

SELLING AVIATION: THE MEANING OF AIR SHOWS IN AMERICA

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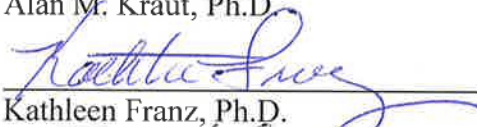
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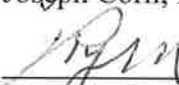
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To Aunt Marilyn  
For guiding me to this path

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## ABSTRACT

This dissertation is a social and cultural history of air shows in the United States between the end of World War II and 2012. Many people, both scholars and the general public, consider air shows during this period to serve primarily as entertainment, and dangerous entertainment at that. This study suggests that air show organizers, performers, and community boosters employed air shows to educate spectators and the larger world about their perceived benefits of aviation and the host communities.

From the invention of aviation in 1903 until 1939, the primary purpose of air shows and public air demonstrations was to prove the existence of powered flight to the American public. As Americans acclimated to this concept, air show participants used the programs to demonstrate technical advancements or to excite crowds with increasingly complex aerobatic maneuvers. Both demonstrations increased the risk of injury and death for participants and spectators as pilots flew their aircraft closer to the edge of aerodynamic failure. By the start of World War II, the air show as a viable marketing technique was largely discredited.

World War II and the postwar growth of commercial aviation seemed to further negate the need for air shows to demonstrate aviation's value. This study demonstrates there were at least four distinct goals present in most air shows organized since the end of World War II. First, military officials and military supporters used air shows to demonstrate their success at developing equipment and techniques to defend the nation in an economically responsible way. Second, civilian aviation officials utilized air shows to exhibit the products of corporate America and to build brand recognition for individual aerospace brands. Third, community leaders and

boosters employed air shows to foster community socialization and to market community assets to tourists, business officials, and government representatives. Finally, participants used historic and replica aircraft to teach a version of aviation and American history to spectators.

## ACKNOWLEDGMENTS

The seeds of this dissertation started back in elementary school when my aunt gave me a set of Time-Life's Epic of Flight series. Over the years, I read and re-read those books many times as I generally became more engrossed in the study of history. The next step on this journey came in college when I interned at the American Airpower Museum. I took the position to explore my career options in history and found a whole new world of history outside the printed page. Having the opportunity to work on operational World War II aircraft and with veterans of many eras, inspired me to preserve and disseminate history. The fact that major funding for the museum came from air show participation introduced me to the behind-the-scenes world of air shows that stuck in my head as my education continued.

I am eternally grateful to all my professors and advisors over the many years at the University of Rochester, the University at Albany, and at American University. I am sad that Dr. Bob Griffith passed away before I could complete my dissertation. His immense help in my early years at American University were vital to me completing this project. Among the many folks who also helped me discover how to think and research along the way were Stewart Weaver and the late Lynn Gordon at UR, Amy Murrell-Taylor at the University at Albany, and Max Friedman, Kathleen Franz, and Alan Kraut at American University. Extra gratitude must go to Dr. Kraut who guided me through this dissertation process, endured numerous bouts of my self-doubt, and he helped show me how to solve my own problems.

I must also thank all the people that worked with me at archives and libraries throughout this process. The staffs at the Wright State University Special Collections and Archives, the Western Reserve Historical Society, the National Air and Space Museum Library and Archives, and the Library of Congress Microform and Newspaper divisions were extraordinarily helpful in

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As my workload grew from the dissertation, so many friends and family provided mental, physical, and financial support that allowed me to bring this to fruition. First and foremost are my parents who supported me when my enthusiasm faltered and when my research travels took me all over the country. Second, are the friends and family who have dealt with my many disappearances from social life as I buried myself in archives, libraries, and writing. To those of you who provided a couch for the night, a cup of coffee in the morning, or a beer at night: you are awesome. To everyone who endured learning way more about airplanes than you ever fathomed as I wended my way through this: you are troopers. Kiersten Conley and Jim Daniels

probably never realized how important they would be to me when we met at colleagues at Sully Historic Site but became friends and important critics as this project stretched on. Ben Atwood, Ashok Krishnan, and Jenny Turner-Trauring were among my first friends at University of Rochester and have endured my historical wanderings for many years. For all the randomness over the years, I could not hope to have a better set of friends.

Lastly, no words or actions will ever adequately explain how much I owe to my wife, April. We met just as I finished the draft of my proposal and our relationship has endured and blossomed through defenses, research, and writing. I would not have made it through this without her continuous support and her occasional reminder to step away from my desk and go walk the dog.



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## CHAPTER 1

### INTRODUCTION

On November 7, 1910, Hubert Latham ascended in his fragile Antoinette monoplane and then flew towards Baltimore's Fort McHenry. After flying over the inspiration for the national anthem, Latham flew over the city's harbor, past the dome of Johns Hopkins Hospital, over the *Baltimore Sun* building, and performed a figure eight in view of Ross R. Winans' home. Latham then returned to a temporary airfield just outside the city, in Halethorpe. The flight was the hallmark performance of the 1910 Baltimore Air Meet, organized by hotel owner Jerome Joyce and other city elites. An estimated 500,000 people poured into Baltimore's streets to glimpse Latham's flight. Ten years later, such a flight would be considered unremarkable but, in 1910, no pilot claimed to have successfully flown over an American city. Before the flight, Wilbur Wright told reporters he believed that such a flight was possible, but he considered it extremely dangerous.<sup>1</sup>

Baltimore became the first city overflowed by man because the *Baltimore Sun*'s publishers offered \$5,000 to the first pilot to perform the feat. They claimed the flight provided an opportunity for residents to see aviation in action, while it also served to publicize the air show and make it a financial success. Additionally, organizers hoped school administrators and businessmen would consider the flight instructive enough to release their students and workers from their responsibilities to see Latham aloft. The editors even equated the flight to other famous Baltimore firsts, including the first Morse Code message in 1849 and the first trip of the

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<sup>1</sup> "Latham to Fly All over Baltimore for Sun Prize of \$5,000," *Baltimore Sun*, 30 October 1910,16. "Latham Sees Success," *Baltimore Sun*, 31 October 1910,14. "Cool at Start," *Baltimore Sun*, 8 November 1910,10; "First All-over-City," *Baltimore Sun*, 1 November 1910,10. "City Lost in Wonder as Latham Rides the Air," *Baltimore Sun*, 8 November 1910,16.

Baltimore & Ohio Railroad in 1831. After Latham agreed to the flight, Ross R. Winans, a wealthy invalid, offered Latham an extra \$500 to alter his course so Winans could see the airplane from his bedroom window.<sup>2</sup>

When Latham arrived in Baltimore on November 4th, *Baltimore Sun* reporters courted him to explain why he flew and to prophesize the future of aviation. Latham replied that he started flying to improve his health when he was diagnosed with tuberculosis and doctors gave him a year to live. The effort of flying, he claimed, renewed his “health and strength.” When discussing aviation, he contended that flying at an air show demonstrated the possibilities of future flying. He, like many aviation prognosticators, thought there would be a day when planes would be commonplace and aviation would be a business rather than a leisure sport of the rich.<sup>3</sup>

Jerome Joyce and his collaborators created the 1910 Baltimore Air Meet for multiple reasons. Among their goals was probably a desire to make money off the new aviation fad, as an air show would presumably fill Joyce’s hotel rooms. For the *Sun* editors, funding the prize was a small price to pay in order to sell newspapers. But all the organizers also claimed that Latham’s flight over Baltimore served science, by proving flying over buildings was safe while introducing powered flight to factory workers, recent immigrants, children, and others unable to afford to attend the air show. Finally, organizers maintained that Baltimore needed an air show to prove to the world that it remained “at the forefront of invention and industry of all kinds.”<sup>4</sup>

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<sup>2</sup> "Latham to Fly All over Baltimore for Sun Prize of \$5,000." "All Eager to See Latham's Great Flight," *Baltimore Sun*, 31 October 1910,14. "Whole City Awaits Kings of the Air," *Baltimore Sun*, 1 November 1910,16. "The Aviation Meet Will Make History," *Baltimore Sun*, 2 November 1910,6. "Aviation for All," *Baltimore Sun*, 8 November 1910,6.

<sup>3</sup> "Latham to Fly All over Baltimore for Sun Prize of \$5,000." "Latham Sees Success." "Latham Sees Mr. Winans," *Baltimore Sun*, 5 November 1910,10. "Hubert Latham, the Man," *Baltimore Sun*, 8 November 1910,12.

<sup>4</sup> "All Eager to See Latham's Great Flight." "Aviation for All."; "The Latham Flight and What It Means," *Baltimore Sun*, 1 November 1910,6. "Cool at Start."

In the early 1900s, when aircraft reliability and knowledge of aerodynamics were minimal, every successful air show improved public acceptance and endeared aviation to financial investors. However, aviation scholars generally agree that by the end of World War II, Americans embraced the virtues and risks of aviation after it was employed to supply and transport troops, attack enemy targets, and defend the skies from Axis aircraft. Since air shows still existed long after Americans needed physical proof that man could go aloft, what was the role of an air show when there were thousands of successful daily flights for commercial, military, and personal reasons?

