

Terry Von Thaden – 2004 Convention
Amelia Earhart Fellow Presentation

President Webjorn, International Board members, Foundation Board members, Zontians....Good morning. It's my distinct honor to speak in the presence of such esteemed company.

I was asked to join you here today to talk about the work I'm doing and how Zonta's Amelia Earhart award has helped me attain my goals. I'd like to request your indulgence for a bit. Rather than focus much of my time on women in the aerospace sciences, I'd like to share my personal story so you can understand the profound effect this award has on its recipients.

But first, allow me to digress and share with you the story of my family history that brings to light a connection with this award. (SLIDE)

My grandmother, Iris Louise McPhetridge von Thaden, was a record setting aviatrix during The Golden Age of Aviation, the 1920s and 1930s. She set the First Women's Altitude record, solo endurance record and speed record in the winter of 1928/spring of 1929 – she is the only woman to hold these records concurrently.

In addition to these and other records, she was a close, personal friend to Amelia Earhart. They met in summer of 1928 after Earhart's Atlantic crossing and before Louise had set any records. (SLIDE)

Louise and her husband Herbert von Thaden, an aircraft designer who manufactured one of the first all metal airplanes, shared many an adventure and even flying double dates with Amelia, and her (then) beau Sam Chapman.

Louise and Amelia shared a mutual love of aviation and a mutual respect for each other. They dedicated their lives to the mission of changing public opinion about equal roles for women vocationally and supporting women's roles in aviation.

Louise and Amelia were also, on occasion, competitors. (SLIDE) In 1929, The First Women's Transcontinental Air Derby from Santa Monica, CA to Cleveland, OH, became the first sanctioned race for women. (SLIDE)

Amelia and Louise flew in this race with 18 other female pilots, including other notables such as Pancho Barnes and Bobbi Trout. It was a grueling 2800 miles and eight days, encompassing brutal terrain, extreme heat, and little ground support. When they received mechanical support, often times, it created more problems than it solved. The women realized early on that if they were to be successful, they would have to support each other to make it across the country. They faced equipment failures, sabotage, and even the death of one of the racers, Marvel Crosson in a plane crash. (SLIDE)

After Crosson's death the public outcry was that the race should be stopped, that women couldn't be trusted to fly cross-country without harming themselves. The headlines in the papers? "Women have conclusively proven they cannot fly" "Women have been dependent upon men for so long they have become handicapped when left to their own resources." (SLIDE) The women stuck together, and held to their resolve not to be bullied by race officials or the public into giving up their cause. The public was skeptical of airplanes. The women of the Derby were out to prove that flying was safe.

I'm happy to report to you that by the time they reached Cleveland, Louise Thaden crossed the finish line in first place. (SLIDE) In her acceptance speech, she deferred crediting her win to herself, noting that *all* the women flew a splendid race and *all* the women were in fact winners. Hers, she went on to say, was merely a faster ship. (SLIDE)

Directly after this race, the women formed what is now the Ninety-Nines (International Organization of Women Pilots) so they could continue to provide support for one another. Louise served as the first de-facto president of this organization as she encouraged Amelia to become the first elected president.

Women were barred from air racing from 1930 to 1935, due to the deaths of some women racing. Amelia and others worked tirelessly to have this ban lifted, and it was. (SLIDE)

In 1936 Amelia and Louise would again be direct competitors, this time in the prestigious Bendix Transcontinental Air Race. The Bendix was a one-day, all-out speed dash across the country to promote civil aviation. 1936 was the first year the competition was open for women to compete for a prize in this previously male-only race. As a result, Vincent Bendix offered a separate prize category (a consolation prize) for the woman who came across the finish line first, regardless of her position in the race. The women were finally allowed to race side by side with the men. But the question remained, would they measure up?

(SLIDE) In 1936, the powers that be finally understood why they had never allowed the women to race alongside the men. Louise Thaden won the entire Bendix Transcontinental Speed Race, bettering pilots of both genders, and setting an East-West speed record for women at the same time. She not only won the Bendix purse, but the special “consolation prize” for women, also.

(SLIDE) In 1937, the same year of Earhart’s disappearance, Louise won the International Harmon Trophy for outstanding female aviator. Louise wrote her memoirs in 1938, dedicating a chapter to her friend Earhart. In it, she painted a picture of Earhart’s staunch fineness, her undefeated spirit, and splendid mentality. (SLIDE)

One evening they talked after dinner and Louise asked just exactly what Amelia wanted. She answered, “Recognition for women. Men do not believe us capable. Manufacturers refuse us planes. The public have no confidence in our ability. If we had access to the equipment and training men have, we could certainly do as well. And why not? Because we are women seldom are we trusted to do an efficient job. Thank heaven, we continue willingly fighting a losing battle. If enough of us keep trying, we'll get someplace.”

