FLYING IN FORMATION: CREATING A PLACE FOR WOMEN IN AVIATION THROUGH THE NINETY-NINES, THE WASP, AND THE WHIRLY-GIRLS

By Katherine S. Gray

During the twentieth century, women’s aviation organizations created a place for women to share experiences and advice, pool their financial resources, and push for additional opportunities for women in aviation. Between 1929 and 1955, three organizations formed to serve these ends, including the Ninety-Nines (99s), the Women Airforce Service Pilots (WASP), and the Whirly-Girls. With the help of dynamic leaders like Amelia Earhart, Jacqueline Cochran, and Jean Ross Howard Phelan and loyal members like Dr. Dora Dougherty Strother and Marty Martin Wyall, these organizations developed both the popularity and the resilience to maintain their numbers and continue their activities into the twenty-first century. Because of the bonds of camaraderie formed through individual relationships and group influence, the unity created by unique women’s aviation dress and flying songs, and collective resistance to sex-based discrimination, women used aviation organizations to construct their own culture to meet the needs of women pilots.
FLYING IN FORMATION: CREATING A PLACE FOR WOMEN IN AVIATION THROUGH THE NINETY-NINES, THE WOMEN AIRFORCE SERVICE PILOTS, AND THE WHIRLY-GIRLS

A Thesis

Submitted to the
Faculty of Miami University
in partial fulfillment of
the requirements for the degree of
Master of Arts
Department of History
By
Katherine S. Gray
Miami University
Oxford, Ohio
2007

Advisor: ________________________
Mary Frederickson

Reader: ________________________
Judith Zinsser

Reader: ________________________
Allan Winkler
# Table of Contents

List of Figures........................................................................................................iv  
Acknowledgements.................................................................................................vi  

**Introduction- Aviation, Women, and Organization**….1  

**Chapter 1- Organization, Sisterhood, and Service**……..5  

**Chapter 2- Creating a Place for Women Pilots**.........36  

**Conclusion- Professionalism through Women in Aviation, International**.........68  

Appendix.................................................................................................................73  
Bibliography............................................................................................................75
Abbreviations

99s- Ninety-Nines
AIA- Aircraft Industries of America
CAA- Civil Aeronautics Authority
CPT(P)- Civilian Pilot Training Program
FAA- Federal Aviation Administration
WAFS- Women’s Auxiliary Ferrying Squadron
WAI- Women in Aviation, International
WASP- Women Airforce Service Pilots

List of Figures

Figure 1: Dr. Dora Dougherty Strother at the controls of a helicopter. Texas Woman’s University WASP Collection…6

Figure 2: Bessie Coleman. Atlanta Historical Museum.
http://www.bessiecoleman.com/…9

Figure 3: Louise Thaden waving to the crowd after her first place finish in the 1929 National Women’s Air Derby. Ninety-Nines. www.ninety-nines.org/1929airrace.html…10

Figure 4: Ninety-Nines organizational meeting November 2, 1929. Earhart seated in the front row second from the right. The Ninety-Nines. www.ninety-nines.org/1929airrace.html…11

Figure 5: Jacqueline Cochran with her airplane in the 1930s. United States Air Force Photograph…14

Figure 6: Janet Harmon Waterford Bragg. Hill Air Force Base Aerospace Museum.
http://www.hill.af.mil/museum/history/jhbragg.htm…18

Figure 7: Trainees from Class 44-W-6 relaxing against the wing of an airplane. Texas Woman’s University WASP Collection…20

Figure 8: Class 44-W-10 at the final WASP graduation at Avenger Field in Sweetwater, Texas. Texas Woman’s University WASP Collection…22

Figure 9: Fifinella Patch. Texas Woman’s University WASP Collection…23

Figure 10: Baymates of 44-W-10. Standing: Nina “Cappy” Morrison, Jane Moviso, and Muriel Moran. Kneeling: Frances Miesner, Marty Martin Wyall and Nancy Mayes in front of the barracks at Avenger Field in Sweetwater, Texas. Texas Woman’s University WASP Collection…24

Figure 11: Ninety-Nines in matching outfits prepare for the Powder Puff Derby. Texas Woman’s University 99s Collection…28
Figure 12: Jean Ross Howard Phelan getting ready to fly. Texas Woman’s University Whirly-Girl Collection….30

Figure 13: Whirly-Girls Official Logo….32

Figure 14: Margaret Ringenberg during WASP training. http://www.museumofthesoldier.com/ringenberg2.JPG….36

Figure 15: Marty Wyall at home in Ft.Wayne, IN September 2006. Author Photograph….37

Figure 16: Former WASP with Jacqueline Cochran (seated) at the 1964 WASP reunion. Texas Woman’s University WASP Collection….39

Figure 17: (L) Amelia Earhart in flying gear. ( R) The contestants of the first National Women’s Air Derby. Forney Museum of Transportation. http://www.fornemuseum.com/ameliaearhart2.htm….41

Figure 18: Jill McCormick (43-W-5) and Louise Bowden (43-W-4) (center) at Pursuit School in Brownsville, Texas. Class 44-14. Flight-B. Texas Woman’s University WASP Collection….43

Figure 19: Jacqueline Cochran (center) and a male army office at the wishing well with women of WASP class 43-W-2. Texas Woman’s University WASP Collection….46

Figure 20: WASP helping each other tighten their “Zootsuits.” Texas Woman’s University WASP Collection….50

Figure 21: WASP women walking in front of a B-14 Liberator showing off their Santiago blue uniforms. http://www.wasp-wwii.org/photo/….51

Figure 22: Marty Wyall flying a BT-13 at Avenger Field in Sweetwater, Texas. Texas Woman’s University WASP Collection….52

Figure 23: Jean Ross Howard Phelan at her desk surrounded by Whirly-Girl paraphernalia. Texas Woman’s University Whirly-Girl Collection….59

Figure 24: Whirly-Girls with President John F. Kennedy at the White House in 1961. Texas Woman’s University Whirly-Girl Collection….60

Figure 25: WASP meeting with Senator Barry Goldwater to discuss militarization effort. Texas Woman’s University WASP Collection….63

Figure 26: WASP Reunion in the late 1990s. Marty Wyall seated third from left. Texas Woman’s University WASP Collection….64
Acknowledgements

After over a year of brainstorming, researching, traveling, organizing, writing, and re-writing, there are a multitude of people in my life without whom, this project would not have been possible.

I owe an enormous debt to the staff at the Texas Woman’s University Woman’s Collection in Denton, Texas. Dawn Letson and Tracey McGowan were incredibly valuable resources who made it possible for me to do an immense amount of research in a very short time. Additionally, thank you for your encouragement and financial support through the Byrd Howell Granger WASP Research Fellowship that made my second trip to Texas possible.

I would also like to thank former WASP and 99 Marty Wyall for the generous donation of her time and willingness to share her story for my thesis. Marty is a remarkable firecracker of a woman, and I feel lucky to have had the opportunity to meet her and even luckier to have the chance to share her story.

Thank you to my reading committee including Judith Zinsser and Allan Winkler and especially to my advisor, Mary Frederickson, who helped me develop and refine my ideas throughout the yearlong process of bringing my thesis to life.

I cannot forget to acknowledge the people who helped me through my thesis on a daily basis. To my roommates, Andrea Middleton and Christine Jauch, thank you for putting up with stacks of books strewn about our apartment and allowing me the space to take over the kitchen or living room when needed. To Dan Chomicz and my dad, Wally Gray, thank you for reading through early copies of my thesis and offering your suggestions. You did not have to help, but you did, and that support is what family and best friends are for. Finally, to my mom, Janelle Gray, thank you most of all for being the voice of reason when I either a.) wanted to drop out of school and join the circus or b.) wanted to turn in ten pages and call it quits. Moms have a way of letting their kids know it will be okay, and mine is the best.

I love you all, and without your support, willing ear to listen, and willing eye to edit, this project would not have been possible.
In the late 1920s, most Americans had never flown in an airplane, the concept of commercial aviation was still new, and it was faster to cross the country by train than in the air. At this moment, the United States was on the cusp of an aviation boom that would change the way Americans communicated, traveled, fought wars, and thought about their world. Corporations, investors, and individual men and women like Charles Lindberg and Amelia Earhart made that aviation boom possible through massive promotional campaigns and flights that drew the public’s curiosity and awe.

Throughout her life, Earhart was America’s unquestioned heroine of the sky. A model of poise, strength, adventure, intelligence, and womanly grace and determination, Earhart pushed aviation and “air-mindedness” forward and focused her life on creating opportunities for women in aviation, but she was just the first in a long line of deeply invested individuals promoting aviation for women. The women who followed Earhart’s lead did not have the benefit of the publicity she earned from her trans-Atlantic flight or from the subsequent books and magazine articles that followed, but as part of Earhart’s legacy, they did have organizations that brought women aviators together to share the emotional, physical, and financial burdens of flight.

Amelia Earhart in particular took it as her personal charge to promote aviation among women. In November 1928, just five months after she became the first woman to fly across the Atlantic Ocean, Earhart took advantage of the publicity she had earned during that flight to begin exposing American women to flight through a regular aviation column in *Cosmopolitan* magazine. At that time, just over one-hundred women had earned their pilot’s licenses compared to thousands of men, but Earhart felt that women across the country would love aviation if they just knew more about it. She also felt that with her recent publicity, it was her responsibility to promote aviation among women. Earhart’s frank, personable year-long column in *Cosmopolitan* attracted thousands of responses from women and girls, many of whom had seen airplanes and flight as alien

---

and exotic. Because of those articles, which emphasized the fun and safety of flight, women throughout the country finally saw aviation as a possible part of their future. The lasting effect of these articles was that a deep-seated desire to fly found its way into the hearts of many of those young women who recounted Earhart’s articles as one of the most common reasons why they fell in love with aviation.

Aviation organizations like the Ninety-Nines (99s), the Women Airforce Service Pilots (WASP), and the Whirly-Girls recognized that for women, flying meant freedom, adventure, and power. It meant expanding the scope of womanhood to include technology based jobs, resisting society’s mores of chaste, docile womanhood, and forming bonds of friendship through flight, a uniquely costly, yet powerful addiction. Although not all women found aviation an easy avenue to pursue due to racial prejudice and financial limitations, these organizations helped give all women the opportunity to participate for the first time. In 1930, Margery Brown added that, “Women are seeking freedom. Freedom in the skies! They are soaring above temperamental tendencies of their sex which have kept them earth-bound. Flying is a symbol of freedom from limitation.”

Flight captivated adventurous, driven women and led to the development of a sisterhood among women pilots that rivaled the exclusive brotherhood of flight from which they were excluded. These groups helped women go from piloting the first bi-planes to flying military aircraft, from soloing on cross-country and oceanic flights to winning air races against the country’s best pilots, male and female, and from flying helicopters to piloting the space shuttle in orbit. Because of the bonds of camaraderie formed through individual relationships and group influence, the unity created by unique women’s aviation dress and flying songs, and their collective resistance to discrimination based on sex, women during the 20th century used aviation organizations to create their own pilot culture that helped create the opportunities women needed to advance in aviation.

Over the course of the twentieth century, those organizations represented different categories of women aviators. After 1929, the Ninety-Nines, International Organization of Women Pilots (99s) included only fixed wing aircraft pilots and the Women Airforce Service Pilots (WASP), who flew between 1942 and 1944, were the country’s only

---

women military aircraft pilots. A decade later, the Whirly-Girls, International Women Helicopter Pilots association, created in 1955, included only licensed women helicopter pilots. While each organization had their own individual focus and somewhat exclusive membership, they all shared two primary objectives: they wanted a social organization to bring mutually “air-minded” women together for fun and support, and they wanted more women to get the chance to fly. Because of these similar organizational goals, many women found that the groups complemented each other, making it possible and common for women to join two, or even all three organizations.

A number of scholars have addressed topics such as women’s suffrage, their entrance into the workforce and the military, or their sexuality, but women’s contributions to aviation have received very little attention. A number of authors address women’s associations in terms of their social and political impact prior to suffrage, but few works have been written about women’s organizations or about women in aviation since World War II. Of these, most discuss voluntary associations or feature biographies of the pioneers of flight, but none addresses organizations like the 99s, WASP, and Whirly-Girls or their unifying and professionalizing forces for women. One argument central to the continued importance of women’s aviation organizations is that made by Estelle Freedman in her essay “Separation as Strategy: Female Institution Building and American Feminism, 1870-1930.” Freedman notes that when women integrated themselves into the male dominated world of politics and professions following suffrage in 1920, they lost the power of collective action that had earned them that right. As she noted, “Women gave up many of the strengths of the female sphere without gaining equally from the man’s world they entered.”

3 In the male-dominated world of aviation, women’s organizations were essential as a location where women could gain leadership experience and communicate with each other, preventing a situation in which women professionals in the field felt cut off from each other.

The following chapters begin the process of recognizing the heroines of the 1950s and 1960s who followed in Amelia Earhart’s footsteps but never received their due. This thesis argues that women’s aviation organizations created a place for women to share

---

experiences and advice, pool their financial resources, and push for additional opportunities for women in aviation. The first chapter outlines the origins and development of the 99s, the WASP, and the Whirly-Girls, emphasizing how they overcame the challenges that they faced. It highlights the unique collection of determined, adventurous, exuberant, precise, and intelligent women who led these groups, as well as addressing how each organization matured over time, adjusting its self-definition and purpose to fit changes in the larger society. The second chapter takes that discussion further to analyze how women used these organizations to create their own pilot culture, one that relied on women’s organizational and communication skills to advance women within the largely male world of aviation. Finally, the conclusion brings the influences of these organizations up to the present, using Women in Aviation, International, the newest and largest women’s aviation organization, to discuss the professionalizing influences of these organizations and the future for women in aviation.

Aside from discussions of Amelia Earhart and Jacqueline Cochran, the women featured here were not the first to fly across the Atlantic or the first to compete with men in races. Most of these women never captured the newspaper headlines, but their adventures and contributions have been just as important to women in aviation as those of their more publicized sisters. Through their seemingly ordinary efforts to maintain organizational rosters, seek out new pilots, and coordinate reunions and meetings, these women laid a foundation for future women pilots and made possible the full-scale entrance of women into the aviation industry. From initial organization to continued development, these leaders of the Ninety-Nines, the WASP, and the Whirly-Girls always believed that their efforts would strengthen the “sisterhood” of women aviators and eventually allow “women pilots” the opportunity to just be “pilots.”
Chapter 1- Organization, Sisterhood, and Service

Throughout the twentieth century, women’s aviation organizations provided the resources that many women needed to help them begin or continue to fly. They created a place for women to share experiences and advice, pool their financial resources, and push for additional opportunities for women in aviation. Between 1929 and 1955, three organizations formed to serve these ends: the Ninety-Nines (99s) in 1929, the Women Airforce Service Pilots (WASP) in 1942, and the Whirly-Girls Pilots in 1955. These organizations have had both the popularity and the resilience to maintain their membership and continue their work into the twenty-first century. The women who created these organizations used the experiences and contacts they developed in one aviation organization to create or build another. For example, Jacqueline Cochran used her connections and experience in the 99s to create the WASP. Marty Wyall used her 99s connections to re-organize the Order of Fifinella, a post-war WASP organization. Many WASP joined the 99s after World War II because of their military training and experience, and Jean Ross Howard Phelan took her experiences and connections from the 99s and the WASP to help her organize the Whirly-Girls. While each organization served a specific need at a particular moment, they collectively helped create a place for women in private, professional, and military aviation. The personal and professional connections between the women within these organizations were key to the endurance of all three groups, and these relationships defined the life of WASP, 99, and Whirly-Girl—Dr. Dora Dougherty Strother.