The answer is numerous groups and individuals employed the air show as a platform to further their own interests, both directly and indirectly related to aviation. Most obviously, the aerospace industry and military aviation officials used air shows to maintain or improve broad support for public and private investment in aviation. Local officials and community groups across the country utilized the air show to publicize their regional assets to the larger world and cement positive relationships among residents. Lastly, aviation organizations, like the Commemorative Air Force, utilized air shows as a classroom to teach their interpretation of aviation and American history. These were not necessarily the only roles for the air show in the second half of the twentieth century, but they were the most prevalent and left the largest paper trails.

The most visible American air show participants since World War II, was the U.S. military. Military officials used the air shows to recruit new service members, retain existing personnel, and demonstrate to the American public how they intended to defend the nation. Since the late 1940s, they developed many different air show performances to publicize their technological and personnel assets to the public. Their most famous air show acts were the

Navy's Blue Angels and the Air Force's Thunderbirds. Both units evolved into a key element of their respective service's brand and embodied the idea of wedding advanced technology to pilot skills in awesome displays of power and precision. By the early twenty-first century, Americans who never attended an air show could still know about these units because of their presence at sporting events, on television shows, and throughout mainstream media.<sup>5</sup>

Like the military, corporate and general aviation representatives also employed air shows to pitch spectators the idea that aviation improved American life. As World War II ended, many aircraft manufacturers believed thousands of trained pilots mustering out of the military wanted to continue flying after the war. As a result, many manufacturers developed new private aircraft for an expected postwar boom in aircraft sales, which they hoped would replace the military aircraft sales that ended with the war's conclusion. Instead, the few who did want to fly were able to purchase surplus military aircraft at extremely low prices. After the war, general aviation airport operators also contended with suburbanization encroaching on their space and new residents complaining about the noise of aircraft operations. As a result, airport operators and industry officials also saw the air show as an opportunity to showcase aviation's attributes to their local communities.

While general aviation did not expand as predicted, corporate executives came to desire accessible and luxurious flight accommodations outside the commercial airlines. Manufacturers and servicers of these 4-12 passenger aircraft used air shows to showcase their products and services. From the 1950s-1980, the National Maintenance and Operations Meeting, better known

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<sup>5</sup> A few key examples of accounts about the evolution of the Blue Angels and the Thunderbirds are: Martin Caiden, *Thunderbirds* (New York: E. P. Dutton and Co., Inc., 1968). Bob Gore, ed. *We Rode the Thunder: The Autobiography of the United States Air Force Thunderbirds* (Evansville, IN: M. T. Publishing Company, Inc., 2003). Robert K. Wilcox, *First Blue: The Story of World War II Ace Butch Voris and the Creation of the Blue Angels* (New York: St. Martin's Press, 2004). Nicholas A. Veronico, *The Blue Angels: A Fly-by History, Sixty Years of Aerial Excellence* (St. Paul, MN: Zenith Press, 2005).

as the Reading Air Show, in Reading, PA grew from a small gathering into the major demonstration show for new aircraft and products designed specifically for the corporate market. By 1970, 200 companies rented booths and exhibited 650 aircraft at the airport. By the end of the decade, 100,000 people descended on Reading each year for the air show, which strained the region's roads and hotels. The vast audience also made it harder for commercial participants to reach their potential customers and get a return on their demonstration costs. As a result, so many reduced their participation at Reading that organizers shutdown the Reading Air Show in 1980.<sup>6</sup>

While many air show organizers and performers focused on growing public support for contemporary and future aviation, some also developed air show programs to demonstrate aviation's history. Instead of demonstrating technical capabilities of aircraft or the aerobatic skills of the pilot, these individuals and groups interpreted the past using authentic and replica aircraft and equipment. These performers primarily argued the world benefitted from America's engineering, manufacturing, and heroic manpower in developing and deploying aviation. In the late 1940s, the Blue Angels participated in this aspect of air shows when they performed a mock battle with another Navy airplane painted to look like a World War II Japanese fighter. Three Blue Angels and the "Japanese" pilot would perform combat maneuvers until the faux fighter began belching black smoke and then staggered towards the ground until it appeared the pilot bailed out of the plane. The "pilot-less" airplane disappeared behind some trees and an air show worker detonated preset explosives to suggest the Japanese plane crashed. The Blue Angels discontinued this display in 1952 when they began flying jet aircraft because the act was no longer believable with the grossly mismatched combatants. Despite their attempts at

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<sup>6</sup> Roger Mola, "That '70s Airshow," *Air & Space Smithsonian* (September 2001) [http://www.airspacemag.com/history-of-flight/70s\\_Airshow.html](http://www.airspacemag.com/history-of-flight/70s_Airshow.html) [Accessed 29 June 2013].

believability, the Blue Angel pilots never allowed the Japanese pilot to “destroy” a Navy plane, even though it would have occurred in war.<sup>7</sup>

Despite the closure of Reading, the International Council of Air Shows (ICAS) regularly listed 300-400 air shows each year in North America since the 1980s. While always local in character, air shows became more uniform across the nation when performers and organizers created ICAS to serve as an industry association. Among ICAS’s contributions to American air shows was the staff organized an annual convention, published a quarterly magazine, and served as the public spokesperson for domestic air shows. Within these realms, they helped connect performers with air show organizers and facilitated debates about best practices and standards for all aspects of air shows ranging from ticket prices to trash removal. One of the ongoing issues ICAS staff and members worked to address was how to respond to air show crashes and how to reduce them. Among their solutions was to create the Aerobatic Competency Evaluation (ACE) program to test air show pilots’ ability to fly safely at low altitudes.<sup>8</sup>

ICAS staff efforts to reduce the negative impact of air show crashes was necessary because the memory of a single incident could overshadow years of safe and successful programs. For example, in 2003, upstate New Yorkers living near the Empire State Aerosciences Museum still remembered when a Canadian Air Force helicopter crashed during the Museum’s 1991 air show. While no one died during this event, there were a half dozen crash-free air shows in the intervening decade that few people mentioned. Similarly numerous volunteers at the Sully Historic Site, a historic home neighboring Dulles International Airport, easily recounted crashes that occurred over three decades earlier, during Transpo ’72. Finally, in 2011, a twenty-

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<sup>7</sup> Wilcox, *First Blue: The Story of World War II Ace Butch Voris and the Creation of the Blue Angels*, 200. Armstrong, *From POW to Blue Angel: The Story of Commander Dusty Rhodes*, 173-236.

<sup>8</sup> M. A. Everett, *Fliers* (Naples, FL: Strand House, 1988), 63. "Air Show Facts", International Council of Air Shows <http://www.airshows.aero/Page/AboutAS-Facts> (accessed November 29 2012).

something staff member at the Port Discovery Children's Museum in Baltimore, Maryland related how an F-117 Stealth fighter crashed after a local air show. While he could not remember when the event happened, it was not surprising when research showed the crash dated to 1997.<sup>9</sup>

Many of these negative memories of air shows were a result of how the media covered aviation in general. News media producers often disseminated detailed coverage of crashes because they were so rare for both air shows and other flight operations. Non-fatal crashes rarely got more than local or regional coverage, but fatal accidents usually garnered national coverage for at least a day or two after the crash. This crash-focused coverage became extremely apparent between March and September 2011 when five fatal crashes occurred at air shows in Brownsville, TX, Kansas City, MO, Reno NV, Martinsburg, WV, and outside Detroit, MI. In Reno, the situation was exacerbated when spectators died at a domestic air show for the first time since 1951. While so many fatalities were unusual in the decades after World War II, some in the media asked if the air show had outlived its usefulness.

This was not the first time media representatives questioned the ongoing value of air shows after World War II. The editor of *Aviation Week*, Robert Wood, was a vocal critic of air shows and considered them a roadblock to public acceptance of flight as a major mode of transportation. Of ten editorials he wrote about air shows between July 1949 and February 1953, only the last one was positive when he complimented air show organizers in Detroit for executing a "safe and sound" program that focused on aviation in the citizen's life. More typical was his June 18, 1951 editorial, "An Old and Tragic Story," where Wood wrote about the first air show fatalities of the year. He described how Arlie Johnson and Murray Pete died when their aerobatic plane crashed into the ocean during the Tillamook County Centennial in Oregon. Wood

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<sup>9</sup> These anecdotes were the result of conversations with co-workers and volunteers at the various museums I worked at while exploring air shows.



then criticized aerobatic stunts as “foolish for the participants, reprehensible in its danger to others, and thoughtless of the reputation to aviation.” He believed most air shows only served to provide the “morbidity that brought out thousands to the ancient Coliseum.”<sup>10</sup>

On occasion, Wood printed readers’ letters countering his claims that air show crashes hurt public confidence in aviation. Among them, Arthur Beckington complained how the only coverage Wood printed of the 1950 Detroit Air Show was the denunciation of a fatal crash during an air race. Beckington claimed to be at the air show and wrote that he believed people could differentiate between the risks of air racing and the risks of commercial airlines in a way that the crash of non-commercial aircraft did not damage aviation’s reputation.<sup>11</sup>

Given the vehemence of these polar views, it seemed surprising local officials, corporate executives, and military personnel considered an air show a useful method for connecting with the general public. Conversely, without understanding why air shows existed, every crash, injury, and fatality appeared to be a wanton waste of life and equipment. By considering why people organized air shows, one can better understand why pilots, organizers, and boosters continued to participate in air shows after catastrophes like those in 2011.<sup>12</sup>

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<sup>10</sup> Robert H. Wood, "Dangerous Exhibition," *Aviation Week*, 11 July 1949, 54. Robert H. Wood, "Abolishing the Races," *Aviation Week*, 3 July 1950, 66; Robert H. Wood, "Risking Death for Thrills," *Aviation Week*, 2 October 1950, 50; Robert H. Wood, "Fighting Unfair Headlines," *Aviation Week*, 17 December 1951, 94; Robert H. Wood, "Good Luck to the Air Races," *Aviation Week*, 13 August 1951, 86; Robert H. Wood, "An Old and Tragic Story," *Aviation Week*, 18 June 1951, 98; Robert H. Wood, "More Dangerous Exhibitionism," *Aviation Week*, 15 September 1952, 90; Robert H. Wood, "Planning a Safe and Sane Air Show," *Aviation Week*, 16 February 1953, 94.