In 1937 Louise flew into Burbank, California, where Amelia’s Lockheed was hangared in preparation for her round-the-world flight. They sat on the edge of a rubber lifeboat inflated for a test. Louise reprimanded Amelia for taking unnecessary risks and dropping essential equipment in order to save weight. But Amelia would have none of it.

They sat in silence, each thinking her own thoughts. When Earhart spoke, it was with unusual seriousness, “I’ve wanted to do this flight for a long time. I’ve worked hard and I deserve *one* fling during my life time. If I bop off you can carry on; you can all carry on — But I’ll be back.” Earhart grinned

In an omen of what she could not know lay ahead, Louise asked “If you don’t make it, what flowers shall I send?” To which Earhart replied: “Well, water lilies should be appropriate shouldn’t they?”

Earhart knew the risks, and gladly took them to improve the status of women in the aeronautics. (SLIDE)

In Louise’s lifespan she went from flying rudimentary Jennies, to being at one time the woman who had flown higher, faster, and longer than any other. As far back as the 1930s she predicted women’s roles performing advanced military missions. She served on the Defense Advisory Council to Women in the Services, rose to the rank of Lieutenant Colonel in the Civil Air Patrol. She realized her dream to fly a jet, when her son Bill served in the New Hampshire Air Guard. The accomplishments of the early aviatrixes allowed women to ascend where we had never been allowed to venture before. (SLIDE) For me, I reap the benefits of their personal sacrifice, forcing open doors that were once tightly shut for women. Of the top aerospace agencies, it’s a woman who sits at the helm of the Federal Aviation Administration, the National Transportation Safety Board, and The Air Transport Association. A woman has now *commanded* a space mission. (SLIDE) I personally have benefited from such a history by having the great good fortune to pay tribute to Louise and her contemporaries. I have flown Louise’s 1929 Travel Air race plane across the country, and a Staggerwing aircraft like the one she flew to victory in 1936 on a commemorative tour to honor Louise’s win. (SLIDE) I’ve had the honor to become friends with Louise’s contemporaries, including the fabulous Bobbi Trout who passed away merely 2 short years ago at age 95, and I piloted my son on his first airplane ride when he was 3 weeks old. With such a rich aerospace history you’d think I would have it easy. What possible need could I have for a Zonta fellowship?

I'm here to tell you, it hasn't been easy. Make no mistake, It's never been easy. Women have consistently comprised from 4 to 15% of the aerospace population. I came to the aeronautical sciences a bit later in life, and as such, have faced a different set of circumstances most younger women do not face including extreme financial difficulty, ageism, and believe it or not, sexism. The more things change...the more they remain the same.

I was prompted on the course of Human Factors when I suffered the trauma of watching people die in an airplane crash in front of me. Due to the extreme fire, we were not able to rescue them. The crash was a direct result of the pilot's actions. The crash killed his family and affected the lives of everyone at the airport that day.

I was in my late twenties and I decided I needed to embrace aerospace science as a way of life and set about on the road to attaining the necessary education to accomplish that. The decision to go back to school to pursue an advanced degree involved personal and financial sacrifice, as it would for anyone in this circumstance.

Along the way, I've encountered numerous roadblocks. I went back to school to complete a bachelor's degree in aviation. The career I thought I would go into to earn money while I pursue my advanced degree and advanced flight ratings, that of an Air Traffic controller, set about on a 5 year hiring freeze my senior year. You cannot be brought on as a new-hire air traffic controller past your 30th birthday....I was 29. Imagine being too old for a job at 29!

I decided it must have been an omen for me to go directly into a doctoral program. With no way to pay for it, I packed my belongings in my car and moved to Los Angeles to pursue a degree at the University of Southern California. I want you to know, that when I was at USC in 1995, I applied for the Zonta Amelia Earhart Fellowship – and didn't get it. I've been meaning to speak to you about that. Really though, in all seriousness, it is a prestigious award, and rightly so. I probably wasn't the best candidate at the time.