Dora Dougherty Strother’s life revolved around aviation. She was an active member of the 99s, the WASP, and the Whirly-Girls. A highly educated professional in the aviation industry, she remained an intellectual and a physical presence in the aviation community throughout the twentieth and into the twenty-first century. With the combination of an infectious smile, a keen mind, and an inordinate amount of determination, Dougherty was ready to fly from the first time she saw an airplane. She was born in the 1920s at the right time and in the right place to become a woman aviator. By the time she was old enough to fly, the untamed age of barnstormers and women air
racers, was taking off. Indeed, aviation had become less dangerous and more affordable than ever before, and because of the efforts of early women flyers, by the late 1930s, there were more opportunities for women to fly and society was more welcoming of the idea of a woman pilot.

Dougherty was born to a middle class St. Paul, Minnesota family on November 27, 1921, and after calling several places home before her eleventh birthday, her family finally settled down in 1932 along the shore of Lake Michigan in the Chicago suburb of Winnetka, Illinois. During her childhood in the Chicago area, this green-eyed English-Irish girl developed her love of flight, and by the age of 19, she had earned her pilot’s license and was well on the way to the first of four college degrees at Cottey College in Nevada, Missouri. A combination of emotional and financial support from her family and single-minded determination provided the ticket to flight.  

Through the Civilian Pilot Training Program at Northwestern University, Dougherty earned her private pilot’s license in 1940, and soon after she began her lifetime membership in the Ninety-Nines (99s) women’s international flying association. Dougherty Strother’s flying career continued to develop in 1943 as she joined the

---

4 Dora Dougherty Strother McKeown, “Curriculum Vitae” (June 2004): Sec 2, pg. 1, Sec 16, pg 1, WASP Collection. Texas Woman’s University. Denton, Texas.
Women Airforce Service Pilots or WASP. She became one of only 1,857 women accepted for training through the WASP. During her two years of service, she flew twenty-three different types of aircraft and became most well known for being one of only two women certified to fly or “check out” in the B-29 “Superfortress.” After finishing her time in the WASP, Dougherty went on to complete three additional university degrees that included a Ph.D. from Northwestern University, an M.A. from the University of Illinois, and a Ph.D. in aviation education from New York University, before becoming one of the first female Human Factors Engineers at Bell Helicopters. Although she married Lester Strother and then Harry McKeown in later life, Dougherty Strother never had children of her own. In addition, Dougherty Strother earned her commercial helicopter rating on December 2, 1959, becoming Whirly-Girl #27.

Dougherty Strother entered women’s aviation organizations like the WASP and the Whirly-Girls during the early years of their development. When she joined the 99s in 1941, it was just a few hundred members strong, nothing close to the 2007 size of over 6,000 women pilots. She was also among fewer than 2,000 women who made up the Women Airforce Service Pilots and its post-war arm, the Order of Fifinella. She also joined the Whirly-Girls, the first women’s helicopter association, by personal invitation of founder Jean Ross-Howard Phelan, becoming part of an organization that now numbers over 1,371.\footnote{Fact Sheet: The Ninety-Nines, Inc., The Ninety-Nines.org, \url{http://www.ninety-nines.org/pdf/99sfact.PDF} (7 Sep 2006); “WASP Records,” Nancy Parish, WASP on the Web, \url{http://www.wasp-wwii.org/wasp/records.htm} (7 Sep 2006); “Welcome to the Whirly-Girls,” Whirly-Girls.org, 20 July 2006, \url{http://www.whirlygirls.org/} (7 Sep 2006).}

Without question, Dougherty Strother was a “Renaissance woman” of twentieth century aviation and her career highlights the various related and interconnected organizations that helped put women in the air.

Before the Ninety-Nines, the WASP, or the Whirly-Girls, there was a group of women aviators who stood out as pioneers and innovators. Without the benefit of organizations or community support, women such as Anne Morrow Lindbergh, Amelia Earhart, Helen Richey, Harriet Quimby, Ruth Nichols, and Jacqueline Cochran created a cohort of pioneer women pilots whose feats in the air inspired historians to call the 1920s the “decade of the lady pilot.”\footnote{Henry M. Holden, Ladybirds: The Untold Story of Women Pilots in America (Mt. Freedom, NJ: Black Hawk Publishing, 1991): 58-73.} During the years between 1929 and 1939, these women
and their contemporaries successfully crossed both the Atlantic and the Pacific Oceans, flew countless races, set an unprecedented number of speed and distance records, and made women visible at airfields. They ignored stereotypes and fears about women pilots and proved that regardless of a woman’s gender or her physiology, she could and should fly.

For the most part, the first generation of women aviators were white and from privileged backgrounds. They had both the money and luxury of time to devote to aviation that working class and minority women did not. One African American woman who hoped to break those stereotypes was Bessie Coleman, a young woman from Waxahachie, Texas working as a manicurist on the South Side of Chicago.\(^7\) Coleman was determined to learn how to fly, but at every airfield she visited, the white pilots refused to take her on as a student, because as pilot Janet Harmon Bragg remembered, “in the 1920s and 30s, and even later, aviation was not considered a suitable pursuit for blacks, who were deemed unable, both mentally and physically, to fly safely.”\(^8\) Coleman persisted regardless of the racism she faced. She wanted to fly, and no one was going to stop her.

---


After several flight schools in the Chicago area turned her down because of both her race and her sex, Coleman made the necessary preparations to travel to France to earn her license. Coleman’s trip to France in November 1920 was successful, and as of June 15, 1921, Coleman was the world’s first black woman licensed to fly an airplane. Once she finished her training, Coleman returned to Chicago where she started her career as a barnstormer and circus flyer. 9 As the only black woman pilot in the world, Coleman was more on her own than any other woman pilot of her day, so she did not have the luxuries of support from other aviators. Without inclusion in the first women’s aviation organizations, women like Coleman, who died in a tragic flying accident in 1926, had to do whatever it took to keep themselves in the air, and issues of discrimination and money became very real factors in limiting their participation. 10

Not only did women like Coleman enter the field of aviation en masse during the 1920s and 1930s, they took it by storm. 11 From the first all-woman transcontinental race to the first women winning races and honors against men, this decade was one of historic accomplishment for women. Among those honors and accomplishments, the completion of the first National Women’s Air Derby, in August 13-20, 1929, was by far the most important for the future of women in aviation. The race consisted of twenty women pilots leapfrogging from airport to airport across the country. At each stop along the 2,700 mile trek between Santa Monica, California and the National Air Races in Cleveland, Ohio, these women attended functions and gave speeches promoting flight for women, turning their “race” into a positive propaganda tool for women in aviation. 12 The race brought together a collection of strong, capable women pilots who individually learned that they were not the only skilled women in a cockpit in America.

9 Rich, 31-35.
Prior to the race in August 1929, very few women pilots had ever met one another, so the eight days these twenty women spent together in the air and on the ground were a significant departure from their normal lives. At home, many of them experienced a sense of loneliness, as each was one of very few women at her home airfield. The women of the first National Women’s Air Derby, which commentator and comedian Will Rogers nicknamed the “Powder Puff Derby,” formed an instant connection built between these women from mutual experiences and interest in aviation. Moreover, as the official history of the Ninety-Nines notes, “Despite the competitive nature of these talented women, but probably more because of it, they felt their camaraderie called for a more formalized bond.”

That more formalized bond came in the form of a flying club for all women pilots, the Ninety-Nines (99s).

The idea for the 99s originated in the minds of the pilots themselves during and directly after the first “Powder Puff Derby.” They hoped to create an organized structure to “bring about a different attitude toward the girl in aviation, whereby, she is accepted as an equal rather than spoiled as something rare and very precious.” With the help of aviation enthusiast but non-pilot Clara Trenchmann, the organizers of this group invited every licensed woman pilot in the country to meet at Curtiss Airport in Valley Stream, Long Island on November 2, 1929 to discuss the formation of this all-women’s aviation

---

organization. In the invitation, Fay Gillis, Secretary Pro Tem, Neva Paris, Margery Brown, and Frances Harrell suggested that it “need not be a tremendously official sort of an organization, just a way to get acquainted, to discuss the prospects for women pilots from both a sports and breadwinning point of view, and to tip each other off on what’s going on in the industry.” Even though only twenty-six of the one hundred fourteen American women pilots attended, the first meeting was a success. In short order, the organization attracted an additional seventy-three women pilots for a total of ninety-nine charter members. After much debate, the group agreed upon “The Ninety-Nines” as their official name, reflecting and celebrating the size and character of their charter membership. At first the 99s were a mostly informal group with an acting secretary and treasurer but no president until 1931, when the membership elected Amelia Earhart to lead the organization. Earhart was an obvious choice for the organization because of her celebrity as well as her dedication to the cause of women’s aviation. As aviation pioneer and 99 Phoebe Omlie put it, “She is all woman and one that the other women of America can proudly put up as an example of their contribution to the progress of this great generation.”

![Figure 4: Ninety-Nines organizational meeting November 2, 1929. Earhart seated in the front row second from the right. The Ninety-Nines. www.ninety-nines.org/1929airrace.html](http://ninety-nines.org/letter.html)


16 Susan Ware, Still Missing: Amelia Earhart and the Search for Modern Feminism (New York: W.W. Norton & Company, 1993): 86.
From that point on, the 99s, who lived in all corners of the country, divided the organization into eight regions with an elected governor for each so that they could provide the opportunity for women to meet on a regular basis. In addition, the 99s organized a yearly national conference where members could socialize, share stories, and discuss new information about the world of flight. Over the years, the 99s became more official and more organized with a distinctive organizational hierarchy that by 2006 included a biannually elected nine-member board of directors to represent 189 chapters in the United States and Canada as well as twenty-three countries worldwide. From the beginning, the organization set out its purpose, which was, specifically,

> to assist them [women] in any movement which will be of help to them in aeronautical research, air racing events, acquisition of aerial experience, maintenance of an economic status in the aviation industry, administering through the air in times of emergency arising from fire, famine, flood and war, or any other interest that will be for their benefit and/or that of aviation in general.

In more general terms, 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.

The list of initial members of the Ninety-Nines reads like a “who’s who” of women pioneers in aviation. From Amelia Earhart to Louise Thaden to Phoebe Omlie and Opal Kuntz, the first women of the 99s were the record breakers and pace setters of early aviation, not just women’s aviation. Their ranks included the only American women who had flown across the Atlantic Ocean, the only women who had flown across the United States, and eventually, the only women who had flown against men in direct competition. Because they defied accepted social mores, members of the 99s had to prove repeatedly that woman pilots were not sideshow freaks, and Amelia Earhart knew this. She and other founding members of the 99s hoped that by increasing the number of women aviators, they would also increase the number of record breakers and allow women to be pilots without stigma or special treatment.

---

19 Ware, 83-86.
Earhart once said to a young Louise Thaden, the woman who won the first Powder Puff Derby, “We women pilots have a rough, rocky road ahead of us. Each accomplishment, no matter how small, is important. Although it may be no direct contribution to the science of aeronautics nor to its women who fly, the more who become pilots, the quicker will we be recognized as an important factor in aviation.”

Earhart knew that she and her sister aviators had to sell themselves as women pilots before they could ever be known simply as pilots. For example, although the women of the first Powder Puff Derby did not fit the nickname as “Powder Puffs,” they did recognize that the title helped them gain publicity, which in turn, legitimated them as pilots in the public’s eyes. As a result, they accepted any publicity they could get, regardless of the name given to them. If the newspapers thought that “Powder Puff” fitted them, they would just go along with it, knowing that their future efforts as individuals and as a group would set the record straight about whether they were really lightweights or not.

Although the early 99s were supportive of women in aviation, they were also fiercely competitive with each other and with male pilots. Louise Thaden and Jacqueline Cochran, winners of the prestigious Bendix Trophy race in 1936 and 1938 against male competitors, noted that setting women’s records was a waste of time, because that still meant that they were not the best. Instead, Cochran, in particular, pushed to set aviation records, and not merely women’s aviation records. She noted, that “the reason I went for record breaking and long distance flying was simply then as now, the jobs as test pilots and airline pilots went to men, not women. The chances were that if a woman was selected for this training, before she had returned a profit on the heavy investment in such training, she would have converted herself into a wife and mother and stopped working.”

Not all of the original members of the 99s remained as active as Cochran, who continued to be an advocate for women in aviation, and most importantly, an advocate of her own aviation career.

---

Born in the panhandle of Florida in the 1910s, Jacqueline Cochran spent her early years moving from mill town to mill town before she struck out on her own at the age of twenty and changed her name from Bessie Mae Pittman to Jacqueline Cochran. A nurse who married multi-millionaire Floyd Odlum in 1936, Cochran later became the owner of a cosmetic company and a highly decorated flyer of the 1930s who relied on her strong personality and determination to help her move forward in the world of aviation. She was never satisfied with less than the absolute best from herself and those around her, and although she made more enemies than friends, she was undoubtedly one of the most talented pilots of her day. Because of her skill and determination, she set more speed and altitude records than any contemporary woman or man, and in the process, set herself apart as a highly determined woman on a mission to be the absolute best.  

![Figure 5: Jacqueline Cochran with her airplane in the 1930s. United States Air Force Photograph](image)

Although she earned her pilot’s license in 1932 and joined the 99s later that decade, she, like many women who earned their pilot’s licenses during this period, prided herself on being successful in the world of aviation because of her own determination and not with the assistance of others. She noted that “women pilots of the Thirties were a special breed. Most were born rich. I hadn’t been born to such surroundings, but if I had to push my way in and pull my way to the top, I’d do it.” With that outlook in mind, Cochran always pushed herself to question authority and always give everything she had. In addition, Cochran was the elected president of the 99s in 1941, which put her in a position of leadership and influence at the beginning of America’s full participation in

---

22 Although Cochran herself insists that she was an orphan raised by a foster family in Florida, recent research has proposed that she was originally born Bessie Mae Pittman and that she changed her name and her story because she was embarrassed about her meager upbringing.

23 Holden, 66.
World War II. Because of her leadership abilities and experience related to women in flight, Cochran was the perfect woman to lead the creation of a new women’s aviation organization during World War II, the Women Airforce Service Pilots.

With the possibility of war looming in Europe in late December of 1938, Army General Henry H. “Hap” Arnold recognized that the United States was unable to defend itself from the airpower of countries like Germany, Italy, or Russia. President Franklin D. Roosevelt agreed with Arnold’s apprehensions and proposed the creation of a civilian pilot training program “for the annual training of additional air pilots…directed toward the essential qualifications for civilian flying.” On December 28, 1938 Roosevelt approved the creation of the Civilian Pilot Training Program or CPT to train American college students to fly. He hoped that with approximately 20,000 additional pilots trained each year, the United States would be ready in the event that it entered a war. The Army and civilian personnel designed the CPT program to train men to fly, but because it was a civilian program run through universities, many CPT programs allowed qualified women to fill approximately ten percent of available slots.