<sup>11</sup> Arthur R. Beckington, "He's a Racer," *Aviation Week*, 30 October 1950, 53.

<sup>12</sup> Timothy W. Monville, Preliminary Report Aviation (Washington, DC: National Transportation Safety Board, 2011), ERA11FA495, <http://dms.nts.gov/aviation/AccidentReports/ifxgn22ynnmjl55ld5rem551/H09032012120000.pdf>. Howard D. Piagens, Preliminary Report Aviation (Washington, DC: National Transportation Safety Board, 2011), WPR11MA454, <http://dms.nts.gov/aviation/AccidentReports/mbvq0y55f533kl45ymadyhzr1/P09032012120000.pdf>. Aaron M. Sauer, Factual Report Aviation (Washington, DC: National Transportation Safety Board, 2011), CEN11FA228, <http://dms.nts.gov/aviation/AccidentReports/fzqxpi45vkwqpk45rdwytnn01/Q09032012120000.pdf>. Timothy Sorensen, Preliminary Report Aviation (Washington, DC: National Transportation Safety Board, 2011), CEN11LA582, <http://dms.nts.gov/aviation/AccidentReports/xr3nndnnstcigl452iy0osbg1/J09032012120000.pdf>.

In fact, the conflict between stated goals and the negative publicity from crashes is continuous throughout the history of manned flight. Courtney Brooks, in *American Aeronautics as Sport and Spectacle*, was one of the earliest historians to argue early aviators needed air shows and other public performances to develop aviation technology and to improve public “awareness of aviation’s feasibility.” By tracing public aviation demonstrations in America from 1784 until World War II, he also discusses how the public was attracted to aviation out of a desire for recreation, danger, and speed. While hot air balloons were the main aerial attraction for many of these years, the airplane quickly replaced them in the early 1900s as the preferred airborne attraction.<sup>13</sup>

Like Brooks’ work, most existing air show histories focus on programs prior to World War II. In “The Los Angeles Air Show: The Beginnings of Air Awareness in the West,” Roger D. Launius and Jessie L. Embry observed that the 1910 Los Angeles Air Meet was primarily a publicity stunt funded by the city’s Merchants’ and Manufacturers’ Association to prove the city was a progressive, forward-thinking region ripe for investment. The good publicity combined with the financial windfall from 500,000 paying spectators inspired boosters in cities like San Francisco, San Diego, Portland, and Seattle to host their own air shows with varying degrees of success. However, the positive publicity was short lived because primitive equipment and rudimentary understandings of aerodynamics often resulted in performer deaths. Embry and Launius found the carnage led newspaper editors to shift coverage of air shows from their front

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Timothy Sorensen, Factual Aviation Report (Washington, DC: National Transportation Safety Board, 2012), CEN11LA606A, <http://dms.nts.gov/aviation/AccidentReports/lmgf1trlfa1tsq55hgkrj4et1/E09032012120000.pdf>.

<sup>13</sup> Courtney Gould Brooks, “American Aeronautics as Spectacle and Sport” (Tulane University, 1969), iii-v.

pages to the sports pages because some Americans considered aviation a “reckless sport” and not the future of American transportation.<sup>14</sup>

The reputation of air shows did not improve after World War I when former military pilots, flying daredevils, and air racers wandered the country performing for millions of Americans every year. Surplus military aircraft, particularly the Curtiss JN-4 trainer, created an extraordinarily cheap market for aircraft when there were few viable airfields, safety features, or accurate weather forecasts to assist the gypsy pilots. Historians credit these barnstorming pilots with giving millions of Americans their first physical proof that powered flight was real.

The influence of barnstormers was not without its critics as many aviation leaders believed air show accidents in the 1920s and 1930s prevented Americans from taking aviation seriously as a safe transportation method or a viable military weapon. They cited how barnstormers and their passengers died in crashes eighty times more often than airmail pilots, who spent a comparable amount of time airborne. Such incidents, industry leaders contended, imperiled the development of aviation because the general public linked all aviation crashes together regardless of whether it was an air show, commercial flight, or test flight. Federal legislators responded with the Air Commerce Act of 1926, which created the Aeronautics Branch of the Commerce Department to license pilots, mechanics, and aircraft. Historian Bill Rhode argues the legislators intended to permanently ground itinerant pilots who performed stunts and gave short scenic rides.<sup>15</sup>

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<sup>14</sup> Roger D. Launius and Jessie L. Embry, "The 1910 Los Angeles Air Show: The Beginnings of Air Awareness in the West," *Southern California Quarterly* 77, no. 4 (1995), 329-344. Jessie L. Embry, "Transportation, Sport, or Community Pride?: Air Shows in the West, 1910s," *Journal of the West* 42, no. 2 (2003), 65-75.

<sup>15</sup> Paul O'Neil, *Barnstormers and Speed Kings* (Alexandria, VA: Time-Life Books, 1981), 36-47. Bill Rhode, *Baling Wire, Chewing Gum, and Guts: The Story of the Gates Flying Circus* (Port Washington, NY: Kennikat Press, 1973). Jack R. Lincke, *Jenny Was No Lady: The Story of the JN-4D* (New York: Norton, 1988), 229-244. David T. Courtwright, *Sky as Frontier: Adventure, Aviation, and Empire* (College Station, TX: Texas A & M University Press, 2005), 52-70. Richard P. Hallion, *Legacy of Flight: The Guggenheim Contribution to American*

Joseph Corn, in The Winged Gospel: America's Romance with Aviation, 1900-1950, is among the historians who argue the relationship between Americans and aviation changed after World War II. He posits public enthusiasm for aviation was a dimension of Americans' devotion to technological change in the first half of the twentieth century. Air shows were essentially on hiatus for the war, but when the war ended, Americans no longer viewed the plane as an "unalloyed blessing and panacea." Coupling the horror of war to the predictability of commercial air travel in the postwar period effectively ended the romance of aviation for many people. According to Corn, all that remained of the gospel was the National Air and Space Museum, which served as a shrine to aviation's past.<sup>16</sup>

However, the air show could be the last functioning arena for romanticizing aviation after the war. By hosting an air show, communities focused on the good and the bad of aviation for one weekend a year. Media outlets like newspapers and local television stations assisted in marketing the air show by offering positive and personal stories about the aircraft and pilots coming to the community. Furthermore, when people knew unusual aircraft were flying into the area, more people probably looked to the skies when an engine droned overhead to see what form was attached to that sound.

Conversely, Dominick Pisano, in "The Greatest Show Not on Earth: The Confrontation between Utility and Entertainment in Aviation," disregards air shows as valuable after World War II when considering the National Championship Air Races in Reno, Nevada and the Experimental Aircraft Association's AirVenture in Oshkosh, Wisconsin. He argues the War marked the end of aviation as even a form of entertainment because the public's contact with

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*Aviation* (Seattle: University of Washington Press, 1977), 17. Nick A. Komons, *Bonfires to Beacons: Federal Civil Aviation Policy under the Air Commerce Act, 1926-1938* (Washington, DC: Smithsonian Institution Press, 1978).

<sup>16</sup> Joseph J. Corn, *The Winged Gospel: America's Romance with Aviation, 1900-1950* (New York: Oxford University Press, 1983) 9-142.

aviation was now dominated by commercial aviation. Although Pisano is correct to argue postwar aviation is primarily commercial and military, he missed the diverse interests of organizers who wanted to communicate with air show audiences.<sup>17</sup>

United States air show spectatorship in 1987 totaled 18 million people, which ICAS officials then compared to attendance numbers of major sports organizations like the National Football League, NASCAR, and Major League Baseball. However, this comparison only served to provide support to air show critics who perceived air shows to be mere entertainment. What was missing in these statistics was an explanation of why organizers and performers were courting 18 million people to see an air show.<sup>18</sup>

In 1999, aerospace historian Roger D. Launius challenged scholars to create a New Aviation History that moved “beyond a fetish for the artifact to emphasize the broader role of the airplane” in American history. He wanted historians to end their fascination with the machine and consider the social, political, and culture implications of aviation in the United States. Many existing air show histories failed to meet Launius’ goal because they were primarily performer memoirs, photo albums, or chronological histories of specific air shows. Most authors focused on specific aircraft and aviation celebrities at individual air shows and on infamous crashes. These works were useful for documenting air show activities but authors did not question the value of the programs.<sup>19</sup>

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<sup>17</sup> Dominick A. Pisano, "The Greatest Show Not on Earth: The Confrontation between Utility and Entertainment in Aviation," in *The Airplane in American Culture*, ed. Dominick A. Pisano (Ann Arbor, MI: The University of Michigan Press, 2003), 66-9.