While I was at USC, the program I was in shut down, forcing me to stop at the master's level. Before I left Los Angeles I was hit by a car while I was bicycling. Lucky me, the 19 year old

driver had no insurance. The resulting spinal injury would leave me in constant pain for years to come thus ending any potential for a career in the cockpit due to long hours of sitting in position. I went through courses of physical therapy and a spinal operation. I was prompted to move to DC to pursue an investigation job. While there I got married, had a child and I couldn't get hired. When I applied to the agencies I was fully qualified to work for, I was met with resistance, or rather, sexism. *Wouldn't it be better for a young gal like me to focus on raising my son rather than performing fieldwork? Maybe I should come back in a few years and if I was really serious about it, get a doctorate in the meantime.*

While on one hand I was happy to spend time with my young son, on the other I felt defeated and lost. I found freelance work to keep me busy, and thought a doctorate was something completely unattainable. I was losing hope for a meaningful career. My husband urged me to continue with my dream, and offered to move to allow me to do so. Somehow, and I'll never know how, I got accepted a top Human Factors program at the University of Illinois, and set about pursuing my doctorate once again.

It was in my second year at the University of Illinois that I couldn't stand the pain any longer and underwent surgery to fuse my spine, keeping me in a body cast for 6 months. Naturally I did this in the beginning of the spring semester, but I timed it so I only missed one week of classes and finished the semester on time. Nothing was going to keep me from my dream, not now.

In the true spirit of perseverance, I decided to give the Zonta Earhart Fellowship one more shot. Thank goodness I did. This award has allowed me to pursue my own original line of research. (SLIDE) My input into the aerospace sciences deals with issues of the human operators in a system: humans working with machines. My research involves improving safety, pilot training, and aids to decision making. I'm someone who bridges the disciplines of engineering, psychology and information science. Technology is a good thing, but if we don't advance how we think about technology and the process of using it, we put ourselves in unnecessary risk. We're so used to performing seamlessly that when technical aids fail, we're not prepared and we have no back up. I don't need to remind you about what happened with the electronic voting yesterday.

(SLIDE) In aviation, there's a phenomenon known as Controlled Flight into Terrain where a pilot or crew flies a perfectly flyable airplane into the ground because they failed to update their perception of where they were; they failed to update their use of technology.

It's my goal to find a way to quantify the rather nebulous areas of *when* and *how* we make a decision, and how we update our perceptions in a constantly changing environment. Through this work, I've developed a model to understand how crews negotiate the socio-technical atmosphere of the flight deck. Not only is this model applicable in the aerospace sciences, I've worked with adapting it to the operating room also.

It's now, that I'm 2 weeks away from defending my dissertation, so close to finally achieving my dream, that it's of major importance that I look back and see how far *we've* all come. At the examples of the early pioneers in aerospace, at the examples of the women of Zonta. And I realize, as much as I feel I have struggled to be here, no one does this alone.

I'm truly fortunate and highly grateful for the support I've received from Zonta. You don't have restrictions as to age, or use of this award. I was able to apply it towards equipment I desperately needed to finish my research, which had been stalled because the equipment I had borrowed kept failing, resulting in hundreds of hours of lost work.

But it's not only that. The women of Zonta have been kind, supportive, enthusiastic. Through this award and through your words, you let people like me know that what we do matters. I can't adequately express the importance of that personal significance in mere words. (SLIDE) What does this award mean? The same thing flying means to many of us...freedom. Freedom to complete our own study. Freedom to pursue our own line of thought. Freedom to set our own direction.

In my brief association with Zonta, I'm amazed at how an organization of strong successful industrial women with such a profound global commitment to supporting the value of women in society can lend such precious encouragement to a simple individual, such as myself. You stand

behind what it is we do and signify that you feel it's worthwhile. That on some level, we contribute not only to the value of science, but to the value of women, human life and dignity in society.

I am deeply proud to benefit directly from the Zontian legacy, with the fellowship award provided in memory of a beloved family friend, Amelia Earhart. For me to have earned this honor feels like I am completing a journey that Amelia, Louise, and their contemporaries set out upon over 75 years ago. That the granddaughter of one of Amelia's close friends should benefit from an award in her memory is an amazing gift. You have allowed me to pursue my birthright. I put this last statement by Louise (*flight is yesterday's yearning, the fulfillment of today's dreams, tomorrow's promises*) up here because I feel it not only, so eloquently applies to flight, but it applies to Zonta's mission also. *Zonta* represents yesterday's yearnings, the fulfillment of today's dreams, tomorrow's promises.

I am enormously grateful for your support of my research and I urge you to continue your commitment to supporting those in the future. We need to foster leaders in aerospace science so that we may continue to help others who I believe have an even harder journey than mine. I look forward to a time in the future when I may be granted the privilege to become a Zontian, to give back, just as you have given to me. Thank you.