In addition to the hundreds of college programs across the country, private flight schools also received federal funding to launch CPT programs. One such school was the Coffey School of Aeronautics in Oaklawn, Illinois run by the African American pilot team of Cornelius Coffey and John Robinson. As the only black non-college CPT program in the country, the school allowed black men and women in the Chicago area the opportunity to fly that white students could already acquire at no fewer than thirteen other schools in the Chicago area. Unlike university CPT programs, Coffey and Robinson did not limit the number of women who entered the flight school, and at least one woman pilot, Chicago nurse Janet Harmon Waterford, helped fill the school’s ranks of instructors. Hundreds of women, more white than black, who would not have had the

---

27 Strickland, 102.
means to afford flight, earned their private licenses through these programs. As a result, the 99s saw a rise in membership that increased to 400 women in 1940.28

Once the United States entered World War II in December 1941, the War Department determined it needed to focus its energy on training only male pilots, so as of December 13, 1941, the CPT program became the War Training Service. Because it was to be “exclusively dedicated to the procurement and training of men for ultimate service as military pilots,” the exclusion of women from the program was a “natural” side effect.29 Cochran, then president of the 99s, was not pleased to see women evicted from the airfield with their elimination from the CPT program, and she knew that it was essential for another program to take its place.30 She insisted that women were more than racers or competitors; they were also patriots who were willing to serve their country as pilots during war.

Since 1940, the number and variety of aviation careers in general had grown at an enormous rate, and Cochran saw that women could take advantage of this expansion to transform their role in professional aviation.31 She took advantage of her leadership position among women aviators and her intimate knowledge of the structure of the existing 99s organization to propose the creation of a woman’s wing of the Army Air Corps, the predecessor to the modern United States Air Force. Cochran dedicated herself to the creation of a training program specifically designed for women in the United States. She believed that women were a very important, yet untapped, military resource that the US would be unwise to ignore.

Before the U.S. army gave her the go-ahead for the WASP, Cochran and twenty-four very experienced American women pilots spent the period from late 1941 until early 1942 with the Air Transport Auxiliary, or ATA, in England, learning the ins and outs of the structure, training, and daily management of a woman’s wartime aviation outfit. Cochran noted that she “went to England to prove to General Hap Arnold and others in Washington, D.C. that American women pilots were just as capable as English women

29 Strickland, 13.
30 Douglas, 28.
pilots.” She hoped that upon her return to the United States during the fall of 1942, she could show General Arnold that with women pilots on the home front, there could be more male pilots available for combat duty. She hoped he would see that United States needed women pilots.

After a great deal of controversy between Cochran and fellow 99 Nancy Harkness Love, both the Women’s Auxiliary Ferrying Squadron (WAFS) under Love’s leadership and the Women’s Flying Training Detachment Squadron (WFTD) under Cochran’s leadership became active women’s aviation organizations. Eventually, in August 1943, the two organizations united to create the Women Airforce Service Pilots or WASP with Cochran at its helm and Love heading the organization’s ferrying division. According to Cochran, the organization was designed to “see if women could serve as military pilots, and if so, to form the nucleus of an organization that could be rapidly expanded; to release male pilots for combat; and to decrease the Air Forces’ demands on the cream of the manpower pool.” In selecting the pilots for the WASP, Cochran wanted only the best, most devoted pilots, but she also wanted women who would be socially acceptable, meaning that she denied admission to qualified African American pilots who applied for the program.

It is not clear exactly how many African American women Cochran denied entry into the WASP, but one such woman was Coffey School of Aeronautics instructor Janet Harmon Waterford. Waterford had earned her pilot’s license in the spring of 1934 and had been flying in the Chicago area ever since. By the time Cochran began searching for prospective WASP, Waterford was an extremely experienced pilot whose flying qualifications made her a perfect candidate for the program. With the encouragement of a white female student at the school, Waterford applied. Because of her qualifications, she moved on to the interview stage of the application process held at the Palmer House in Chicago, but Waterford’s progress stopped the minute she walked into the interview room and the interviewers saw the color of her skin. From that moment on, the

32 Cochran, 183.
interviewers could not “see” Waterford as a qualified pilot; they saw her as a black woman who would cause problems for the program if admitted. Subsequently, interviewer Ethel Sheehy warned Waterford that because she was not sure where Waterford would stay if allowed to begin training, she would have to consult with Cochran before she could give a definite answer. After all, it was Sweetwater, Texas, a less than hospitable place for African Americans. Waterford left the Palmer House discouraged but still hopeful for a positive answer from Cochran.35

Figure 6: Janet Harmon Waterford Bragg.

A few weeks later, Cochran’s answer arrived in the form of a polite yet cruel letter that acknowledged Waterford’s skill as a pilot but stated that she could not accept African American women pilots. Badie Lee Johnson of Tunica, Mississippi also received a similar letter from Cochran, which read, “Your desire to help your country in this time of war is very praise-worthy. Unfortunately, there is no provision for the training of colored girls in the Women’s Flying Training Program.”36 Cochran herself sugar coated the problem in her autobiography The Stars at Noon, stating that when a particularly qualified candidate came to her attention, she made a specific trip to New York to personally meet with her. After explaining that although she did not care about the race of her candidates, the complications of adding a woman of color might “for one reason or

35 Bragg and Kriz, 40.
36 Letter from Jacqueline Cochran, Director of Women Pilots to Miss Badie Lee Johnson, 19 August 1943 (Denton, Texas: Texas Woman’s University Special Collections).
another, prove the straw that would break the camel’s back.” Cochran believed that “this fine Negro girl” removed her application from consideration because she acknowledged the power of Cochran’s argument and “stated that first of all the women pilots’ program should be stabilized and strengthened.” 37 It is unlikely that this woman voluntarily gave up her WASP aspirations because of her race. But, the fact remained that no African American woman pushed the issue after Cochran’s New York meeting. Even though California native Pearl Brummett Judd remarked that none of her “friends at Avenger would have cared if anyone was black, white or yellow, if they could fly,” Cochran knew that she could not get both flight for women and flight for African Americans. 38 Like the women of the suffrage movement just one generation earlier who ignored the plight of black women in favor of the cause of women’s suffrage, Cochran chose gender over race. 39

Even without the capable African American women pilots whom Cochran denied, 25,000 American women applied for fewer than 2,000 training positions. Cochran accepted just 1,830 for training, and of those women, only 1,074 made it to graduation six months later. 40 The WASP represented a huge step for women’s aviation organizations because it was a highly publicized government-sanctioned organization, and it was the first time that the government allowed women to fly military aircraft.

While on active duty for the WASP between the spring of 1943 and Christmas 1944, pilots flew rigorous schedules in which they sometimes made back-to-back cross-country trips across the country for up to two weeks at a time.

Beyond the flight aspects of the job or the chance to help the war effort, women were attracted to the WASP because of the fun, adventure, and free flight time, which was not available anywhere else. Even with the fun of flying and being together, the WASP worked harder physically and mentally than they ever had prior to joining, so when WASP Betty Jane “B.J.” Williams noted, “I don’t know of a WASP that really

38 Gail Gutierrez, Pearl Brummett Judd, Oral History, Forgotten Wings: An Oral History of Women Airforce Service Pilots, the WASP (Fullerton, C.A.: Gail Margaret Gutierrez and Oral History Program California State University): 55.
truly didn’t love flying or she never would have been able to go through the rigors of training and take some of the conditions under which we had to fly afterwards,” she meant it. Jean Hascall Cole explained that she “joined the WASPs of course, because I thought that was a pretty exciting thing to do; I was a little bit patriotic in those days… I just thought that was going to be a lot of fun, and so I joined.”41 In a slightly different vein, Lourette Puett of Fort Worth, Texas joined the WASP, “because that was the best place to get further flight training free,” and Ruth Woods of Dallas, Texas claimed that she “joined the WASP…because I could get to fly aircraft that I couldn’t get my hands on any other way. No matter how much money I had, I wouldn’t have been able to buy time on them, because they were military planes.”42 Women such as Woods or Cole did not see themselves as standard-bearers for women pilots nor did they care about breaking barriers for women; rather, they saw themselves as taking advantage of an opportunity to fly and see the world.

The WASP were expected to perform to the highest military standards, but they were not given the same kind of support afforded male pilots because they were technically still civilians. Unlike male pilots who traditionally flew one or two airframes during their entire careers, WASP pilots had to be capable of flying several different aircraft in the span of a day or two, seamlessly jumping from airplane to airplane with

little transition time. If a woman lost her life in the line of duty—and 38 did—her family had to pay the cost to return her body to her hometown. In addition, the families of the WASP could not display a Gold Star, representing a person who died in the military, for their fallen daughter, nor could an American flag be draped over her coffin for burial. The WASP worked just as hard, if not harder, than male pilots doing comparable jobs, but because they were women, older officers treated them as second-class citizens throughout their WASP experience. They never made as much money or received as much respect as male pilots, but the women in the WASP loved their jobs. It gave them the chance to fly military airplanes and contribute to the war effort. From their perspective, what more could a girl want?

During their two years of service in the Army Air Corps, the WASP flew a collective 60 million miles in every type of airplane in the American arsenal, and, exclusive of combat, they performed every Air Corps mission. They were ferry pilots, test pilots, administrative pilots, and flight instructors. They towed targets for crews practicing anti-aircraft gunnery, and they challenged the “boy’s club” that was military aviation. Dora Dougherty noted, “I think initially sometimes, we had tremendous antagonism, the first phase when we went down to Camp Davis. We heard later that all of the men on the flight line had asked for a transfer. If twenty-five women were coming, they didn’t want to be there.” Over time, though, male pilots came to respect female pilots for their hard work and skill in the cockpit. Eventually, General Hap Arnold noted, “You, and more than nine hundred of your sisters, have shown that you can fly wingtip to wingtip with your brothers. If ever there was in doubt in anyone's mind that women can become skillful pilots, the WASP have dispelled that doubt.” The establishment of the WASP as an auxiliary organization was very important, but for Cochran, the organization would not reach its full potential until Congress recognized it as an official part of the United States military.

By 1944, Cochran believed that the WASP had proved themselves as a necessary part of the war effort through their professionalism and skill as pilots. With the support

of General Arnold, she was certain that Congress would agree to their militarization, so Cochran made the ultimate gamble with the organization. In her all or nothing style which she had developed as a poor kid from the mill towns of the Florida panhandle working her way out of poverty, Cochran proposed that Congress either militarize or deactivate the WASP, never thinking that deactivation would happen while the country was still at war. Even though she successfully argued that the WASP continued to play an essential part in the war effort, Congress did not budge. Whether it was because legislators considered shrinking and not expanding the Army Air Corps as the war drew to a close, or because they did not appreciate Cochran’s aggressive ultimatum, the government denied the WASP request for militarization.

One of the most painful events of every WASP pilot’s life came in December 1944 with the WASP disbandment. The women of the WASP were completely blindsided by their deactivation notices. As part of the final class of WASP, 44-W-10, Marty Wyall was among those unlucky women who finished their training at Avenger Field in Sweetwater, Texas but never had the opportunity to join an active squadron or to put her training to use in the field. She and her class of sixty-seven other women graduated on 7 December 1944, and just eight days later, on 15 December 1944, they each received a letter from Lt. General P.K. Yount of the Army Air Forces Training Command Headquarters in Forth Worth, Texas notifying them that the army no longer needed their services. Through its positive tenor and congratulations on completing “a long and difficult period of training…requiring mental and physical vigor, stamina and discipline,” the letter masked the fact that the WASP women were not being discharged at the end of the war; they were being forced to leave when World War II was still in full swing.
Even though the letter wished them “good luck and happy landings,” it is obvious that, to Yount, these women were still second-class citizens. They performed as well as any male pilots in the Army Air Force, but because they were women in a non-traditional field, they were unacceptable. He lauded them as highly trained, but the letter itself pointed out that they were ultimately expendable. As Yount stated, “We have watched WASP as we have watched men pilots and we know that flight training has played a special part in the development of these attributes and in the sharpening of a fine and vigorous love of country and fellowmen.” Just as Yount noted how proud the army was of these women, he also noted that they were “WASP” and not Army Air Force pilots, a significant distinction. Veteran’s organizations would institutionalize that distinction by excluding the WASP from their membership, but the WASP did not take their exclusion sitting down. Rather than disband across the country without the means to reconnect, the WASP themselves created their own post-war organization dubbed, The Order of Fifinella, after the WASP mascot and friendly gremlin who provided protection in the skies. Over the years, the organization was a poor substitute for the WASP and did little more than send out periodic newsletters, which served as sources of updates about the family and professional lives of the WASP, but did not specifically promote flying or their development as pilots.

Beginning on December 20, 1944, the official date of disbandment, WASP women had no recourse but to hitch rides home in cars, on buses or trains or military planes. Although Cochran’s ultimatum had led to WASP disbandment, the women of the organization did not blame her. She had done what she thought was right, and regardless of their feelings, it was time to restart their “normal” lives. Joyce Sherwood Secciani remembered, “a lot of girls hoped they could stay in the air force and keep flying, but that was absolutely forbidden. They could stay in the air force but there would be no more flying.” The reality of the situation, though, was that many WASP had given up their “normal” lives to join the organization, so returning home meant leaving their “family,” not returning to it. In a letter responding to Wyall, WASP Cappy Morrison, Wyall’s bunkmate and friend, wrote,

Reckon that’s about right—too—only pretty good—I have an awful cold—and am also very lonesome—this town is so dead—or maybe it’s me. Mother says it’s me. She can’t figure out what’s wrong with me—says I have a one track mind and it’s on airplanes—reckon that’s about rages. She and Pop want me to forget about airplanes and flying—settle down to something conventional and be happy. So far I haven’t been able to see it—maybe I will if I stay here long enough…I’m all mixed up Marty—don’t know which way to turn.47

Women such as Wyall and Morrison missed the pilots they had flown with and regretted not getting the chance to participate in something that mattered. As part of the WASP, many women pilots felt they had finally found something that made them feel alive and

46 Gutierrez, Joyce (Sherwood) Secciani Oral History, 299.
in touch with their own potential. In turn, having found themselves made it even more difficult to leave the WASP on such short notice.

Figure 10: Baymates of 44-W-10. Standing: Nina “Cappy” Morrison, Jane Moviso, and Muriel Moran. Kneeling: Frances Miesner, Marty Martin Wyall and Nancy Mayes in front of the barracks at Avenger Field in Sweetwater, Texas. Texas Woman’s University WASP Collection

Dora Dougherty Strother mused, “I presume that all military groups experience bonding among the group that never leaves them for their entire lives, and we certainly have that.” Iris Critchell summed the situation up well by stating that, “We stepped up and pushed the envelope, and then had to back up a little and wait for total acceptance. Society wasn’t ready.” Once their military flying experience was over, WASP had to make a number of choices, but the most important was whether they would continue to fly. The shock of civilian life was intense and often painful, and although most WASP did not continue flying as their sole occupation, many had been infected with a flying bug that would never leave them.

The WASP, the second large-scale women’s aviation organization after the 99s, represented a shift in women’s roles from exhibition pilots to professionals. Because of their successful military experiences, they saw themselves as pilots and not necessarily “women” pilots. The aviation industry was booming, and the country needed hundreds of qualified pilots in the military, in commercial aviation, at flight schools, and in the private sector, so many WASP were excited to continue their flying careers after the war.

---

To their surprise, they discovered that being a “qualified” pilot suddenly meant being a male pilot. Regardless if they had flown the same number and types of aircraft or even had more hours than male pilots, these women were suddenly unacceptable.