<sup>18</sup> Richard Butsch, *The Making of American Audiences: From Stage to Television, 1750-1990* (Cambridge: Cambridge University Press, 2000), 2-255.

<sup>19</sup> Roger D. Launius, *Innovation and the Development of Flight* (College Station, TX: Texas A & M University Press, 1999), 14. Among the many air histories surveyed are: Duane Cole, *This Is EAA* (Milwaukee: WI: Ken Cook International, 1972). Timothy R. Gaffney & Ty Greenlees, *Dayton Air Show: A Photographic Celebration* (Wilmington, OH: Orange Frazer Press, 2008). Robert Hull, *A Season of Eagles* (Bay Village, OH: Bob

The history of public relations is vital to understanding the motives of air show interests because organizers and performers continually used air shows to convince the public that aviation was valuable to their lives, even when the public was not directly purchasing or using the displayed airborne products. The air show provided an opportunity for the aviation industry and the military to “create a circumstance” for communicating directly with Americans. Without these positive displays, most of the available facts about aviation were negative media accounts of crashes, noise and air pollution, and the high costs of developing and producing aircraft.

In PR!: A Social History of Spin, Stuart Ewen argues public relations evolved over the twentieth century to “mediate” between corporations and the general public. Corporations initially used public relations as a response to the muckrakers of the Progressive Era in the early 1900s. As journalists exposed violence against labor, unhealthy food processing, and unsafe living conditions, corporate leaders sought to counter those claims with pro-industry facts. Government officials also used public relations to gain broad support for World War I. During the war, Committee of Public Information officials trained respected local citizens throughout the country to be “Four-Minute Men.” These individuals gave seemingly spontaneous patriotic speeches at community gatherings, picnics, and movie theaters on topics approved by federal

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Hull Books, 1984). Don Berliner, *The Paris Air Show* (Osceola, WI: MBI Publishing Company, 2000). Peter Demetz, *The Air Show at Brescia, 1909* (New York: Farrar, Straus, and Giroux, 2002). Don & Julia Downie, *The Oshkosh Fly-In* (Blue Ridge Summit, PA: TAB Books Inc., 1984). Don Dwiggin, *The Barnstormers: Flying Daredevils of the Roaring Twenties* (New York: Grosset & Dunlap, 1968). R. A. "Bob" Hoover and Mark Shaw, *Forever Flying: Fifty Years of High-Flying Adventures, from Barnstorming in Prop Planes to Dogfighting Germans to Testing Supersonic Jets* (New York: Pocket Books, 1996). D. A. Lande, *Oshkosh, Gateway to Aviation: 50 Years of EAA Fly-Ins* (Oshkosh, WI: Experimental Aircraft Association, 2002). O'Neil, *Barnstormers and Speed Kings*. Bill Robie, *For the Greatest Achievement: A History of the Aero Club of America and the National Aeronautic Association* (Washington, DC: Smithsonian Institution Press, 1993). Bill Sweet, *They Call Me Mr. Airshow* (Milwaukee, WI: Ken Cook Transnational, 1972); Patty and Ann L. Cooper Wagstaff, *Fire and Air: A Life on the Edge* (Chicago: Chicago Review Press, 1997).

officials. These programs improved public support for the war and demonstrated to businessmen how managing emotions could influence public opinion.<sup>20</sup>

Analyzing air shows also relies on the history of World's Fairs and other industrial showcases because both groups used an entertainment forum to educate spectators about the state of technology and business while also lobbying for public support for future initiatives. Robert Rydell, in Fair America: World's Fairs in the United States and World of Fairs: The Century-of-Progress Expositions, argues exhibitions, like the 1933 Century of Progress in Chicago and the 1939 World's Fair in New York, served to instill faith in visitors that "government, business, scientific and intellectual leaders" could solve the nation's social, economic, and technical quandaries. Fair organizers relied on the "seeing is believing" concept to envision a brighter future for Americans living through the Great Depression. The most famous of these exhibits was General Motors' *Futurama* at the 1939 Fair where designers imagined a revolutionized, integrated transportation system in 1960.<sup>21</sup>

When investigating the educational goals of air shows, it is important to consider the increasingly fragmented America that air show organizers and performers were targeting after World War II. In No Direction Home: The American Family and the Fear of National Decline, 1968-1980, Natasha Zaretsky argues many experts and the public believed changes in the nation between the 1940s and the 1970s signaled the end of the "American Century." Among the perceived flaws were the shift from a manufacturing economy to a service economy and losing the war in Vietnam. Exacerbating these national issues, she continues, were the 1960s social

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<sup>20</sup> Stuart Ewen, *PR!: A Social History of Spin* (New York: Basic Books, 1996), 28-32, 44-52, 85-131, 254-7.

<sup>21</sup> Robert W. Rydell, John E. Findling, and Kimberly D. Pelle, *Fair America : World's Fairs in the United States* (Washington, DC: Smithsonian Institution Press, 2000), 2-19. Robert W. Rydell, *World of Fairs : The Century-of-Progress Expositions* (Chicago: University of Chicago Press, 1993), 9-113.

movements like feminism, gay rights, and civil rights. Pundits saw these changes as undermining the nuclear family, which they regarded as a cornerstone of national strength. During these years, air show supporters may have perceived their programs as a defense against a failing nation.<sup>22</sup>

While attempting to educate air shows audiences, air show organizers were conscious they straddled a line between meaningful education and wanton entertainment. As a result, this work also builds on Cindy Aron's thesis in Working at Play: A History of Vacations in the United States, that Americans desired "respectable leisure." She argues Americans since the 1800s rationalized their vacations if they were deemed beneficial for their work or home life. Among her arguments is a discussion of two types of educational vacationing: the Chautauqua and educational tours. In the former, a resort would host a conference with lectures and activities focused on a specific theme while the latter involved Americans traveling around the country seeing important sites in various cities, normally factories and other businesses. In both cases, Aron contends these vacations served to keep Americans connected to their everyday worlds by exposing them to ideas they could use when they returned home, but still breaking from their daily routines.

Air shows replicate the conflicts in these vacations because pro-air show interests viewed their programs as helping build citizenship while air show critics argued performances only risked highly trained pilots and expensive equipment for entertainment. These debates were complicated by the fact that air show performances needed to highlight the capabilities of aircraft designed to operate thousands of feet above the ground. By contrast, the safest low-level operations were straight and level flight, which could be incredibly boring after a few minutes.

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<sup>22</sup> Natasha Zaretsky, *No Direction Home: The American Family and the Fear of National Decline, 1968-80*, (Chapel Hill: University of North Carolina Press, 2007), 1-20.



As pilots demonstrated more complicated and interesting flight operations at air shows, the margin of error decreased and dramatically increased the chance of tragic accidents.<sup>23</sup>

Despite ever changing technology, organizers and participants employed similar themes and goals throughout the history of air shows. Few air shows, if any, represented only one of the following themes, and multiple themes were usually apparent at a single program. As a result, chapters in this study are organized around single air show theme but can include examples of the other themes in order to contextualize events.

American military officials had an extensive presence at air shows for three distinct reasons. First, air shows provided an opportunity for them to recruit new personnel by giving civilians an opportunity to see the equipment they might work with and communicate with active personnel about their positive service experiences. During many air shows, military officials scheduled an induction ceremony so spectators saw young Americans making the personal sacrifice to protect the nation and build careers. Second, officials employed the air show as a morale builder for current military personnel to enable them to demonstrate to the general public how they served the nation. Often, officials scheduled military personnel to visit air shows near their hometowns so the public could connect their community to missions around the world. Finally, military officials depended on the air show to prove they responsibly spent tax dollars to defend the nation. In this vein, air shows could also support military lobbying efforts for increased Congressional allocations.<sup>24</sup>

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<sup>23</sup> Cindy S. Aron, *Working at Play: A History of Vacations in the United States* (New York: Oxford University Press, 1999) 101-55.

<sup>24</sup> U. S. Government, *21st Century U.S. Military Air Force Thunderbird Support Manual – Air Demonstration Squadron, F-16 Formation Flying* (Washington, DC: Progressive Management, 2005), 17-66. Mark Thibeault, *ACC Aerial Events: 2009 Demonstration Team and Heritage Flight Support Manual* (Langley, VA: Air Combat Command, 2009), 1-6. Wilcox, *First Blue: The Story of World War II Ace Butch Voris and the Creation of the Blue Angels*, 147-8. Jim Armstrong, *From POW to Blue Angel: The Story of Commander Dusty Rhodes* (Norman, OK: University of Oklahoma Press, 2006), 201-29.

While these three goals remained relatively constant since the first military air shows after World War I, military officials altered their air show participation numerous times since the end of World War II. When evaluating their air show activities, officials were conscious they needed to maintain an effective national presence at minimal cost. Throughout the years, the appearance of overly extravagant displays and accidents occasionally resulted in public criticism that military officials were endangering sensitive equipment and highly trained personnel for entertainment. As a result, military officials were extraordinarily specific about why certain aircraft, equipment, or demonstrations were presented at an air show. However, these goals occasionally conflicted with non-military organizers who recognized spectators were eagerly pay to see the fighters, bombers, and cargo aircraft rarely seen by civilians up close.

A second major theme was the presence of civil aviation at air shows. Industry executives employed the air show to exhibit their contributions to the aerospace marketplace while also building public goodwill for non-military aviation. To achieve the first goal, executives exploited the air show as a product infomercial where a company pilot flew relevant aircraft while a narrator explained to the audience how the product fulfilled its intended role(s). Complicating this simple salesmanship was that few of the thousands of spectators had a use for or the money for these highly specialized products. While this was the case for most aviation products, including private aircraft, this was especially true for military aircraft manufacturers participating in commercial air shows.

Since few viewers were even potential consumers, it would seem to be a poor idea for manufacturers to participate in air shows. A more effective program would seem to be identifying potential customers and providing them with private access to products for private sales. While potentially true, many corporate officials were more interested in creating brand

loyalty than in finalizing contracts at air shows. For executives, air show participation could also be an opportunity to exhibit the company's local investments and foster goodwill between the community and corporate officials. Military and government contractors also thought the air shows helped build grassroots political support for specific products. Executives hoped spectators would contact their elected representatives to support government purchases of the demonstrated products or services.

While the corporate air show elements were in some way focused on the technical attributes of aircraft, the air show also served to turn public attention to the community hosting the event. As a result, a third air show theme was boosterism. Like the Baltimore and Los Angeles air show organizers in 1910, local boosters organized air shows after World War II as a venue to build community unity and as a stage to market local assets to aviation-minded groups and individuals outside the community. This complicated air shows because building community unity required air shows to serve primarily as entertainment, akin to sports and carnivals, and exposed them to criticism about the proper use of aircraft.

When organizers oriented a local air show towards garnering regional, national, or international attention, it was because they wanted business leaders, government and military officials, and the general population to learn about new and existing local opportunities. Air shows that included the dedication of a new airport or aviation-related industry were especially important public relations tools. Sometimes the opportunities were not directly related to aviation, but boosters employed the air show to exhibit the technological expertise of the locality. Since aviation was usually focused on cutting-edge research and development, organizers also used the air show to demonstrate the intellectual skills of the local workforce. In essence, they

attempted to suggest to business leaders that skilled workers of many types could be found in the local community.

By hosting an air show, organizers also sought to attract audiences to visit the region and discover the area's non-aviation characteristics. Air shows fostered tourism, drawing aviation-focused people to the locality with the promise of a unique or important performance. Since the air show was rarely an all day affair, boosters and local officials created other events like community tours, conferences, and recreational opportunities to spur additional spending in the area.

A final theme evident in air shows is historical aviation demonstrations, where organizers sought to inform and entertain guests with lessons about aviation's past. The most popular of these historical representations was the "warbird movement," which developed in the 1960s as Americans began to revisit World War II with some nostalgia compared to the ongoing Cold War and the escalating Vietnam War. Additionally, by the 1960s, more World War II veterans were financially able to purchase the aircraft they flew or wished they flew during the war. While military officials crafted their air show performances to illustrate the contemporary value of defense spending, warbird pilots re-fought and re-imagined battles to suggest Allied victory was inevitable, especially with the American entrance in the war after the Japanese attack on Pearl Harbor.

However, the history at air shows included more than just representations of World War II. By the early 2000s, every decade of aviation's history could be found at air shows, including working replicas of the Wright Brothers' Flyer, World War I aircraft, and jets from former Soviet bloc nations. With this diversity, some air show organizers created programs claiming to illustrate the entire history of a period or even the entire century of powered flight. Like the

representations of World War II, these history lessons were usually biased towards American contributions, devoid of conflict, and presented the development of new technology as a predestined march of progress. Additionally, the presence of historic aircraft, like a working *Spirit of St. Louis* replica or a Boeing B-29 Superfortress, reflected the desire of air show interests to not just sell products but instill or reaffirm American history and patriotism in air show crowds.<sup>25</sup>

Throughout all four themes, there was continuous conflict between providing “safe and sane” flying activities embodying the regular utility of aviation and thrilling flights pushing the envelope of technology and physics. International Council of Air Shows officials claimed over 10 million people attended one of the hundreds of air shows held in the United States every year. This means when the five fatal incidents occurred in 2011, barely one percent of air shows experienced a fatal accident. Yet many millions more understood the dangers of air shows by digesting the ensuing media coverage compared to those who attended the hundreds of accident free air shows.<sup>26</sup>

The public image of air shows was unintentionally distorted by how the news media worked. By focusing on the rare, unusual, and dramatic, media producers fostered the notion that air shows were little more than dangerous entertainment where pilots bet their lives against their skills, with some spectators hoping they would lose the wager. These depictions overshadowed the intentions of air show participants. The goal of the following pages is to delve into why and

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<sup>25</sup> Roland Marchand, "Corporate Imagery and Popular Education: World's Fairs and Expositions in the United States, 1893-1940," in *Consumption and American Culture*, ed. David E. Nye (Amsterdam: VU University Press, 1991). Roland Marchand, "The Designers Go to the Fair II: Norman Bel Geddes, the General Motors "Futurama," And the Visit to the Factory Transformed," *Design Issues* 8, no. 2 (1992), 22-40. Michael A. Smith, "Making Time: Representations of Technology at the 1964 World's Fair," in *The Power of Culture: Critical Essays in American History*, ed. Richard Wightman & T. J. Jackson Lears Fox (Chicago: The University of Chicago Press, 1997), 236-40. Rydell, *World of Fairs : The Century-of-Progress Expositions*, 9, 35, 113, 116.

<sup>26</sup> Everett, *Fliers*, 63. "Air Show Facts".

how organizers decided an air show was the best method of exhibiting aviation and community assets to local residents, tourists, and the larger world.

## CHAPTER 2

### MILITARY AIR SHOWS

On July 14, 2009, six Embraer EMB-312 Tucanos, painted blue with lime green lightning bolts edged with yellow running from the tail to the nose, flew past some 25,000 spectators at the Vectren Dayton Air Show. The pilots flew in two V-formations, one level with the ground and the other inverted and above the first formation. To the crowd, the six aircraft appeared as the mirror image of just three planes. The pilots were part of the Brazilian Smoke Squadron (Esquadilha da Fumaça), a Brazilian Air Force demonstration team making their third appearance in Dayton since the squadron's 1952 founding.<sup>27</sup>

Four Brazilian Air Force instructor pilots created the team in 1952 to perform aerobatic maneuvers for cadet pilots to "instill confidence and demonstrate aircraft performance." At the time, they flew American designed and built North American T-6 Texans, aircraft originally used to train American pilots during World War II. By the 1980s, the unit flew the domestically designed and built Embraer Tucano, which was easy to maintain, fuel efficient, powered by a turboprop engine, and very maneuverable. As a whole, the Tucano was a desirable training plane for any air force and the Brazilians sent the unit abroad to help sell the aircraft to other nations. By coming to Dayton, the Brazilians were putting their aircraft on display near the Air Force's Air Material Command, where all aircraft buying programs were managed. When the Brazilian Smoke Squadron came to Dayton, it was a sales effort.<sup>28</sup>

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<sup>27</sup> Tim Tresslar, "Chills and Thrills," *Dayton Daily News*, 19 July 2009, A6.

<sup>28</sup> Cindy Holbrook, "The Brazilian Team Is Smokin'," *Vectren Dayton Air Show: 2009 Souvenir Program* 2009, 16-8.

Local organizers used the rare performance to market the Vectren Dayton Air Show by dedicating an entire page of a five-fold brochure to the team. Visually, the Brazilians had equal billing with the U.S. Air Force's Thunderbirds, including two images of the Brazilians in flight. However, marketers missed a key point of the Smoke Squadron's existence by describing the Tucanos as "festively painted" in blue, yellow, and green. These were the colors of the Brazilian national flag and were intentionally used because the team was demonstrating the country's aviation industry by flying Embraer aircraft and the nation's military pilots' skills.<sup>29</sup>

Like the Brazilians, American military officials also sold at every air show they participated in across the country. The major difference was American officials sold a product already paid for by the taxpayers. They demonstrated the equipment they bought and the personnel they trained with the federal government's money. Officials hoped by awing the public with the capabilities of the fighters, bombers, helicopters, and cargo planes, Americans would feel safe and enthusiastically support the military leadership's budget requests.