After returning to Indiana following her WASP service, Wyall received a letter from TWA airlines March 1, 1945 that said her exceptional training as a WASP “will undoubtedly qualify you for many of the positions now open in TWA.” Upon further scrutiny, though, she learned that “while TWA does not at the present time assign women as co-pilots, should such a decision be made in the future, all former member of the ‘WASP’ in our employ will be given full opportunity to qualify.” The operative words of “at the present time,” “should,” and “opportunity to qualify” point out that women as pilots or co-pilots were in the future tense. National airlines like TWA did not intend to hire any women pilots or co-pilots in the foreseeable future, but the language assumes that the airlines thought WASP like Marty Wyall were more interested in being around planes than actually flying. They were wrong. Many WASP members took offense to the assumption that working as a stewardess was the same as flying. They considered themselves professional pilots, not professional servers. Potential job offers such as this were widespread and reflected society’s resistance to women professional aviators.

After sending out over 50 letters to various flight operations, Betty Haas Pfister commented, “I didn’t know there were so many ways to say, ‘no.’…Some were really nice, others just said, ‘I’m sorry, we don’t use women pilots,’ or, ‘We don’t need anybody.’” Ultimately, Wyall declined a position at TWA in favor of a small-town instructor position in Indiana. She wanted to fly. She did not want to serve people in the sky or print their tickets on the ground. While some WASP accepted offers from the army to take on non-flight positions and others accepted positions as stewardesses or grounds-crew for major airlines, not one American woman remained on the flight line as a military or commercial pilot, regardless of her ability.

Cochran worked tirelessly to obtain military status and aviation jobs for her pilots, but to no avail. In the March 15, 1945 issue of the *Wasp Newsletter*, Cochran confirmed the undesirability of women in the final months of World War II. She stated that,

> Through the Newsletter, I wish to report on inquiries concerning flying jobs which have been made through the Washington office. It disappoints me greatly to have no encouraging news for you—I wish that it might be otherwise…there are unlimited ways of continuing to do your part in the war effort in non-flying capacities.\(^{53}\)

Even with this blatant discrimination, women pilots found other means to fulfill their desire to fly. As their literal and figurative mothers had done a generation before them, the women of the WASP turned to the 99s for opportunities and support.

Before World War II, the 99s membership consisted largely of women of means. For the most part, they had family funds, a wealthy husband, or their own business, which provided the money they needed to fly professionally or as a hobby. Additionally, these women had the luxury of enough time to focus on flying rather than earning money to raise a family. Even before the United States entered World War II, the CPT program had already made flying more accessible to middle and upper middle class women by working through universities. According to the 99s section of the National Aeronautic Association newsletter in October 1940, a membership drive was necessary, because “pilots have increased their numbers so rapidly since the start of CPT that the organization now has some 2,000 from which to draw.”\(^{54}\) After the war, flying continued to be a supremely expensive habit, but because of the CPT and the WASP, there was a larger available population who could pool their financial resources into a fund that could allow more women the chance to fly.

For women who wanted to continue flying, the 99s was a natural choice because it provided the financial and organizational support of a national organization along with the sisterhood and personal support of a local group. Some chapters of the 99s would get together to buy an airplane for chapter members to share, split the cost of hangar space, and collectively pay airport fees while the national organization focused on large-scale air

---

\(^{53}\) Cochran, *WASP Newsletter*, Vol. II No. 2, 15 March 1945, WASP Collection, Texas Woman’s University, Denton, Texas.

\(^{54}\) “Ninety-Nines: International Organization of Women Pilots,” *National Aeronautics*, Oct 1940, WASP Collection, Texas Woman’s University, Denton, Texas.
races and aggregate service initiatives. As soon as the war ended for the WASP, the directors of the 99s seized the opportunity to tap into that pilot base by continuing the 1940 membership drive and by contacting individual WASP to offer them 99s membership. According to the history of the Indiana 99s, 1945 and 1946 were rebuilding years in which “a list of Indiana WASP was obtained and all were invited to join the Chapter. Many new members were added from this and other sources.” 55 Although building up a new class of 99s was important for the growth of the organization, the most important post-war story for the 99s was that of their renewed and enhanced commitment to service, education, and racing.

During the immediate years following World War II, the 99s succeeded in recreating the Powder Puff Derby, launching a national Air Marking campaign, and funding the Amelia Earhart Memorial Scholarship Fund. Rebuilding the Powder Puff Derby began in the spring of 1947 when the Florida Chapter of the Ninety-Nines sponsored an air show known as the First All-Woman Airshow in Palm Springs, Florida. The organizers of the show, many of them ex-WASP, invited West Coast 99s to race their airplanes to the show to begin the festivities.

With the organization of Florida 99s member ex-WASP Mardo Crane and the public support of Jacqueline Cochran, the race continued to grow until the 99s officially accepted responsibility for its organization and management in 1950 and subsequently incorporated it under the title “All-Woman Transcontinental Air Race, Inc.” 56 The race gave women pilots, especially those who did not have aviation-related jobs, a reason to develop their flying skills and stay connected within the organization. In addition, the competition aspect of the race led many women to seek funding through outside sponsors, legitimizing and making possible a very expensive, perhaps even unnecessary transcontinental flight. While the women who participated in the All-Woman Transcontinental Air Race were, for the most part, very serious about flying, they also made the race a fun event with matching pilot/ co-pilot uniforms that they wore throughout the race, which are evident in the picture below.

Racing remained popular among the 99s from the 1950s through the late 1970s with a variety of races held across the country each year. Although many women did have financial backing from family or corporate sponsors, many did not, which made it impossible for them to participate in the races.

In order to expand participation opportunities for those women who did not have the time or financial resources to race, the 99s also created a number of aviation-related service projects to bring members together and give the organization greater purpose. One of the most significant service projects for the post-war 99s was air marking. Led by 99s charter member Blanche Noyes, air marking was a volunteer practice popular throughout the twentieth century where 99s members painted runway numbers, a compass, and the name of a given airport on the tarmac or the roof of a hangar so that it was large enough to be read from the air. According to WASP Opal Vivian Fagan, “With few navigational aids and fewer radios in the small planes, it was easy to get lost on cross-country flights. The air marking on the roof of a town’s prominent building was often the only means of identifying your whereabouts, a life saver in hazardous weather.”

Noyes turned the life-saving gesture of air marking into a contest among 99s chapters across the country in order to popularize the practice, which led to the completion of fifty air marking projects in Indiana alone during the 1949-1950 year. Other service projects performed by the 99s during the 1950s and 1960s included work

---

57 Fagan, 159.
through schools, the Civil Air Patrol, and the Winged Scouts. Arguably one of the greatest contributions of the 99s beyond air marking were the scholarships and volunteerism that developed out of their dedication to air education.  

Along with participation and leadership of the 99s, several former WASP also became some of the first women to fly helicopters as the new machine gained popularity in the mid-twentieth century. Women entered the world of helicopter aviation in February 1938 as German pilot Hannah Reitsch demonstrated the Focke-Wulf Fa-61 inside the enclosed Berliner Deutschlandhalle to a crowd of over 20,000 German spectators. During the next decade, the helicopter advanced technologically with the help of manufacturers such as Sikorsky, Boeing, and Bell, but more importantly, the helicopter became an icon of progress. 

Although aviation enthusiasts predicted a helicopter in every home by the mid-1950s and that teenagers would learn to fly a helicopter just as they learned to drive a car, the reality was much different. Women had a hard time in the helicopter industry, as Ann Shaw Carter, the first American woman to fly a helicopter, did not earn her license until 1947, almost a full decade after Reitsch’s initial flight. By the time 99 and WASP trainee, Jean Ross Howard, who later married and added Phelan to her name, earned her helicopter pilot’s license in 1954, there were only twelve other licensed women helicopter pilots in the world. As a woman who had only learned to fly a helicopter because of her work at Bell Helicopters and her close personal relationship with Lawrence Bell, Chairman of the Board of Bell Aircraft Corporation, Ross Howard understood how rare she was as a woman helicopter pilot. She even called herself the “eighth wonder of the world” when she first earned her license.

---

60 Peckham, 153-155.
Ross Howard took it upon herself to organize the existing women helicopter pilots at the next meeting of the American Helicopter Society to be held in Washington, DC on April 28, 1955. The meeting, held on the mezzanine of the Mayflower Hotel, was a relaxed social event in which six of the thirteen women helicopter pilots gathered, drank martinis, and talked about their “whirly-bird” piloting experiences. Ross Howard noted that “for most of us the first meeting was truly fun! We started in as if we’d known each other for years—helicoptering is a real bond.”63 The women on the mezzanine at the Mayflower Hotel that day included Jean Ross Howard, Clara Livingston, Ann Shaw Carter, Marilynn Riviere, Ethel Sheffler, and Edna Gardner Whyte. Beyond socializing, the women laid out a basic framework for an international organization of women helicopter pilots they dubbed the “Whirly-Girls.”

By the end of the meeting, the group had decided on the purpose and a basic meeting schedule for their new organization. Officially, they decided that any woman holding a Civil Aeronautics Authority (CAA) license was eligible for organizational membership. In addition, they “agreed to exchange helicopter information, promote interest among all women and advance the acceptance of rotary-wing aircraft to its fullest utilization.”64 Their final official act was the creation of the following statement of

---

63 Jean Ross Howard, “At the first official ‘hovering’…” Letter to The Whirly-Girls, 5 April 1956: 1, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
64 Ross Howard, “At the first official ‘hovering’…”: 1-2.
purpose: “The Whirly-Girls will endeavor to—1. Establish scholarship funds in all fields of helicopter training. 2. To provide standby personnel for helicopter rescue in disaster areas.”  

They agreed to hold their annual meeting or “hovering” at the American Helicopter Society National Forum, which most of them would already attend, so they could get together and recount the year. While they decided not to have organizational officers, they also decided that Jean Ross Howard should serve as the group’s organizer to coordinate group activities and invite new members to join as they earned their private helicopter certificate. Later, Ross Howard took on the position of secretary so that the organization would have one official officer and could file their logo as a Trademark. 

Finally, and most importantly, the women at the first meeting decided that each “Whirly-Girl” would be given a number corresponding to the order in which she earned her license. Although this was a seemingly benign choice, it made an enormous statement for the organization. Rather than politics, money, or status, the original members of the Whirly-Girls put flying first. Most of the first Whirly-Girls had flown for the Allied powers during World War II including Ann Shaw Carter, Jean Ross Howard, and Pat Swensen of the WASP, Nancy Livingston, an American pilot who was part of the British Air Transport Auxiliary, and Dr. Valerie Andre of the French Air Force. Their agreement that former Nazi pilot, Hannah Reitsch, should be Whirly-Girl #1 set the tone for a very open organization based on flying above all else. 

The bottom line for the Whirly-Girls was that regardless of nationality or political affiliation, if a woman was a capable helicopter pilot, they accepted her. 

Figure 13: Whirly-Girls Official Logo

65 Ross Howard, “At the first official ‘hovering’...”; 1-2.
66 Jean Ross Howard, Letter to Mrs. Frank C. Hoffmann, Jr., 5 March 1965, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
As the initiator of the group and designated recording secretary for the Whirly-Girls, Jean Ross Howard took on the Whirly-Girls as a personal project that she maintained along with her full-time job with the Aerospace Industries Association, but the title “recording secretary” does not quite encompass all of the work that she did. Between 1955 and 1969, Phelan was the organization’s only officer, and even though the group was still only a little over one hundred members strong when she became its first president in 1969, without her, it is questionable whether the organization would have survived.

Along with planning each meeting, Phelan also encouraged women, especially those she already knew and respected as pilots, to learn how to fly the helicopter. For example, upon hearing of WASP Dr. Dora Dougherty Strother’s new post in the Electronics Department of Bell Helicopters, Phelan sent her a letter encouraging her to pursue helicopter flight: “As you may remember, I got my rating at Bell- back in ’54- and think it would be super if you did the same!”

In addition, she corresponded with members throughout the year, congratulating them on aviation and family accomplishments and making sure that there would be as many as possible at each “hovering.” She also acted as the organization’s liaison to the 99s and the post-war WASP organization, the Order of Fifinella, and as the Whirly-Girl press agent, disseminated information through press releases throughout the year. She also wrote a newsletter to highlight new members and newsworthy events in the lives of the Whirly-Girls and other women helicopter pilots.

As the organizer of the Whirly-Girls International Women Helicopter Pilots, Ross Howard, held the organization together for its first twenty years of operation. Other members called her the “den mother,” because as organizer, encourager, and motivator, she was everything they believed that a good leader should be. As of July 10, 1959, Ross Howard Phelan still characterized the Whirly-Girls as “a somewhat loosely organized group—no officers—no dues.”

For such a small organization with members who, for the most part, either were in the midst of raising a family or held a full-time job either in

---

68 Ross Howard, “Welcome to HELICOPTERS!” Letter to Dr. Dora Dougherty, 4 August 1958, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
69 Ross Howard, “WHEE and again WHEE!” Letter to Dr. Dora Dougherty, 10 July 1959, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
or outside of the aviation industry, such a relaxed structure worked well. Most of the early members of the Whirly-Girls did not have time to devote to this fledgling organization, so occasional correspondence with the “den mother” and annual attendance at the Whirly-Girl “hovering” was plenty of commitment.

The Whirly-Girls grew slowly but consistently until its numbers topped one hundred members in 1965. The increased number of women in the organization meant that Phelan could no longer manage it as a “one-woman show,” which led to the creation of an official organizational structure, officers to split up organizational responsibilities, and dues to provide a financial base for the organization. In 1969, Phelan became the Whirly-Girls’ first official president, and by the time Whirly-Girl # 21, Charlotte Kelley, took over in 1975, the group had successfully evolved from a small social organization of women helicopter pilots into a truly international organization that featured scholarships and a strong push for the development of American helicoptering. One of the most significant legacies of the Whirly-Girls has been their commitment to the development of med-evac programs in which helicopters would pick up accident victims from crash sites and deliver them to hospitals or transfer patients from one hospital to another.

Like the 99s and to an extent the WASP, the mission of the Whirly-Girls was a mixture of social, professional, and service goals. Members wanted an organization where they could get together to swap pilot stories while also promoting aviation for women, but like these other two groups, they also wanted to pool their resources in order to create the economic and social support system necessary to really launch women into professional aviation.

While all of these organizations, the 99s, the WASP, and the Whirly-Girls, developed individually, their collective impact made a real difference. As a whole, they provided two different scholarship programs, three groups to bring women pilots together, and three groups to provide leadership opportunities for women. Undoubtedly, the fact that these organizations existed meant that women had more opportunities for growth as pilots, leaders, and aviation professionals than before. But something else had to change in order for women to feel comfortable in the male dominated world of aviation. Just as male pilots had created a distinctive aviation culture, so too would the women of the 99s, the WASP, and the Whirly-Girls. Women could adapt some aspects
of male culture such as flying uniforms and pilot songs, but at the same time build their
own traditions and set of conventions, ways of being that came out of the hands-on
experiences of women in flight.
Chapter 2- Creating a Place for Women Pilots

Men have always had a place in aviation. From the first days of flight, American society associated flight with men and pilots with masculinity, relegating women pilots to an anomalous role at the airfield. Aviation organizations like the 99s, WASP, and Whirly-Girls created a supportive environment for women in which they could develop their professional skills. In addition, women’s aviation organizations provided a safety net for women as their lives changed throughout their career. While many women pilots left aviation at some point to get married and start a family, these organizations were always there as a fixed point of reference for them. Unlike in other industries, women in aviation had a constant support network throughout the twentieth century that made fluid movement into and out of the field possible. Finally, these groups provided an organized network of women that group leaders could call upon to champion the causes of women aviators or rely upon as leaders within the field of aviation. Whether they recognized it themselves, the women of the early 99s, WASP, and Whirly-Girls established the model for women leaders in aviation to follow. WASP and 99 Marty Martin Wyall exemplified that example of a dedicated, energetic leader.