Unlike the Brazilians, American military leaders had two additional goals during air shows. First, they hoped to inspire young men and women to enlist in the military by draping the aircraft and personnel on display in patriotic ideals. They attempted to accomplish this by displaying combat maneuvers and operations without actually sending civilians to war. Second, officials used air shows to help boost morale within the ranks. Many times military personnel returned to their hometown air shows to provide inspirational stories for both civilians and fellow servicemen and women. At the 2009 Vectren Dayton Air Show, officials emphasized how the USAF Thunderbirds commander, Lt. Col. Greg Thomas, grew up in nearby Cincinnati and graduated from Wright State University (WSU) in Dayton. Thomas credited WSU for giving him the "foundation" he needed to achieve success as a combat pilot and his goal was to demonstrate

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<sup>29</sup> *Vectren Dayton Air Show*, (Dayton, OH: 2009), From Author's Personal Collection, 2-3.



the “pride, professionalism, and precision” of the Air Force to his hometown. USAF Capt. Cullen Thomas was also at the 2009 air show, eight years after graduating from Beavercreek High School, located just 25 miles from the air show site at Dayton’s Cox International Airport. Thomas returned after graduating from the U.S. Air Force Academy and becoming a military flight instructor.<sup>30</sup>

Americans have used public events to build patriotism and demonstrate political views since the early days of the republic. David Waldstreicher argues in In the Midst of Perpetual Fetes: The Making of American Nationalism, 1776-1820 that events like parades served to stir nationalism and viewpoints by crafting messages reproducible in the media of the day, including newspapers, leaflets, and broadsides. Military air show organizers used this same concept to build public support for the military. They demonstrated contemporary equipment to potential military recruits to illustrate how they could put their patriotism to work in war and peace.<sup>31</sup>

Military air shows were also similar to the 19<sup>th</sup> and 20<sup>th</sup> century pageants Naima Prevots studied in American Pageantry: A Movement for Art and Democracy because pageant organizers and air show organizers alike used the power of respectable leisure to unite people with messages about community, history, and/or social propriety. This is important for analyzing air show audiences because pageant and air show organizers have similar goals and interests when embedding messages in their performances.<sup>32</sup>

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<sup>30</sup> Thomas Gnau, "Thunderbirds Commander Eager to Fly Familiar Skies," *Dayton Daily News*, 16 July 2009,A1; Thomas & Hannah Bealer Gnau, "It's Just Cool to Come Back Home and See the Family'," *Dayton Daily News*, 20 July 2009,A3; "Wright State University Grad Returns to Dayton, as Thunderbird No. 1," *Vectren Dayton Air Show: 2009 Souvenir Program*, 2009, 14.

<sup>31</sup> David Waldstreicher, *In the Midst of Perpetual Fetes: The Making of American Nationalism, 1776-1820* (Chapel Hill, NC: University of North Carolina Press, 1997), 2-14.

<sup>32</sup> Naima Prevots, *American Pageantry: A Movement for Art and Democracy* (Ann Arbor, MI: UMI, 1990), 2-14.

Military air shows date to at least February 1919 when Lt. Col. Harvey B. S. Burwell, organized an air show with parachutists, formation flights, two World War I veterans engaged in mock air combat, and a fake bombing raid at the United States Air Service's Rockwell Field in San Diego, California. The air show also resembled a carnival because the public was also treated to bands, athletic events, a cabaret with dancing, and a sideshow.<sup>33</sup>

Soon after the Rockwell Field air show, army officials organized the Victory Loan Flying Circus to raise money for the Air Service and to promote the value of aviation during World War I to Americans. Beginning on April 10, 1919, they divided America into three sections (West, Midwest, and East) and assigned 72 servicemen and 19 airplanes to tour each section. Over the next thirty days, the three units flew 19,000 miles in 45 states and performed in 88 cities. At each stop, a pilot announced the Circus' arrival by "bombing" the community with Victory Loan leaflets. At the show site, the public was treated to aerobatics and a mock battle where five German fighters attacked five American bombers. Four British and four French fighter planes then swooped in to save the Americans.

After World War II, military officials developed the Blue Angels and the Thunderbirds to standardize their air show programs in order to better realize recruitment and public relations goals. However, the Blue Angels and the Thunderbirds were not the only military representatives at air shows after World War II. Other teams were formed to demonstrate specific types of aircraft or to focus on specific geographic areas, while the Blue Angels and the Thunderbirds remained the preeminent exhibition teams of the American military. Since World War II, exhibition teams continued to form organically by the chance postings of like-minded pilots. One such team was the Four Horsemen, a Lockheed C-130 Hercules exhibition team created by four

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<sup>33</sup> Maurer Maurer, *Aviation in the U. S. Army, 1919-1939* (Washington, DC: Office of Air Force History, 1987), 18.

pilots in 1957 at the 774<sup>th</sup> Troop Carrier Squadron based at Ardmore, Oklahoma. The men demonstrated even the hulking cargo plane could fly graceful formations akin to the Thunderbirds. Before these evolutions could occur, military officials needed to create concepts to guide how they would market themselves to the American public.<sup>34</sup>

### Armed Forces Day

On January 23, 1950, Secretary of Defense Louis Johnson met with 32 officers from all military branches to create parameters for the first unified Armed Forces Day (AFD) celebration in the United States. Johnson imagined AFD as the combination of the three separate celebrations organized by the Army, the Navy, and the Air Force plus all the other federal service elements like the Coast Guard. Furthermore, by dividing the country into three regions, officials theorized they could plan quality programs while evenly distributing displays across the country without hindering the operational needs of any one service or unit.<sup>35</sup>

Johnson led the meeting himself to help smooth conflicts amongst the military officials. Some officers were unhappy with Armed Forces Day being scheduled for the third weekend in May. Army Colonel J. R. Burns reported he spoke to numerous officers who felt the date was too close to Memorial Day. The problem, felt Burns, was many Americans would be exhausted from AFD festivities to participate in similar military events on Memorial Day. Lt. Col. J. T. Jones, the Chief of the Public Relations Division in the Office of Public Information, responded to Burns' concerns by explaining the entire calendar was evaluated for potential Armed Forces Day dates and the date was chosen so nothing of historical significance could conflict with AFD.

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<sup>34</sup> Adrian M. Balch, *Aerobatic Teams of the World* (Osceola, WI: Motorbooks International, 1986). Sam McGowan, "The Four Horsemen," *Aviation History* 13, no. 4 (2003).

<sup>35</sup> *Area Commanders Meeting*, 1950. Armed Forces Day, General Celebration, 20 May 1950, P2 Box 86; Division of Public Information, 09/1947-ca. 1960; U.S. Marine Corps.; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-12.

Jones clarified that officials did not want to co-opt days like VE Day or Armistice Day but they also had to consider issues like school vacations and weather patterns for the entire nation.<sup>36</sup>

USAF Brigadier General Roscoe Crawford supported the goals of AFD but stated he could fulfill very few flight requests because there was no room in the Air Force budget to increase the monthly flight allotment in the Air Force, Reserves, or Air National Guard.<sup>37</sup>

On February 28, 1950, OPI officials publicly announced Armed Forces Day would now replace the traditional individual service days. Americans could expect an annual national military program to learn about “the state of the nation’s defense” on the third Saturday in May. All programs carried the slogan, “Teamed for Defense,” because officials intended programs to demonstrate how the members of the Navy, Army, Air Force, and other services worked together to defend the nation. Officials also explained they divided the nation into six geographic regions to help evenly distribute equipment and personnel to as many venues as plausible. President Harry S Truman publicly supported the effort and, in March, urged all citizens to display American flags on AFD to show their support for the military.<sup>38</sup>

Internally, military officials decided their programming priority was cities with 50,000 residents or more. These cities received preferential treatment for scheduling important guests like high ranking admirals and generals and allocating the best programs and most impressive equipment. Locations smaller than 50,000 would still have “adequate representation” but it

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<sup>36</sup> Ibid. 1-12 *Manual for Project Officers and Local Committees*, (Washington, DC: Office of Public Information, 1953), Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 15.

<sup>37</sup> *Area Commanders Meeting*, 1-12.

<sup>38</sup> *First Armed Forces Day Will Be Observed on May 20, 1950*. Armed Forces Day, General Celebration, 20 May 1950, P2 Box 86; Division of Public Information, 09/1947-ca. 1960; U.S. Marine Corps.; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD. "Truman Sets May 20 as First Armed Forces Day," *Washington Post*, 1 March 1950, 2.

would be based on how large the military presence was the particular area. Areas with a significant existing military population would receive more attention to maintain or increase community support.<sup>39</sup>

During the planning process, Rear Admiral J. Cary Jones, Commandant of the Ninth Naval District, reminded planning officers that AFD was necessary because the military needed to combat negative attitudes amongst Americans who believed the services did not work together. Jones argued civilians misunderstood the diverse experiences across the different services. He believed they could not appreciate these technical differences and thus categorized them as inter-service rivalry. AFD, according to Jones, was an opportunity to demonstrate cooperation instead of disunity. If a service member failed to enthusiastically support Armed Forces Day, the public would interpret this as “evidence of immature thinking within the Defense Establishment...”<sup>40</sup>

In Washington, DC, the primary host for Armed Forces Day events was Bolling Air Force Base on the eastern shore of the Potomac River. In addition to air demonstrations, a Bolling official named Davis requested the Marines perform an amphibious demonstration with a Battalion Landing Team (BLT) and a landing ship in view of the spectators. He also desired a Marine Underwater Demolition Team (UDT) to be assigned to Bolling for an exhibition of their personnel and equipment.<sup>41</sup>

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<sup>39</sup> Commanders within Armed Forces Day Area One, Memorandum, by J. Cary Jones, 13 February, *Re Armed Forces Day*, Great Lakes, IL. Washington, DC, Armed Forces Day, General Celebration, 20 May 1950, P2 Box 86; Division of Public Information, 09/1947-ca. 1960; U.S. Marine Corps.; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-6.

<sup>40</sup> Ibid. 1-6.

<sup>41</sup> Amphibious Force Commander, U.S. Atlantic Fleet, Memorandum, by Davis, 1 March, *Re Amphibious Lift and UDT Units for Armed Forces Day Observance at Washington, DC, Request For*. Washington, DC, Armed Forces Day, General Celebration, 20 May 1950, P2 Box 86; Division of Public Information, 09/1947-ca. 1960; U.S.

Marine Commandant General C. B. Cates replied to Davis that the 2<sup>nd</sup> Marine Division could not commit to either demonstration because of local program needs at their North Carolina headquarters and safety concerns. His primary fear stemmed from a UDT demonstration on September 29, 1949 in Boston where a pyrotechnic ejector exploded during the program. The blast killed a naval officer and a civilian photographer in front of a crowd of 100,000. Realistic demolition programs, explained Cates, carried increased risk of accident and bad publicity. The risks could be lessened by not simulating naval gunfire, bombings, and actual explosive demolitions, but the programs then also lacked the realism and public appeal necessary to promote the military.<sup>42</sup>

All of Cates concerns were for naught as the Armed Forces Day program at Bolling Air Force Base did include the Marine landing demonstration but no problems occurred. In fact, other activities garnered much more media coverage than the mock invasion. Naval aviators also “attacked” the base with some ninety aircraft from Oceana, Virginia. After the “invasions,” thirty-seven naval aviators demonstrated their flying skills by maintaining a formation spelling out “NAVY” over the crowds. While not something ever to occur in combat, officials probably hoped viewers would be awed by pilots overcoming the rough air from so many aircraft in a small area to maintain their aircraft’s position throughout the flight.<sup>43</sup>

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Marine Corps.; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1.

<sup>42</sup> Chief of Naval Ops, Memorandum, by F. G. Fahrion, 23 March, *Re: Marine Amphibious Troops for Participation in Observance of Armed Forces Day in Washington D.C. Area, Information Concerning*. Washington, DC, Armed Forces Day, General Celebration, 20 May 1950, P2 Box 86; Division of Public Information, 09/1947-ca. 1960; U.S. Marine Corps.; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1. “Photographer Killed in Maneuvers; 3 Navy Officers Also Hurt in Boston,” *New York Times*, 30 September 1949, 16.

<sup>43</sup> “Big Defense Show Planned for District,” *Washington Post*, 1950, M7-M7. “Bolling Displays to Feature Armed Forces Day Saturday,” *Washington Post*, 1950, M2-M2.

On the technical side, Lt. Commander J. S. Hull showed the power and speed of his McDonnell F2H Banshee, a carrier-based jet fighter, with a climb demonstration. The premise sounded incredibly simple but was difficult to execute. Hull took off from Bolling, ascended to 50,000 feet over the crowd, and then guided the plane back to the earth. With a climb speed of over 5,000 feet per minute, Hull completed the entire operation in under a half hour. Upon landing, he told spectators that at the pinnacle of his flight, almost ten miles above the ground, his canopy iced over from the altitude's extreme cold. Unless a spectator had high-powered optics, they had to take Hull's word any of this actually happened.

Where naval officials opted to focus on aerial agility, Air Force officials chose overwhelming size by demonstrating their bomber technology to the public at Bolling. Twice during the air show, crews piloted two Convair B-36 Peacemakers over the crowds. The flybys were part a mission where B-36 crews flew the eight-engine bombers up and down the East Coast on Armed Forces Day to exhibit the aircraft's long range capabilities to as many Americans as possible. Another pair of B-36 crews performed the same feat for the West Coast, theoretically showing the whole nation the reach of the nation's strategic nuclear bombers. The crew of a Boeing B-50 Superfortress, a modernized B-29, performed a landing and braking demonstration by touching down at a 115MPH and then stopping the sixty ton plane in a mere fifteen seconds and consuming only 1500 feet of runway.

In a demonstration of healthy military and corporate relationships, Air Force and General Electric officials flew the company's B-29 "Flying Laboratory" at Bolling AFB. Company researchers normally used the aircraft at GE's Schenectady, NY facility to test jet engines and new flight equipment. Instead of an atomic bomb, GE's B-29 carried a J-74 turbine engine in its bomb bay. According to *Washington Post* reporter John G. Norris, the corporate pilots brought

the former bomber down low over the air field so the 250,000 spectators could watch the propellers frozen in the air as the pilots shut down all four piston engines. Even with the props stopped, the B-29 visibly accelerated due to the power of the single GE turbine slung beneath the aircraft.<sup>44</sup>

Norris concluded the Armed Forces Day air show at Bolling Air Force Base successfully promoted the unification of the diverse military services in the Department of Defense. The cooperation even shocked him at times as he described Air Force information officers telling reporters how the Navy demonstrations were the “feature event” for the Air Force hosted show. Norris found this was not an isolated incident at Bolling as service personnel throughout the grounds continuously spoke glowingly of programs from other military branches.<sup>45</sup>

Bolling Air Force Base was not the only Washington, DC military installation open to the public for the first Armed Forces Day, though it was the most popular. People could visit nine different facilities on May 20, but military information officers were disappointed few chose to avail themselves of all opportunities. Most locations were Navy installations like the Naval Ordinance Lab near Silver Spring, MD, where five thousand people toured a supersonic wind tunnel, watched Navy divers in action, and saw air-sea rescue demonstrations by the Coast Guard. In Carderock, MD, David Taylor Model Basin officials provided three-hour tours of the unit responsible for testing designs and materials for ships and aircraft in realistic environments. Less than two thousand people visited the Model Basin on AFD while another two thousand

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<sup>44</sup> John G. Norris, "Jets, Bombers, Field Guns Put through Paces at Air Base," *Washington Post*, 1950, M1-M1.

<sup>45</sup> Ibid. M1-M1.



visited the Naval Gun Factory, in southeast Washington, to tour a destroyer and small ships while also viewing newly developed rocket launchers.<sup>46</sup>

Armed Forces Day in Washington, DC was more than just air shows and open houses. AFD officers also organized a morning parade down Constitution Avenue attended by luminaries like President Harry Truman and General Dwight D. Eisenhower. In addition to the politicians and military officials, an estimated 100,000 people watched five divisions and 17 bands, representing all military branches, march in a cold rain. The parade was even halted for ten minutes because Truman was late arriving at the White House viewing stand. *Washington Post* reporter Marshall Andrews opined Navy and Air Force officers made excellent impressions on spectators because they extended the parade to the sky by scheduling pilots to fly active military aircraft over the parade. He then criticized Army officials for organizing the same parade presence for the past “six generations.” By simply having soldiers march past the president in neat uniforms and polished boots and helmets, the Army failed to illustrate its “mighty chore” of war on Constitution Avenue.<sup>47</sup>

While parades, air shows, and open houses occurred in metropolitan Washington and across the country on May 20, military officials and politicians were also deployed to give speeches explaining the military’s ability to respond to international threats. In San Francisco, Chairman of the Joint Chiefs of Staff, General Omar Bradley bluntly told a crowd that America and her allies would fear a nuclear-armed Russia in a few years. While he was sure the United States would have a larger stockpile than the Russians, Bradley argued the nation must work to

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<sup>46</sup> "Armed Services Show Scheduled at White Oak, Md," *Washington Post*, 1950, B1-B1; "Bolling Displays to Feature Armed Forces Day Saturday." "Area Armed Forces Facilities Opened for Public Inspection," *Washington Post*, 1950, M15-M15.

<sup>47</sup> Marshall Andrews, "Services Unite for 1st Joint Parade Here," *Washington Post*, 21 May 1950, M1, M17; "Armed Forces Plan Gigantic Aerial Show," *Washington Post*, 1950, B1-B1; "Big Defense Show Planned for District."; "District to Celebrate Armed Forces Day," *Washington Post*, 1950, 28-28.

make sure Russia could never “cripple this arsenal of the Western World.” In addition to physical armaments, Bradley suggested, in a national emergency, Congress should give the President complete and direct control over the country, including the civilian economy, to safeguard the democratic world.

In Detroit, USAF Chief General Hoyt S. Vandenberg used Armed Forces Day to lobby the American people for more money and equipment because he warned the growing Air Force could not fight an extended air war at its current size. If fully mobilized and engaged in heavy fighting, Vandenberg estimated the branch only had enough equipment to last a few months before it was destroyed. At current production levels, he estimated it would take two years to simply replace existing aircraft and equipment.<sup>48</sup>

Compared to Vandenberg and Bradley, Admiral Jonas H. Ingram, the retired commander of the Navy’s Atlantic Fleet made an even more dire prediction to an audience in Indianapolis. He prophesied a war in less than three years if international relations did not improve. Instead of military buildup, he argued war could be averted if a properly staffed, “bipartisan” State Department enacted a foreign policy Stalin “would respect.” Ingram also wanted Americans to fully commit to the United Nations and maintain diplomatic relations with the Russians and their satellites because peace, according to Ingram, came from the conference table, not the battlefield.<sup>49</sup>

Sadly, the first major military conflict of the Cold War started barely a month later on June 25 when Soviet-supported North Korean soldiers invaded the U.S.-backed South Korea, triggering a three-year war for control of the peninsula. Just as the 1950 Armed Forces Day

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<sup>48</sup> He made similar statements before Congress during the MacArthur hearings in May 1951. Steven Casey, *Selling the Korean War: Propaganda, Politics, and Public Opinion in the United States, 1950-1953* (New York: Oxford University Press, 2008), 251.