On an otherwise normal day in late June 1957, Marty Wyall, a petite woman of five feet five inches, was busy in her living room cleaning the piano when Margaret Ringenberg, a rambunctious yet dedicated flyer walked into her home. It had been a rough day in the Wyall household as two-year old Peter had smeared lotion over the piano keyboard, leaving a gooey mess on top of, in between, and underneath the keys. Needless to say, Wyall was open to anything that would take her away from her home when Ringenberg barreled through the back door. Ringenberg and Wyall had both been part of the Women Airforce Service Pilots (WASP) during World War II, and although Wyall had flown enough to keep her skills current since her husband proposed in 1945, she had not continued to fly as seriously as her friend. Both women lived with their husbands and children in the city of Ft. Wayne, Indiana where Wyall was happy to babysit for Ringenberg when she went flying, and did so on a regular basis. When Ringenberg walked into her living room that day, Wyall’s first thought was that she had
come to ask her to baby-sit, and what was one or two more kids added to the five she already had? Even though she had had quite enough of her own kids for the day, Wyall would have happily assisted her friend, because she knew how important flying was in Ringenberg’s life.  

Ringenberg, a member of the Ninety-Nines, International Organization of Women Pilots (99s), was scheduled to participate in her very first Powder Puff Derby the following week. The Derby was a timed race, which went from San Carlos, California to Philadelphia, Pennsylvania over the course of a week with a series of timed legs along the

---

70 If not otherwise noted, the stories related to Marty Wyall are based on an interview with the author in Ft. Wayne, Indiana, 29 Sept 2006.
Ringenberg was a qualified pilot, and she was ready for the race. She had sponsors lined up to donate her aircraft, a Cessna 172, and pay for her fuel, she had an unlicensed but prepared co-pilot, and she even had matching uniforms for herself and her co-pilot, sister-in-law Lois Ringenberg. Margaret and Lois had been ready to go until Lois’ mother became very sick, and she could no longer make the commitment to Ringenberg or the race. At the last minute, Ringenberg knew that she needed a very specific woman to fill her empty co-pilot slot: someone who knew planes, could be away for at least two weeks, and most importantly, would fit into her co-pilot’s size 10 uniform.

As much as she wanted to get out of the house, Wyall’s mouth dropped open. Tomorrow. Tomorrow, she thought. The day after today. Darn. That would be a fast turn around time whether she had a family or not. At this point, she would have to get in contact with her mother to baby-sit for the two weeks, get formula for her baby, Martha, who was still nursing, and somehow tell her husband Gene. Wyall looked at the gooey piano and back at Ringenberg. If she could get her mother to baby-sit, get to the doctor, get the formula, and tell Gene, she would go.

Between Ringenberg’s visit and the next morning, Wyall managed the doctor, her mother’s transportation, and telling her husband and family that she was leaving for the next two weeks. Early the next morning, Wyall and Ringenberg loaded into Ringenberg’s Cessna 172 and headed out to Cheyenne, Wyoming on their way to
California to prepare for the Powder Puff Derby. While Ringenberg spent time preparing for the race and visiting friends, Wyall visited WASP women living in California whom she had not seen in years. Other than a few local WASP such as Ringenberg, Wyall had not seen any of her other fellow flyers since she left the WASP training base in Sweetwater, Texas in December 1944. As a result, spending time before and during the race with so many WASP was a life-altering experience.

Wyll loved the chance to talk with fellow WASP. Whether it was because they were part of a small sorority of women pilots, because they had many collective memories of their time as WASP that no one else quite understood, or because they had not seen one another in almost fifteen years, the strong bond between these women was tangible, especially for Wyall who had been away from flying for so long. Even though officials disqualified their airplane from the race because they had failed to complete the take-off procedures in proper succession, Wyall took her experiences in the Powder Puff Derby to heart. By the time she started working toward a WASP reunion, using the Order of Fifinella’s limited organizational roster had become very difficult because many of the over 1,000 WASP had married, divorced, or remarried during the twenty years since deactivation. With her experience in the 1957 Powder Puff Derby, Wyall realized that the one place where many WASP still “flew” in the same circles was among the 99s. With the help of friends within the WASP and the 99s, Wyall managed to create a sizable roster of WASP membership that she used to contact the women and invite them to the first ever reunion dinner to be held at the 99s convention in Cincinnati, Ohio in August 1964. The reunion of eighty-five WASP, with speakers such as WASP Dr. Dora Strother and Jacqueline Cochran, was a huge success.

With that one dinner, the Order of Fifinella found new wings. Marty Wyall became the organization’s historian and leader, and even though she did not necessarily recognize it herself, her dedication to the WASP helped reconnect the group, which in turn provided the organization necessary to launch a campaign for WASP militarization in the late 1970s.\footnote{Margaret Werber Gilman and Jean Terrel McCreery, 44-W-10: The Lost Last Class of Avenger Field (Private Collection of Marty Wyall, 1996).}
After her first Powder Puff Derby, Wyall continued raising her children and managing their family farm, but she did not stay out of aviation for long. With help from her husband, a civil engineer who worked on the interstate highway system in Indiana, Wyall became the only pilot of a small commercial aviation service to fly parts and important contractors to and from worksites, manufacturing plants, and offices around the greater mid-west. Wyall continued as her service’s sole pilot for several years, making just enough money to keep her airplane flying and pay for gasoline, always considering her work more of a hobby than a vocation.

Wyall had been a member of the 99s since 1944 when she had joined while in WASP training in Sweetwater, Texas, but she did not become active in the organization until the Derby with Ringenberg. After that, she took up racing regionally in races such as the Indiana Fair Ladies Race and even attempted the Powder Puff Derby in 1958 as the pilot of her own aircraft. Wyall’s passion for her fellow WASP came to the forefront of her life as she became increasingly involved in the post-war organization. Without asking for compensation or recognition, she edited the WASP Newsletter and maintained a roster for the organization for several years. Eventually, she began to create an informal WASP archive, collecting everything from reunion programs to the letters she

---

sent home during World War II to WASP newsletters that she herself edited. Before long, she had a large shed full of WASP papers, memorabilia, and ephemera, and in 1992, she donated all of these records related to the WASP and the 99s to Texas Woman’s University where they became the cornerstone of the country’s largest WASP archive, as well as part of a growing 99s archive.\footnote{Marty Wyall, interview with the author, Ft. Wayne, IN, 29 Sep 2006.}

Piloting is and has always been an exclusive club, with a pilot’s license as the only ticket for entry. But in the early days of aviation, aviation was more fraternity-like than anything else. The field open only to men, and even if women such as pioneer Harriet Quimby, air circus performer Katharine Stinson, and stunt flyer Ruth Law could fly as well as male pilots, men still denied them entry into the fraternity.\footnote{Wendy Boase, \textit{The Sky’s the Limit} (New York: MacMillan Publishing, 1979): 18-21.} These women, who had all begun flying within the first decade that airplanes were available, remained on the outside of mainstream pilot culture primarily because they were women. If African American, these women had an even tougher time entering mainstream aviation, as shown by Bessie Coleman’s forced trip to France for licensure. The public saw them as anomalies and sideshow freaks who may have been great pilots, but were not representative of all women. Accordingly, other pilots always considered them “women pilots,” never just “pilots.”

In the 1920s, women began their infiltration into the world of the male pilot through racing and then organization. In the Powder Puff Derby, women showed that regardless of their sex, they were competent flyers capable of navigating and flying long routes across the country. These pilots were new, different women, including women such as Amelia Earhart, the iconic figure of women in aviation, Pancho Barnes, the rough and tough pilot who defied all social and gender conventions, and Louise Thaden, the small town girl who exemplified superior airmanship. Pilots first, these women took their profession seriously. In their training, devotion, competition, and even in the way they dressed, these new women consistently demonstrated their competence, skill, and professionalism.

“Practical” accurately describes the clothing women pilots chose to wear. Rather than dresses, skirts, or heels, these women wore long pants so that they could straddle the
stick, low boots so that they could operate the rudder pedals, and often a leather jacket and flying cap to keep themselves warm at high altitudes. Women pilots during the late 1920s and the 1930s relished their popular depiction in pants, silk blouses, and leather jackets, as evidence that they were a stronger, more daring breed of female American. Especially for Earhart, her pants and jacket were a conscious choice. She specifically created an image of herself as strong, yet feminine. But, Earhart’s slim, attractive figure still positioned her primarily as a “woman” pilot and not just a pilot. Regardless of their daring dress in the air during the Powder Puff Derby in 1929, Earhart, Thaden, the race’s winner, and most of the other pilots, Barnes excluded, wore skirts and dresses during their stops along the way from Santa Monica, California to Cleveland, Ohio. Willing to break social norms by flying in pants, women pilots wore dresses during their stops so as to not upset supporters at airports along the way.


As much as the race itself sparked increased interest in women’s aviation, the pilots themselves sparked an equal amount of curiosity. Earhart noted in her autobiography that women came from all around “to see what the powder puffers themselves looked like and after that what kind of airplanes they had.” One unnamed male journalist even noted, “I don’t care what you guys write about their bravery, their

---

76 Boase, 77.
skill, their sportsmanship or their adaptability to goddam aeroplanes. You can say what you like. But what I’m gonna say is, them women don’t look good in pants.”\textsuperscript{77} Pants or no pants, the fact of the matter was that even when women such as Jacqueline Cochran defeated men in coed races like the Bendix Air Race in 1938, the public still saw women pilots as exceptions to the rule, and therefore, not full members of the fraternity of flight.

Once women organized themselves through the 99s, they recognized that they had their own, equally valid female pilot culture. For the first members of the 99s, pilot bonding happened at the airfield, but it did not involve being on the same commercial airline crew, working for the same private aviation company, or being in the same military squadron, because women were excluded from each of these areas. It happened because they had similar aspirations to be great pilots. With a new, woman-centered culture, they focused on making aviation more available to a wider range of women through scholarships and education programs, emphasized the specific needs of women pilots who often had family commitments outside of flying, and created a space in which women could organize and publicly support one another. Even though women formed their own pilot subculture through the 99s, they could not enter mainstream aviation until they could prove themselves to other pilots, namely, male pilots. The WASP program of World War II provided that opportunity as it threw women into the combined world of aviation and military style service for the first time. Even though they did their primary, basic, and advanced training on an all-female base, the WASP still had to assimilate into male pilot culture in order to survive training, and especially in service where a small number of women integrated into male units across the country.

As a whole, though, the WASP did not assimilate into male pilot culture as much as they developed their own self-contained unit that collectively dealt with WASP issues, created WASP traditions, and supported its members.

Although Marty Wyall’s father had been a chaplain during World War I, she did not have first hand knowledge of military life prior to the WASP. It would be reasonable to assume that she needed time to adjust before understanding or fitting into this different military world. But no, as she had earlier settled into college life at DePauw University, she loved it from the moment she arrived at Avenger Field. She wrote to her parents on her first day of WASP training, May 26, 1944,

Dearest Mother and Dad,
Gee, what a long day this has been. We came out in 2 huge semi-trailer trucks with benches arranged in the trailer, and have spent the entire afternoon marching here and there and in lengthy lectures from the chief of staff, the primary training (flying) officer, the flight surgeon and the physical training teacher. So far, I’m thrilled beyond measure. 78

For Wyall, as for other women, entering the WASP was overwhelming, but most loved the excitement and constant movement that training brought them. Wyall continued in another letter on May 28, “Well, I still love it! This seems like dreamland down here…There is a wonderful spirit among the girls down here. All the girls try to be so

---

78 Durr, Letter from Mary Anna Martin to her parents, 26 May 1944 (Denton, Texas: Texas Woman’s University WASP Collection): 10.
friendly—almost to the point they outdo themselves.” Although women such as Wyall raved about their WASP experiences, other women such as Marjorie Osborne Nicol felt torn between the excitement and the pressure of army life.

Osborne Nicol wrote home, “Sometimes I’m very discouraged about my flying, but everyone else is, too. We all seem to be of the same opinion that we’ll wash out before we even solo.” The pressure Nicol felt was natural and not any different from the pressure on newly recruited male pilots who were also expected to perform to the army’s highest standards at all times. Because they were trained at a single sex base, these women could not know how much their skill and organizational culture matched that of male pilots, but as instructor pilot Kenneth Eckley said, “I was probably like all the rest of the men pilots, wasn’t sure they [WASP] could fly…but still it turned out very well. I’ve had women pilots that were…better…than any man pilot I flew with.” In fact, Wyall noted later in life that they did not think about how they fit in larger military pilot culture, and their goal was never to be “one of the guys.” Instead, their focus was supporting one another through training and then maintaining their group cohesion once they began flying missions.

The WASP truly needed the support of a female pilot culture to offset the challenges they faced while on active duty. Margaret Ringenberg remembered an incident when she and a few other WASP were eating a buffet style dinner in the officer’s mess at New Castle Army Air Base in Wilmington, Delaware in which she experienced resistance from the male pilot sitting next to her.

Two or three of us—maybe three or four of us—had come in and we were sitting across from each other and filled the table. Dessert was a bowl of fruit that went passing around. The fellow on my left held the fruit over, and I reached over to take some grapes out to put on my plate. He dumped the whole bowl in my lap and says if you can fly airplanes and want a man’s job, you can hold your own fruit. I took the bowl and picked up the things and put them back in, and passed it on.

---

79 Durr, Letter from Mary Anna Martin to Dearest Mother, Dad, Louise, Grandma, and Berney Dean, 1 June 1944 (Denton, Texas: Texas Woman’s University WASP Collection): 12.
80 Nathan, 39.
81 Nathan, 39.
She and the other WASP just continued their dinner as if nothing had happened. Ringenberg remembers, “They would tell us why don’t you go back? If you want to do something good for the country, go back and do some riveting,” but as a general rule, the women were not mistreated. Wyall stated that she only felt discriminated against by older officers who “were very, very incensed that Miss Cochran decided that their base was one of the bases that women were going to be at,” but when it came to the officers who were closer to her age and experience, “they accepted us for who we were, and we didn’t have any problem.” Following graduation, the WASP were split up and assigned to different bases across the country at which time they were put under the control of the Army Air Force Ferrying Command and male base commanding officers who often saw the WASP as a nuisance and neglected them to the point of not providing adequate lodging or bathing facilities on the base. Therefore, the culture of mutual support and understanding that the WASP created during training was crucial to their success.

Even though they did not directly compare themselves with male pilots, women pilots adopted the same values and way of life as male pilots because they experienced the same army training as the rest of the Army Air Corps pilots. Just like any male pilots trained for military duty, they followed army training schedules, did regular physical training, endured weekly bay inspections, sat through endless ground school lectures, dealt with cantankerous instructor pilots, and had to pass nerve wracking check rides. In addition to an army training schedule, women also followed their instructors’ commands, which led to their participation in some of the traditions of military service. Whether their instructors intended to or not, having the WASP participate in traditions such as the wishing well allowed them to become an increasingly important part of the military flying club. Whenever a pilot was about to take an exam or go on a check ride with an instructor pilot, she would drop a coin into the well for good luck as she marched toward the classroom or the flight line. Then, when she finally soloed in an airplane, her fellow trainees would drop her into the well supposedly to “cool off a ‘hot’ pilot.”

83 Ringenberg, 19.
84 Marty Wyall, interview with the author, Ft. Wayne, IN, 29 Sep 2006.
Part of the fun of the wishing well was that by the time the class moved on to a new phase of training, the unit had dunked every woman in turn. It was a right of passage in which each woman took pride. Wyall noted on Tuesday, June 13th, 1944:

  W-10 is really getting into the spirit of Avenger. Tonight there was really a free for all trying to duck everyone who soloed PT’s [primary trainers] today. Saturday the 1st girl soloed and perhaps by the end of the week we will have all soloed. Three of my baymates swam with the fishes in the wishing well.  

While the WASP adopted the wishing well tradition from other Army Air Force training schools, they transformed the practice into something that they remembered as unique to the WASP. The well marked each woman’s progress as it also marked the unity of the class that tossed each and every woman into the well.

Another tradition that these women adapted was that of writing pilot songs for their specific class and for the WASP as a whole. According to Les Cleveland, in *Dark Laughter: War and Song and Popular Culture*, the war song began out of a soldier’s need both to amuse himself and his comrades during down times and to find release for the frustrations of military life. He identifies five different categories of emotions captured in most war songs including happiness, reluctance to fight, sexual desire, hunger, and fear of death. Although the WASP never entered battle, they did create songs to pass the

---

86 Durr, Letter from Mary Anna Martin to Dearest Folks, 13 June 1944 ((Denton, Texas: Texas Woman’s University Special Collections): 17.

time, to lift their spirits, to commemorate their training class, to celebrate the WASP, and to display their adventurous, socially daring spirit.

Their songs reflected the influence of male pilot culture, but because they were written by women for an all-women’s squadron, they placed women at the center as subjects and not as objects of another’s view. At first glance, the following song presents a woman in a typically compromising sexual situation and not as a pilot as she “Cuddled in the cockpit to keep the pilot warm,” but with further analysis, it is apparent that although the woman in question may regret having “cuddled” with the pilot, it had been a conscious decision on her part. The author claims her own sexuality, making it the subject of her own decision making process, not a result of an action taken by a man. She uses the jovial style of a song to warn other women pilots that even though the male pilots they meet may be charming, they are likely only interested in sex.

**Zoot-Suits and Parachutes**

Before I was a member of the AAFTD  
I was a working girl in Washington, D.C.  
My boss he was unkind to me, he worked me night and day  
I always had the time to work but never the time to play.

(CHORUS)  
Singing zootsuits and parachutes and wings of silver, too  
He'll ferry airplanes as his mama used to do.

A long came a pilot, ferrying a plane,  
He asked me to go fly with him down in lovers' lane  
And I, like a silly fool, thinking it no harm  
Cuddled in the cockpit to keep the pilot warm.

(CHORUS)  
Early in the morning before the break of day  
He handed me a short-snort bill and this I heard him say  
Take this, my darling, for the damage I have done,  
For you may have a daughter or you may have a son;  
If you have a daughter, teach her how to fly,  
If you have a son, put the (censored) in the sky.

(CHORUS)  
The moral of this story as you can plainly see  
Is never trust a pilot an inch above the knee,  
He'll kiss you and caress you, and promise to be true  
And have a girl at every field as all the pilots do.

Courtesy of The Woman's Collection, Texas Woman's University

---

These songs reflect the fact that the WASP were highly independent women who sometimes ignored social mores and freely expressed their sexual desires and military frustrations. At the graduation of WASP class 44-W-2, the trainees took advantage of the fact that General Hap Arnold was in attendance to sing the “infamous and forbidden” song “Rugged But Right!,”

I just called up to tell you that I’m rugged but right!
A rambling woman, a gambling woman, drunk every night,
A porterhouse steak three times a day for my board,
That’s more than any decent gal in town can afford!
I’ve got a big electric fan to keep me cool while I eat,
A tall handsome man to keep me warm while I sleep!
I’m a rambling woman, a gambling woman and BOY am I tight!
I just called up to tell you that I’m rugged but right!
HO-HO-HO—Rugged but right!

I just called up to tell you that I'm rugged but right!
HO-HO-HO, rugged but right!89

Cochran had banned the song because of a combination of risqué lyrics and its promotion of the WASP as an organization in which women drank beer, gambled regularly, and cavorted with strange men. Cochran wanted her organization to be one of upstanding women of strong ability and even stronger character, and she was concerned that this kind of image would peg the WASP as a haven for social and sexual deviance, simultaneously attracting homosexual women and alienating the group from the public. Although Jacqueline Cochran reportedly “sat silent and stone-faced,” General Arnold roared with laughter. To him, the song did not depict social deviance. Instead, it depicted the values of the male pilots that he knew. He most likely was not expecting the WASP to be so audacious and so much like his male pilots whose songs were just as bawdy.90

These women were not afraid to be audacious and ignore the expectations that their society had for them to be “respectable” girls. Just like male pilots, they talked about their skill as pilots, their deep down reluctance toward authority, and their willingness to use gruff, borderline obscene language to point out their toughness as pilots. The entire song exudes a sense of disregard for authority and confidence in the

90 Verges, 170-171.
abilities of the WASP, a mutual trait among most of the graduates. The WASP believed that in their own way, they were respectable girls, because they were serving their country, and they believed themselves to be as important as the men who were serving simultaneously. In making themselves the subjects of these sometimes coarse songs, the WASP adapted existing pilot culture as their own. Yes, they had pilot songs for a variety of different occasions that ranged from standard to very individual and family friendly to downright bawdy. They sang about uniquely WASP problems and experiences and did not refer to women as sexual objects.

Even with traditions that followed those of the men around them and the adoption of pilot songs, the WASP and all female pilots of their time still did not quite fit into pilot culture. When the WASP entered service in 1942, they were part of an experiment, and the army hoped to spend as little money on them as possible. Not only did the WASP require separate bathroom and living facilities from male pilots, but also they had to have their own uniforms, too. One obvious outward example of their temporary status was the fact that the WASP did not have official military uniforms until 1943, and even when those uniforms became available, women pilots had to pay for them out of pocket. A uniform is a very important symbol of a person’s status in the military. To the outsider, it differentiates the branches of military service, officers from enlisted men, generals from lieutenants, and military from civilian. To the insider, it is the first signifier of how a soldier, sailor, or airman should treat a fellow service man or woman, so a group flying military airplanes and living on military bases that did not have an official uniform automatically became suspicious, especially since the group was made up of women.

The uniform that the WASP had from the beginning was overalls, which flyers affectionately referred to as “zootsuits” in reference to their extremely large size. As Mary “Minkie” Heckman remembered, “We tried them on and I don’t care how big the girls were, the suits were all too big.”91 Not only did they make them look small, these large, surplus men’s overalls were another reflection of the temporary status of the WASP and the general understanding that they were not really part of the fraternity of flight. Men got uniforms that fit, but women were only temporary, so they did not deserve the same courtesy. When Life magazine did a cover story on the Women

---

Auxiliary Ferry Squadron, the precursor to the WASP, these overalls were the only uniform the women had to wear, and because they were so large, they made the women look even more like little girls unsuccessfully trying to fit into their big brothers’ clothes. Betty Huyler Gillies noted that, “We looked like a bunch of—it was [a] terrible looking group of people because we didn’t have any uniforms and we had coveralls.”92

![Figure 20: WASP helping each other tighten their “Zootsuits.” Texas Woman’s University WASP Collection](image)

Over time, the WASP recognized the importance of a uniform to create pride and unity among their members. Therefore, they created their own uniform, adopting khaki pants and a white blouse with a khaki overseas cap to create uniformity among the trainees and pilots. Wyall wrote to her parents in May 1944 that they had started wearing their khaki pants or “G.P.s,” because “a long time ago the girls did not have a unified dress. General Arnold was coming down and when Jacqueline Cochran got wind of it she ordered the girls to wear khaki slacks. After they were fitted, the general was detained in Washington and never came; hence the General’s pants.”93 Finally, on March 11, 1944, after several months of wrangling by Jacqueline Cochran, the WASP got

93 Durr, Letter from Mary Anna Martin to Dearest Mother and Dad, 27 May 1944 (Denton, Texas: Texas Woman’s University WASP Collection): 11.
their Santiago blue uniforms, the only blue uniforms serving the American military during World War II. They finally looked like an official arm of the military, and although they were technically still a civilian force, they felt like a more legitimate part of the Army Air Force and consequently validating female pilot culture. By the time those later classes had graduated, some WASP also went through officer training after they finished flight training, so not only did they look like officers with their Santiago blue uniforms and silver wings that Cochran provided herself, but they also acted more official and were treated with more respect by their fellow male officers.

Figure 21: WASP women walking in front of a B-14 Liberator showing off their new Santiago blue uniforms. 
http://www.wasp-wwii.org/photo/

By the end of 1944, the WASP were a real part of the military, but once they were deactivated, their WASP uniforms were also deactivated. The WASP had always believed that eventually Congress would agree to militarize the organization, but as Marty Wyall remembered, time just ran out. They lost all symbolic and real meaning, which mirrored the experiences of the women pilots themselves. At least with uniforms and silver wings, the WASP looked like military pilots who belonged on the base and in the cockpit, but without these, the place of women aviators became much more controversial.

They were not part of the military, they could not find commercial aviation jobs, and they usually lacked the finances to fly. In addition, with such a large cohort of male pilots returning to the United States following World War II, male pilots quickly filled
any aviation jobs that may have been temporarily open to women. Of those who chose to stay in aviation after deactivation of the WASP program in 1944, some women found jobs instructing student pilots, while others found jobs flying for sightseeing companies, small corporations, or, as Wyall had done, started their own flying services. But, for the most part, because jobs were severely limited, many WASP left flying after a few years or a few decades. Many simply never flew again.

Still fresh from her WASP training, Marty Wyall wanted to stay in the air. Although she did not have enough money to buy or maintain her own airplane and was barred from the commercial airline industry, she did find a job as an aerobatics instructor at Franklin Flying Field, a small airport in rural southern Indiana, which gave her the chance to keep flying at least through the summer of 1945. Wyall soon found that being an instructor pilot was difficult because she did not have a strong enough voice to constantly yell instructions. Not only did it require a physically bigger voice than she possessed, but she developed an annoyance for students who did not know what they were doing, were not willing to ask questions, and could not get the maneuvers right, whatever they did. Regardless, Wyall loved the chance to fly daily and especially to perform aerobatics, which was her favorite part about flying.

![Figure 22: Marty Wyall flying a BT-13 at Avenger Field in Sweetwater, Texas. Texas Woman’s University WASP Collection](image)

During the course of that summer, Wyall, whose last name was still Martin at the time, flew hundreds of hours, enjoyed her time with friends at the local lake, and eventually met her future husband, one of her flight students. Gene Wyall was a
Technical Sergeant in the Army Corps of Engineers biding his time at Indiana’s Camp Atterbury, waiting for his army discharge. Although he had been reluctant to have Martin as his instructor when they first met at the airfield because she was a young woman whom he could not imagine as a competent pilot, Gene Wyall became an eager student who eventually asked her out on a date. Their affection was mutual, and during their third official date, Wyall proposed, and Martin accepted. When she returned to the airfield, Martin told her boss, Mr. Mullendore, her exciting news. Rather than congratulating her, Mullendore fired Martin on the spot. She remembers that even though he retorted, “I didn’t hire you to find a husband. I just wanted you to keep the books, and run the airport, and be an instructor,” she was more satisfied with her engagement than her job, so she walked out of the airfield and out of aviation for the next eleven years. Two years and two kids later, she and Gene moved to Ft. Wayne, Indiana where they lived together until his death in 1994.94

Many of the problems that the WASP faced, such as Wyall’s run-in with Mullendore, were reflections of societal expectations after the war. As World War II ended, women all over the country lost their jobs in factories, places in the military, and temporary freedom from traditional expectations of women’s “proper” roles. At the same moment that America thanked women for their efforts on the home front as members of the military freeing more men to fight, as “Rosie the Riveter” producing wartime goods, and as homemakers planting Victory gardens, leading scrap drives, and accepting rationing, now policy makers argued that it was their patriotic duty to leave their jobs for returning veterans. For the most part, popular culture and the media encouraged Americans to believe that just as soldiers’ experiences during the war had been temporary, so had women’s experiences as workers.95 Even women like Wyall, who had loved their wartime flying experience, adopted the socially accepted idea that they should find a husband, settle down in a nice suburban home, and start a family. For her, it was a chance to start something new apart from the war. She wanted a husband and a family,

94 Marty Wyall, interview with the author, Ft. Wayne, IN, 29 Sep 2006.
and if flying did not fit with those two devotions, she was happy to forgo them for the short-term.

For the most part, breaking gender barriers was not the reason that women had joined the WASP. They had joined for the adventure of flying, the opportunity to get away from home, and the chance to do something different. When the military unceremoniously disbanded their organization, they expressed their pain and anger among themselves and not toward organized authorities. When it came to fighting for the WASP and their own rights to fly or accepting traditional expectations of husband and children, the WASP largely accepted these domestic roles. Dora Dougherty Strother confirmed, “Now after wartime, we were all willing to go back and be wives and mothers and take the place that we’d [had] before the war, but during the war, we were really quite liberated because of necessity and so I think there was some resentment.”

As Dougherty Strother remembered, some WASP eagerly left the organization to create a family, but other women entered the domestic sphere because they were expected to and not because they wanted to be a mother or a wife. Those who did end up flying did so because they resisted the expectation to marry and start a family or because they had the individual determination and the right connections to fund flying.

In the immediate post-war period, the 99s once again became America’s largest all-woman’s aviation organization and one of the only places in the United States where women could share the company of like-minded women flyers. Even with such large numbers, the 99s remained a relatively quiet organization during the 1950s in particular. Only the organization’s wealthier women and women who had no children had the time and financial resources to participate in events such as the Powder Puff Derby, but beginning in the late 1950s and early 1960s, many women who had stopped flying to raise a family returned to aviation, and 99s activity peaked in the mid-1960s. Its strength came from the fact that it was a self-run organization that was designed by and for women, it was not dependant on the whims of politicians or the military, and it already had a network of ties that linked women pilots all over the country. Even though the 99s organization had lain mostly dormant during World War II because so many of its members had joined the WASP and because wartime civilian flying restrictions

96 Strother, “U.S. Air Force Oral History Interview.”
prevailed, it remained true to the original goal to provide “a close relationship among women pilots and to unite them in any movement that may be for their benefit or for that of aviation in general.”

Because it was as a more mature organization whose members had significantly more hours and years of experience than before World War II, the 99s added additional activities to traditions of racing and record setting. Long-time air-racer, 99, and 99 President from 1955-1957, Edna Gardner Whyte remembered that

It pleased me to belong to a group that sponsored hundreds of aerospace educational workshops for teachers, gave airport tours for school children, aviation talks to service clubs, courses to alleviate flying fears in apprehensive airplane passengers, flight instructor revalidation courses, and, right down my alley, encouraged races to upgrade piloting skill and proficiency.

Each of these activities was part of a larger 99s focus on further developing the organization to speak to the needs and talents of women pilots.

Following Amelia Earhart’s disappearance while attempting a flight around the world in 1937, the 99s decided to create a scholarship in her name in which “all members could participate in carrying on her enthusiastic and unselfish aims…most particularly that of strengthening and cementing women’s permanent place in aviation.” Although the 99s awarded the first scholarship in 1941, the scholarship did not really take off until after World War II when larger chapters, more chapters, and generous individual contributions made it possible to offer multiple scholarships worth over $1000 each. Many of the 99s of the 1950s, 1960s, and 1970s had limited personal financial resources so they had to use whatever means they could to raise money for the Amelia Earhart (AE) Scholarship including, in the words of the official history, “rummage sales, bake sales, concession stands, hangar dances, plane washes, poker flights, and penny-a-pound days.” Women understood that their best bet for outside support was not only from within the aviation community with plane washes and charity flights but also from

---

97 Dorotha Hendricks and Jane Roy, compilers and editors, “The 99s, Inc.,” October 1969, The Woman’s Collection, Texas Woman’s University, Denton, Texas.
100 History of the Ninety-Nines, Inc., 39.
women outside of aviation circles who would recognize their techniques for fund raising such as rummage sales, bake sales, and hangar dances.

The Amelia Earhart scholarship was immensely successful. It allowed new women the chance to begin or advance their flying careers each year, and as the organization grew, so did the number of scholarships and amount of money offered. Between 1941 and 2006, the Amelia Earhart Scholarship Fund helped over 400 women begin or enhance their aviation careers and went from offering just one $125 scholarship to several in all areas of pilot, technical, and academic training. Another advantage of the scholarship was that it served as a recruiting tool, constantly bringing fresh pilots to the fold, because in order to be scholarship-eligible, a woman had to be an active member of the organization. Regardless of whether a woman joined the organization just to get a scholarship or whether she really wanted to be a member, the fact that she was a member at all was significant, and it meant that young, fresh faces constantly entered the organization, keeping it up to date with changes in the field and the changing needs of women pilots.

In 1967, just twelve years after the creation of the Whirly-Girls by Jean Ross Howard, the organization founded a similar scholarship to honor Doris Mullen, Whirly-Girl number 84 who had been fatally injured in an airplane accident on July 24, 1966. The Whirly-Girls used the very successful 99s Amelia Earhart scholarship as their model, noting its success and necessity for increasing the number of women in aviation. Although it began as a single $500 scholarship to help one woman earn her helicopter rating, the scholarship grew dramatically, and by 2006, the organization could offer ten different scholarships in technical and flying categories totaling over $45,000 annually. One of the most significant aspects of the Doris Mullen scholarship was that the Whirly-Girls offered it to any woman interested in becoming a helicopter pilot or strengthening her helicopter skills. She did not have to be a member; she did not have to be a pilot. She just had to show the scholarship committee that she was dedicated to learning how to fly a helicopter.

---

Beyond their scholarship programs, both the 99s and the Whirly-Girls helped create an increasingly prominent female pilot culture through organizational initiatives that used their strengths of organization, philanthropy, and mutual support. While at the National Association of State Aviation Officials in Sun Valley, Idaho in October 1957 with Charlotte Sullivan Kelley, fellow Whirly-Girl and the only woman in the United States serving on a state Aeronautics Commission, Whirly-Girls Secretary Jean Ross Howard helped prompt the creation of a Whirly-Girls song. Ross Howard wanted the Whirly-Girls song to become a catchy tune that Whirly-Girls and non-Whirly-Girls might recognize. The song went:

Men run for cover
When they start to hover
This autorotation
Is not automation
They pilot for real
And they do it by feel
The air-ocean’s pearls
Are The Whirly-Girls.

They keep their perspective
And use the collective
The rotors will whirl
At the touch of a Girl
The bright skies smile
As the ladies beguile
They’re the pilots in pin curls
The wonderful Whirly-Girl Girls!

Lyrics by Francis Fox
Score by Bill Kleine

Courtesy of The Woman’s Collection, Texas Woman’s University

While the Whirly-Girls song did not have the intentional sexual connotation or daring of those written by the WASP, it represented the efforts of women pilots to create a collective place for themselves in aviation. The song accurately presented the Whirly-Girls as an organization that simultaneously valued piloting skill and the fact that they were women. While the song begins by stating the piloting prowess of a Whirly-Girl as “Men run for cover when they start to hover,” it continues by feminizing the women as “the air-ocean’s pearls” and as the “pilots in pin curls.” Unlike the WASP whose songs

---

103 Jean Ross Howard, Memorandum to The Whirly-Girls, 6 Nov 1957, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
reflected their socially daring spirit, the Whirly-Girls songs hoped to create an image of a competent, yet feminine, pilot.

When Francis Fox and Bill Kleine wrote the Whirly-Girls song, the organization was just over twenty members strong, but Ross Howard believed in the potential of the group and felt that the song would give Whirly-Girls around the world a sense of unity and identity. She even suggested in an update memorandum to the Whirly-Girls members that they “send the song to some of our TV friends for possible use on a program.”¹⁰⁴ A small but tightly knit group, founder Jean Ross Howard wanted to see the Whirly-Girls grow to include as many women as possible. A song that lauded both pilot skill and feminine beauty characterized the group perfectly, and welcomed all comers.

Ross Howard, known as the “Den Mother” to her loyal members, kept the organization together through correspondence that spanned the 1950s, 1960s, and 1970s. Ross Howard was a savvy marketer for the organization as she took every opportunity to advertise through press releases, word of mouth, and publicized events. Ross Howard knew that many women stopped flying altogether when they had children, so to keep women interested in helicopter aviation after having a baby, she consciously sent new congratulations to the new mother on the addition to her family. Along with that, she sent a letter directed to the baby, if she was a girl, offering her entrance into the organization once she reached aviation age, seventeen years old, and had earned her helicopter license.

Before Ross Howard wrote and sent out the first Whirly-Girl newsletter in 1956, she had already sent out a press release about the organization that earned the headline “Their Eggbeaters Whip the Skies” upon publication.¹⁰⁵ Even though most of the Whirly-Girls were career women, Ross Howard played up the depiction of them as “girls” or homemakers who had taken to the skies, which was a mark of the value placed on the post-war domesticity of the 1950s.¹⁰⁶ While even the name “Whirly-Girls” represents them as “girls” and connotes a sense of youth and naïveté among grown

¹⁰⁴ Ross Howard, Memorandum to The Whirly-Girls, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
¹⁰⁵ Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
women, Ross Howard did not think about the organization in those gendered terms. She wanted recognition for the organization and sought to attract prospective new members, so she worked to make the organization seem more enjoyable and less intimidating than a professional organization might sound to women who never planned to have professional aviation careers.

Ross Howard led the organization through difficult times. While Ross Howard’s personal correspondence exuded a sense of confidence and maturity, articles such as one written in the April 14, 1958 edition of the *Northern Virginia Sun* reveal a different subtext. Author Phyllis Battelle began the article promoting the Whirly-Girls as “a most exclusive set in America, bright enough, quick enough, brave enough, and rich enough to devote her leisure hours to driving ‘whirly birds.’ Or, as the technical jargon goes, helicopters,” which established the organization as a bastion of feminine strength, but as it continued, it stereotyped women as material beings solely concerned with preserving their well-dressed look. “One of the big selling point for the girls was that here, at last was a conveyance to pamper not only woman’s curiosity, but her vanity. ‘Can you imagine?’ gasped one lady, after her debut flight, ‘You just step right in and take off…and it never even musses your hair?’” 107 While the Whirly-Girls promoted both images of themselves, as strong, competent women as well as flippant, materialistic girls, it is unclear which image Ross Howard wanted to stand out as that of the “real” Whirly-

---

107 Phyllis Battelle, *Northern Virginia Sun*, April 14, 1958, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
Girl. While the 1950s Whirly-Girls may have appeared from the outside as just one more addition to a wealthy woman’s club schedule, it was a real organization that helped women network among other pilots, share experiences, and perform significant public service.

Beyond the scholarship program that began in 1957, Jean Ross Howard devoted herself to the expansion of med-evac helicopter rescue programs and an increased number of heliports throughout the country to promote private and professional helicopter use. In 1961, the organization made its first official trip to help promote these ends. With the help of Whirly-Girl Jane Hart and husband Senator Phillip A. Hart (Dem. Mich.), eleven Whirly-Girls, including Whirly-Girl #1 Hanna Reitsch, founder Jean Ross Howard, and former WASP Dora Dougherty, met with President John F. Kennedy on the White House lawn to discuss the creation of a downtown heliport in Washington, DC as well as the development of additional heliports across the country.  

![Figure 24: Whirly-Girls with President John F. Kennedy at the White House in 1961. Texas Woman's University Whirly-Girl Collection.](image)

While it is unclear whether the efforts of the Whirly-Girls led to the immediate creation of a Washington, DC heliport, their meeting with President Kennedy represented the first time the Whirly-Girls had used their organization as a political tool to enact change. Whether they considered themselves a political organization or not, they had used their organization’s connections and the power of numbers to secure a meeting with the President of the United States, by definition a political act. Regardless of their small size,

---

the Whirly-Girls demonstrated the organization’s importance and success as a tool for women to enact collective change.

During the latter part of the twentieth century, the post-war WASP organization also used its collective will to push for political change. After World War II, the United States government sealed and classified the records of the WASP. As a result, by the 1950s and 1960s, researchers did not have access to their experiences, so those experiences did not make it into many contemporary histories of World War II. While some of the WASP themselves stayed in touch through the Order of Fifinella, the public gradually forgot about them and their contributions to aviation. In contrast, because other women’s military organizations like the Women’s Army Corps maintained their status as military organizations following World War II, their records remained with unit historians who made them available for inquisitive researchers. During debates in the mid-1970s regarding the official opening of military aviation to women, the government once again opened the WASP records in an effort to decide whether the military’s first experiment with women as military aviators had been a success. The files eventually produced conclusive evidence that the women had been highly successful military aviators, opening the doors of military aviation to a new generation of women pilots.

While WASP such as Dr. Dora Dougherty Strother and Jean Ross Howard expressed interest in extending Order of Fifinella membership to a new generation of women military pilots, the Order decided against admitting the new military pilots to the organization. Although many sided with Dougherty Strother who acknowledged, “these women have had an experience comparable to our own and it would be a means of bringing new life into the organization,” other women contended that new military pilots would take over the organization, and in the process the character of the Order as a veteran’s organization for the WASP would be lost.\footnote{Dora Dougherty Strother, Letter to Mrs. Nancy Batson Crews, President- Order of Fifinella, 17 Jan 1975, WASP Collection, Texas Woman’s University, Denton, Texas.} Because the WASP rejected the inclusion of these new aviators, they organized their own group, Women Military Aviators (WMA), to serve as an organization for military pilots and veterans just as the 99s had for women pilots, the WASP had for World War II military pilots, and Whirly-Girls had for helicopter pilots. While the WASP never officially included the women of
WMA into their organization, the two groups gradually grew together as women of the WASP aged and were no longer able to continue the organizational efforts they had exerted at an earlier time.

The official acceptance of women into military training prompted the WASP to reexamine their own service and reconsider militarization, official acknowledgement of the WASP as military pilots, for the first time since 1944. Through a series of long battles between 1972 and 1977, the WASP became an increasingly political organization dedicated to securing militarization and the accompanying veterans benefits. Although not every WASP expressed interest in militarization, the Order of Fifinella as an organization took on the task with passion. Between 1972 and 1976, four WASP militarization bills had entered congress and subsequently failed, so the WASP felt that time was running out for them to launch a massive effort toward that end. With the help of Colonel William Bruce Arnold, son of General “Hap” Arnold, Senator Barry Goldwater, the WASP Newsletter, and most important, the individual efforts of hundreds of WASP, the organization set out to accomplish its task.110

In the December 1976 issue of the WASP Newsletter, editor Betty Cross implored the women of the WASP to get involved in the militarization process by sending information about their wartime service to a WASP committee including: verbal and written orders to guard their aircraft, proof of the issuance of firearms for use in the line of duty, specific information about which aircraft women flew and where they were stationed, and pictures and stories commemorating their service. Cross entreated, “Girls, this is the year of the WASPs. If you agree with the above, sit right down and GIVE US INFORMATION. Don’t be left out of the WASP story. How great that the Order of Fifinella can share in the profits, publicity and perhaps finally be assured a place in history.”111 With almost twenty captains and co-captains across the country organizing the WASP regionally, the organization launched a campaign called “Red Alert #1” to inform the American public about the WASP quest for militarization. Although the WASP did not have significant monetary support for their efforts, they did have strength in numbers. The Order of Fifinella expected each of its members to act as a “committee

111 Cross, WASP Newsletter.
of one” by actively notifying local news media and writing letters to congressional representatives.

Throughout 1977, WASP women lobbied for militarization at the local and national level. Finally, on November 23, 1977, after thirty-four years without recognition for their efforts during World War II, Jimmy Carter signed the bill granting veteran’s status to the women of the WASP.\textsuperscript{112} Barbara Erickson London remembered that official militarization “gave the families of the girls that were killed a feeling that they died for their country. Six of my girls were killed. I had to go six times and tell their mothers that their daughters weren’t coming home, and I was only twenty-two!”\textsuperscript{113} Other former WASP like Marty Wyall remembered that for the first time, local schools asked them to participate in Veteran’s Day programs, reporters called asking for stories about the WASP, and young women started to seek her out as a source of information and inspiration for flying.\textsuperscript{114}

\textsuperscript{114} Williams, 143-145.
As the women of the WASP aged and many passed away, taking their “final flight,” the organization refocused its efforts on preserving the legacy through education and the promotion of aviation among women. With the help of Texas Woman’s University, the women of the WASP used the materials collected by Marty Wyall as the basis for an active archive to preserve the memory of the WASP and promote additional study of the organization. As a physical display of their dedication to preserving the memory of the WASP, the organization established a WASP endowment set to increase with memorials in the name of WASP who passed away. In 2006 Texas Woman’s University awarded the first ever Byrd Howell Granger WASP Endowment Research Fellowship, which allowed a graduate student doing WASP related research enough funds to travel to the archive with the hope of expanding the existing literature related to the WASP and their accomplishments.

In August 2006, Marty Wyall stepped into a building at the Experimental Aircraft Association’s (EAA) biggest air show of the year in Oshkosh, Wisconsin. Wyall was struck by what she saw as she looked around the large room. She did not see tables full of cheap souvenirs, booths advertising the newest developments in aviation, or even the makings of a banquet recognizing inductees into some sort of hall of fame. What she did see was a window into the potential for women in aviation. The room housed “Women Soar!,” a two-day camp for girls in grades 8-12 interested in pursuing a career in aviation.
in which they got the chance to meet a number of aviation professionals in everything from aerospace engineering to military aviation and airport logistics. Around the room, one or two aviation professionals sat at tables together with three or four girls interested in their career. After a few minutes of talking and asking questions, the aviation professionals gave their attentive listeners a smile, a handshake, and a piece of departing advice before the girls moved to the next table. As each group of girls sat down at their new table, discussions immediately sprang to life with mentors explaining their role in aviation, what they did, how they got there, followed by girls eagerly asking questions.

Wyll had been asked to attend the camp as part of a WASP panel that would discuss each of their experiences at the birth of military aviation for women, but rather than a star, she felt like just part of the act. She was like a link in a chain that had come to the point where these girls might just see aviation as a possibility, either as a hobby or a profession. First, she noticed the sheer number of highly qualified aviation professionals in the tent. They ranged from Captain Suzanna Darcy-Hennemann, the 777 Senior Test Pilot at the Boeing Commercial Airplane Group and Boeing’s first woman test pilot, to Major Jill Long, combat pilot for the United States Air Force, to R. Aileen Yingst, Ph.D., director of the Wisconsin Space Grant Consortium, which employed space and aerospace sciences to promote math, science, and technology among Wisconsin citizens. These were highly successful aviation professionals, many of whom were members of the 99s, freely giving their time to inspire a new generation of women pilots, technicians, businesswomen, and educators.

After taking in the scene, Wyall’s feelings shifted from those of awe to those of pride. Sixty years ago this scene would have never happened, because there simply were not that many women aviation professionals, and inspiring girls to fly would not have been part of the once male-dominated EAA’s air show mission. Partly because of the aviation organizations of which she had been a part, the mentors in the room were now highly successful as they passed their knowledge and passion for aviation on to another generation of women. She recalled that, “We sat at the tables and listened to the questions and how they were answered, and I thought, this is, this is what women have to do. These women have really reached the pinnacle of their success, and if they don’t express how they did it and how difficult it was, how is anybody else gonna know how to
Wyall said that she felt chills run down her spine as she watched the girls and women interact. This, she thought, should be the legacy of the WASP and the 99s.

At the beginning of aviation, women pilots and technicians were considered anomalies who did not represent “normal” women’s abilities or desires. Women like Amelia Earhart and even Jacqueline Cochran were considered abnormal, so they obviously did not belong to the highly exclusive fraternity of flight. They were too masculine to be considered real women, but they certainly could never be “one of the boys.” Rather than let the negative attitudes of male pilots control their destiny, these women banded together to create their own place within pilot culture. Rather than try to force their way into the fraternity, they created a sorority of flight to serve their own interests. With the combined efforts of the WASP, the 99s, and the Whirly-Girls, these women created a distinctly new pilot culture during the second half of the twentieth century promoted aviation as a field for women, and in doing so, they wrote a history of their own, unique within the world of flight. Over time, the lines between male and female pilot culture have not disappeared, but they have softened, leaving each cultural realm much more open to the influences of the other. Women have now been military pilots since the early 1980s, and in combat since the end of the first Gulf War in 1991. And just as male pilots from World War II joined the commercial airline industry in the 1950s and 1960s, women trained in the Gulf War are now following the same path.

Ideally, we would like to say that during the twentieth and early twenty-first centuries women have shed their distinction as “women” pilots and become just “pilots” with equal opportunity and responsibility within aviation with men, but that has not happened. Women are still underrepresented in commercial, military, and private aviation. Although they have increased their numbers, the percentage of women in aviation has remained largely the same since the late 1970s at just five to six percent of the total pilot population. Therefore, the mission of women’s aviation organizations like the 99s, the WASP, and the Whirly-Girls has really just begun. There must be more women in all facets of aviation, and until there is more parity between women and men in the field, the organizational and culture-creating abilities of women’s aviation organizations will be essential for women to survive and prosper in this field of flight.

---

115 Wyall, interview with the author, Ft. Wayne, IN, 29 Sep 2006.
Conclusion- Professionalism through Women in Aviation, International

The founders of the 99s, the WASP, and the Whirly-Girls all focused on pilots and women who wanted to become pilots. In 1990, Dr. Peggy Chabrian, long-time pilot, aviation professional, and educator decided to expand this vision and founded an umbrella organization to encourage “the advancement of women in all aviation career fields and interests.” With this goal in mind, Chabrian and a group of other women aviation professionals organized the first meeting of Women in Aviation, International (WAI) in Prescott, Arizona.

Beginning as a yearly conference dedicated to exposing women to changes in the field of aviation, Women in Aviation quickly gained support among aviation professionals and educators, and in 1994 officially opened its doors as a non-profit organization. While the 99s, the Whirly-Girls, and the post-war WASP organizations each began because there was a need for support for women pilots, women eagerly joined WAI because it had the potential to bring together professional women from the entire field of aviation. This group included pilots, as well as air traffic controllers, aviation journalists, airport managers, flight attendants, students, historians, educators, and corporations looking for new employees. The creation of WAI represented a move toward professionalization for all women interested in aviation. In fact, some WAI members noted that by the early 2000s, their conferences had become so successful in helping women find aviation jobs that young men seeking jobs and educational opportunities began attending the organization’s conferences to gain chances to network within the industry. The organization grew rapidly to include over seven thousand members by 2007, with almost 4000 attendees at WAI’s annual conference.

The 2007 Women in Aviation, International Conference held February 15-18 in Orlando, Florida provided a portrait of the positive impact women’s aviation organizations have had for women. Set up as a meeting to bring all women aviation

enthusiasts together, the conference did something that the 99s, WASP, and Whirly-Girls had never accomplished. WAI tore down the walls between women in different aviation professions and opened new channels for communication. This umbrella organization created a new space in which to strengthen bonds among women in aviation. The 2007 conference continued the “all-inclusive” philosophy of WAI with keynote addresses from women such as Dr. Bonnie Dunbar, CEO of the Museum of Flight and former NASA astronaut, Jane Middleton, Rockwell Collins Executive, and Major Nicole Malachowski, the first female member of the Thunderbirds United States Air Force Demonstration Team. The conference also featured dozens of education sessions, an exhibition hall filled with booths representing over one hundred and fifty different companies and organizations, and a scholarship and Hall of Fame awards banquet.  

The conference exhibition hall and the awards banquet represented how far women had come in aviation since the twenty-six original members of the 99s met in Valley Stream, Long Island. Walking into the hall, the first thing a conference attendee noticed was the enormity of the space. Seven different double-sided rows of booths represented everything from airlines like American and Delta, to university flight programs such as those at Purdue University and the United States Air Force Academy, to organizations like the 99s, the Whirly-Girls, Women in Military Aviation, to the WASP telling their stories and personally signing photographs for eager young aviators. Every single organization and corporation in the exhibition hall was dedicated to women in aviation. Throughout the rows of exhibitors, attendees saw women, old and young, talking about their experiences in aviation, packs of hopeful aviation students brandishing resumes, and women getting excited about flight. 

Finally, the scholarship and Hall of Fame awards banquet perfectly displayed the continuing importance of women’s aviation organizations in the United States. Each year, Women in Aviation, International collects and posts scholarships sponsored by different corporations for women hoping to enter aviation or enhance their skills in a variety of aviation fields. At the 2007 conference, the organization awarded sixty different scholarships that ranged from a Learn to Fly! Scholarship sponsored by Cessna

Aircraft Corporation to international flight attendant training scholarships and even airline job offers that totaled $385,000. In addition, the Hall of Fame awards banquet showcased the lives and careers of accomplished women aviators.  

As of spring 2007, eight women had been inducted into the National Aviation Hall of Fame, which is adjacent to the National Museum of the United States Air Force at Wright-Patterson Air Force Base in Dayton, Ohio. Their careers ranged from the first days of aviation through World War II, the 1950s, and into the space age and included: Jacqueline Cochran, Amelia Earhart, Anne Morrow Lindbergh, Ruth Nichols, Louise Thaden, Nancy Harkness Love, Betty Skelton Frankman, and Patricia “Patty” Wagstaff. Even with the addition of two more women, Evelyn Bryan Johnson and Sally K. Ride, who join them as of July 2007, they represent just 10 out of over 200 aviators and aviation professionals in the Hall of Fame. In sharp contrast, since 1992, WAI has inducted fifty-five women into its own Pioneer Hall of Fame. The aviators and aviation professionals enshrined in both the National Aviation Hall of Fame and the WAI Pioneer Hall of Fame are equally accomplished. They each made significant contributions to the field of aviation through personal accomplishment, dedication, and promotion of aviation as an industry. At the awards banquet in 2007, WAI inducted Major Deanna Brasseur of the Canadian Air Forces, Iris Cummings Critchell of the WASP and the 99s, and balloon pilot and the world’s first Flight Nurse, Marie Marvign of France, into the Pioneer Hall of Fame. As Brasseur and Critchell climbed onto the stage to accept their awards, the energy and support for women in aviation from the crowd of over 1,000 women was very real. These women each received standing ovations because they deserved recognition for amazing accomplishments that spanned the twentieth century, representing each stage of women’s involvement in aviation.

Because of women’s aviation organizations, deserving women pilots and professionals have the opportunity to be recognized for their contributions to aviation. In reality, there is no reason that a larger number of women should not be inducted into the

---

National Aviation Hall of Fame, but, unfortunately, the five percent of the National Aviation Hall of Fame enshrinees who are women is the exact same percentage of women in aviation as compared to men. While sheer numbers of women in aviation increased dramatically over the course of the twentieth century with the help of women’s aviation organizations, the percentage of total pilots has remained constant since the 1970s, as just five to six percent of all pilots and just a small percentage more of all aviation professionals are women.

While the WAI conference did not give women the thousands of jobs needed to make them equal with men in terms of percentage and numbers, it did signify the professionalization of aviation for women. Although the language of flight has always brought women in aviation together, the field has changed over the last eighty years to allow more women the opportunity to learn that language. Rather than just a wealthy woman’s pursuit or an unattainable goal, aviation is now within the reach of almost any woman regardless of class, race, or ethnicity. Through WAI and the organizations that preceded it, aviation has become a field open to all women willing to dedicate their time and effort to the profession. WAI offers the opportunity for women to share their experiences or to gain a competitive edge, and it signifies the importance of professionalization for women in the field. While early women’s aviation organizations like the 99s, the WASP, and the Whirly-Girls worked to remove the constraints for women in aviation, WAI has created an environment in which all aviation professionals can come together to sustain a new generation of women pilots. Most of all, WAI affirms that a collective effort toward the expansion of opportunity and mutual support is the future for women in aviation.

During the final education session preceding the awards banquet at the 2007 WAI conference, eight WASP sat together to share their stories with an audience of conference attendees. After three days of presentations, receptions, and keynote speakers speaking of the future for women in aviation, these women brought something new to the conference. Sitting in a row, dressed in white WASP logo polo shirts, uniform blue pants, and similar blue WASP scarves dotted with aircraft and Fifinella pins, the WASP women were a living legacy of the past. Stories from Margaret Ringenberg, Caro Bosca Bayley, and Pearl Brummett reminded the audience of the days before jets, strict safety
regulations, or the acceptance of women in military aviation. These women, now in their 80s and early 90s, also reminded the audience that women have made great strides in aviation since the days of the WASP. While women still make up a small percentage of those involved in aviation, the institutional barriers that kept the WASP from private, commercial, and military aviation are gone.

Qualified women can fly any aircraft for any organization, exemplified by one pilot who sat quietly in the back of the room watching and listening intently to the WASPs’ stories. Wearing her U.S. Air Force Thunderbirds navy blue flight suit, Major Nicole Malachowski, the first woman named to the Thunderbirds demonstration team, sat quietly by herself, taking in the WASPs’ stories. Just before ending the session of questions and answers, the WASP delighted the audience with an impromptu rendition of “Rugged but Right!” that served as a fitting end to the conference. With words such as

We may be brown-skinned lassies but what do we care,
We've got those well-built chassis & that take it or leave it air
We've got the hips that sank the ships in England, France & Peru,
and if you're like Napoleon, then it's your waterloo!

the WASP showed that they were still the rugged individualists who had opened aviation to women in the twentieth century. With a grin of knowing gratitude, Malachowski touched the Fifinella pin that WASP Jan Goodrum had given her earlier that day. It was because of the efforts of women like the Women Air Force Service Pilots of World War II that she had become a successful pilot. Women like Malachowski found that regardless of the challenges they faced, the efforts of the Ninety-Nines, the WASP, and the Whirly-Girls had created a place for them in aviation that they could always call home.
Appendix

Full Song Lyrics:

Zoot-Suits and Parachutes

Before I was a member of the AAFTD
I was a working girl in Washington, D.C.
My boss he was unkind to me, he worked me night and day
I always had the time to work but never the time to play.

(CHORUS)
Singing zootsuits and parachutes and wings of silver, too
He'll ferry airplanes as his mama used to do.

A long came a pilot, ferrying a plane,
He asked me to go fly with him down in lovers' lane
And I, like a silly fool, thinking it no harm
Cuddled in the cockpit to keep the pilot warm.

(CHORUS)
Early in the morning before the break of day
He handed me a short-snort bill and this I heard him say
Take this, my darling, for the damage I have done,
For you may have a daughter or you may have a son;
If you have a daughter, teach her how to fly,
If you have a son, put the (censored) in the sky.

(CHORUS)
The moral of this story as you can plainly see
Is never trust a pilot an inch above the knee,
He'll kiss you and caress you, and promise to be true
And have a girl at every field as all the pilots do.

Courtesy of The Woman's Collection, Texas Woman's University

Rugged But Right!

I just called up to tell you that I’m rugged but right!
A rambling woman, a gambling woman, drunk every night,
A porterhouse steak three times a day for my board,
That’s more than any decent gal in town can afford!
I’ve got a big electric fan to keep me cool while I eat,

A tall handsome man to keep me warm while I sleep!
I’m a rambling woman, a gambling woman and BOY am I tight!
I just called up to tell you that I’m rugged but right!
HO-HO-HO—Rugged but right!

We may be brown-skinned lassies but what do we care,
We've got those well-built chassis & that take it or leave it air
We've got the hips that sank the ships in England, France & Peru, and if you're like
Napoleon, then it's your waterloo

I'll take a fifteen minute intermission in your V-8,
I'd like to make it longer, but I've got a late date,
My motto has always been "Gone With The Wind",
So let's breeze it tonight,

I just called up to tell you that I'm rugged but right!
HO-HO-HO, rugged but right!\(^{121}\)

The Whirly-Girls

Men run for cover
When they start to hover
This autorotation
Is not automation
They pilot for real
And they do it by feel
The air-ocean’s pearls
The Whirly-Girls.

They keep their perspective
And use the collective
The rotors will whirl
At the touch of a Girl
The bright skies smile
As the ladies beguile
They’re the pilots in pin curls
The wonderful Whirly-Girl Girls!

Lyrics by Francis Fox
Score by Bill Kleine\(^{122}\)
Courtesy of The Woman’s Collection, Texas Woman’s University

\(^{122}\) Jean Ross Howard, Memorandum to The Whirly-Girls, 6 Nov 1957, Whirly-Girl Collection, Texas Woman’s University, Denton, Texas.
Bibliography

Manuscript Collections

Ninety Nines, Inc. Mss. 278. Texas Woman’s University. Denton, Texas.
Ninety Nines, Texas Chapter. Mss. 489. Texas Woman’s University. Denton, Texas.
Strother, Dora Dougherty. Mss. 251. Texas Woman’s University. Denton, Texas.
WASP Collection. Mss 250. Texas Woman’s University. Denton, Texas.
Women in Aviation. Mss. 627c. Texas Woman’s University. Denton, Texas.
Women Military Aviators. Mss. 524. Texas Woman’s University. Denton, Texas.
Wyall, Mary Anna Martin. Mss. 262. Texas Woman’s University. Denton, Texas.

Photograph Collections

WASP Collection. Texas Woman’s University. Denton, Texas.
Whirly-Girls Collection. Texas Woman’s University. Denton, Texas.

Primary Sources


Cochran, Jacqueline. Letter from Director of Women Pilots to Miss Badie Lee Johnson. 19 August 1943. WASP Collection. Texas Woman’s University. Denton, Texas.


Earhart, Amelia. *For the Fun of It*.


Marsh, Clara Jo. WASP Newsletter Vol. 1 No. 6. 20 December 1944. WASP Collection. Texas Woman’s University. Denton, Texas.

McKeown, Dora Dougherty Strother. “Curriculum Vitae” (June 2004). WASP. Collection. Texas Woman’s University. Denton, Texas.


Strother, Dora Dougherty. Letter to Mrs. Nancy Batson Crews, President- Order of


Secondary Sources


Myles, Bruce. *Night Witches: The Untold Story of Soviet Women in Combat*. Novato,