<sup>49</sup> John G. Norris, "Defense Chiefs Call for Greater Security," *Washington Post* 1950,4-4.

speakers called attempted to sell the idea of increased military expenditures for national security to the public, Truman Administration officials needed to sell the American public on the idea of a limited war in Korea. Unlike Germany and Japan in World War II, North Korean aggression posed no direct threat to Americans or their economic markets to necessitate the expenditure of American soldiers and equipment. The result was federal officials had to convince the public and Congress to support fighting a stalled war while also preparing to potentially fight communism elsewhere in the world. The costs were staggering as defense spending accounted for three-quarters of the national budget by 1953.<sup>50</sup>

By the 1953 Armed Forces Day, Eisenhower was president and he was working to cultivate a different image of the military in America. Historians like Paul G. Pierpaoli and Steven Casey consider Dwight Eisenhower's election in 1952 to be a repudiation of how Truman sought to fight and fund the war against communism. Voters were tired of a Korean War that was supposed to take a few months but required three years and over 35,000 American lives to resolve. Compounding these negative public feelings was a fear of Soviet or Chinese attack, which administration officials cultivated.<sup>51</sup>

After three years of war, military officials remained committed to the combined Armed Forces Day because none of the branches had "lost its identity" during the war. Some officials felt it made individual personnel "prouder" to be in the military because AFD reinforced inter-service cooperation, which improved morale because every service member felt they possessed an individual expertise for national security. By 1953, organizers also had more local

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<sup>50</sup> Casey, *Selling the Korean War: Propaganda, Politics, and Public Opinion in the United States, 1950-1953*, 65-122.

<sup>51</sup> Ibid 65-122; Paul G. Pierpaoli, *Truman and Korea: The Political Culture of the Early Cold War* (Columbia, MO: University of Missouri, 1999), 160-223. Casey, *Selling the Korean War: Propaganda, Politics, and Public Opinion in the United States, 1950-1953*, 65-122.

independence to schedule events. Instead of keeping to the third Saturday of May, officers could schedule programs anytime during the preceding week.<sup>52</sup>

On March 17, President Dwight D. Eisenhower issued a proclamation for Armed Forces Day directing the Secretary of Defense and the Secretary of the Treasury to use AFD programs nationwide to recognize how service members demonstrated their loyalty to the nation every day. Eisenhower reminded the Secretaries this was especially true in 1953 as the Korean War dragged on and the “armed forces are now engaged in combat against ruthless aggression and despotism, which threaten to destroy the freedom this Nation cherishes.” He also looked beyond the war and saw Armed Forces Day as evidence to the American people that continued military strength brought both domestic and international peace.<sup>53</sup>

In California, the San Diego Citizens Committee organized the San Diego Air Power show to honor the fiftieth anniversary of powered flight and created a wordy theme of “America’s Security Depends upon [the] Amount and Quality of Her Air Power.” With flights and exhibits from the Air Force, Navy, Marine Corps, and the Coast Guard, at least the quantity concept was illustrated. An estimated 300,000 attended the San Diego Air Power Show while another 500,000 watched it broadcast on television.<sup>54</sup>

Meanwhile, in Texas, USAF Col. John A Christiansen led the state’s AFD programming and told local officers there were four major messages they needed to portray in Air Force

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<sup>52</sup> *Armed Forces Day Manual*, (Office of Information, 1953), Armed Forces Day Manual, P3 Box 7; Office of Information; Office of the Secretary; Department of the Navy; Department of Defense, Record Group 428; National Archives at College Park, College Park, MD, 1-7.

<sup>53</sup> *Power for Peace: Armed Forces Day, May 16, 1953, Bulletin No. 3*, (New York: Area IV Armed Forces Day Committee, 1953), Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-6.

<sup>54</sup> Minutes, by T. J. Ryan, 8 June, *Minutes of Public Relations Advisory Council Meeting*, Armed Forces Day, General Celebration, 20 May 1950, P2 Box 86; Division of Public Information, 09/1947-ca. 1960; U.S. Marine Corps.; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1.

programming. First, they should “sell” Americans the idea that the Air Force was the primary force behind the “Power for Peace.” Second, they should create programs to demonstrate to “taxpayers” how Air Force officials were intelligently managing and spending federal money. Third, personnel should persuade men and women to enlist in the Air Force as a career. Finally, they should inspire male recruits to apply for flight training and Officer Candidate School. In order to meet these goals, Christiansen told officers that the San Antonio-based Flight Training Command would schedule formation flights for communities in five nearby states and land at any airport with a 5000-foot runway.<sup>55</sup>

Elsewhere in the nation, Lt. Col. Robert V. Shinn, the area organizer for AFD events in New York, New Jersey, and New England, told local organizers that Armed Forces Day was an opportunity to recognize the government’s historical role in aviation during the fiftieth anniversary of the Wright Brothers’ first flight. Combining AFD events with commemoration events, Shinn considered to be in the best interest of everyone involved.<sup>56</sup>

Officials from all three branches decided AFD was an opportunity to recognize the fiftieth anniversary of powered flight. Although the Army lost most of its air power when the Air Force became an independent branch in 1947, Army leaders still planned to use 1953 to honor the service’s role in developing aviation. Ironically, Air Force officials decided they inherited the Army’s aviation history when they separated and planned an Air Force history dating to 1907, when the Army created the Aeronautical Division within the Signal Corps. Naval officials sought

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<sup>55</sup> Unidentified, by Col. John A. Christiansen, *Letter*. Waco, TX, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-2.

<sup>56</sup> Robert V. Shinn, *Bulletin No. 1 (1953)*, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-11.

to raise public awareness of their role in aviation by displaying “naval aviation relics” at important locations on Armed Forces Day. Even Civil Aeronautic Administration (CAA) leaders created a national committee to plan commemorations for the fiftieth anniversary of powered flight.<sup>57</sup>

By 1953, military officials also codified air show activities to streamline planning. Defense Secretary Charles E. Wilson designated Armed Forces Day as a “Class I” demonstration, which meant most aerial displays would be simple flybys. Wilson further restricted aircraft designated for use on AFD to any aircraft not already scheduled for missions, maintenance, or training. However, pilots and crews could fly to a distant program if the flight also served a training function. Navy officials added their own limitations, stating their aircraft would only be allowed at non-military venues if the host provided free security and emergency services. The Air Force was most restrictive, as officials called for no bomber flybys and pilots could use no more than 10% of their monthly allocation of flight hours for AFD programming. Air Force officials also said none of their equipment would be used for Class II demonstrations, which were tactical performances meant to exhibit combat capabilities of aircraft and pilots.<sup>58</sup>

The hallmark Armed Forces Day air show for the nation remained the Bolling Air Force Base program since it reached both average citizens and political elites. At an April 1953 planning meeting, an Army officer suggested marketing the event with a leaflet bombing of the

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<sup>57</sup> Charles Cary, *Tentative Program for Federal Government Participation in the Observance of the 50th Anniversary of Powered Flight (1953)*, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-6.

<sup>58</sup> [Official Army, Navy, and Air Force Policies], by William E. Bergin, 28 January, Official Army, Navy, and Air Force Policies on Aircraft and Naval Vessels, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-6. *Armed Forces Day Plan*, (Fort McPherson, GA: Area IV Commander, 1953), Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 23. Class III demonstrations are just static displays.

city. CAA officials approved a flight area for downtown Washington encompassing the National Mall, the White House, the Capitol building, the Washington Monument, and the surrounding neighborhoods. City commissioners supported the plan and suggested officials use a helicopter with loudspeakers to make announcements about Armed Forces Day. After a debate, organizers decided the loudspeakers could disturb citizens and an airplane would be safer for the mission than a helicopter. Overall, those attending the meeting agreed the flight would “have considerable public relations value” and should be executed to demonstrate the skills of the Army’s Psychological Warfare Division.<sup>59</sup>

On May 14, 1953, Army pilot Corporal Deboorne Pickett flew a small Cessna L-19 Birdog liaison plane over Washington, DC and dropped color leaflets on residents and visitors. One side depicted a bald eagle with the seals of all five military branches printed across the eagle’s chest. Above the eagle’s head was the Armed Forces Day slogan, “Power for Peace” while beneath the bird was the AFD dates. Officials employed the opposite side to induce recipients to “[k]now your armed forces” by seeing men and machines in action during a parade down Constitution Ave on Saturday morning and the air show at Bolling Air Force Base.<sup>60</sup> Along the bottom of the card, recipients learned the U.S. Army Psychological Warfare Division staff (PWD) was responsible for over two billion leaflets dropped on the Korean peninsula since the war started in 1950. Readers also learned the card in their hands was developed and

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<sup>59</sup> Capt. M. R. Stone, *Joint Executive Committee, Armed Forces Day, 29 April 1953* (Washington, DC: Potomac River Naval Command, 1953), Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-5. Capt. M. R. Stone, *Preliminary Report on Area VII Armed Forces Day 1953*, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-3.

<sup>60</sup> "Troops and Weapons Swarm over Bolling Air Force Base," *Washington Post*, 15 May 1953, 3.

distributed using the same methods PWD staff used for Korean and Chinese leaflets. In fact, the Armed Forces Day leaflet served as a training mission for PWD soldiers.<sup>61</sup>

For those curious how the Army's psychological warriors worked, they could tour a mobile printing plant at Bolling Air Force Base during the air show. Elsewhere on the base, visitors could view a half-million square feet of exhibits including a Navy demonstration of how it fed sailors on a mass scale. As part of the program, sailors distributed 20,000 free servings of French fries to the public.

Unlike the Navy, Air Force officials remained focused on displaying their combat hardware. Hours after Cpl. Pickett's flight, Major Robert Barouch appeared over the city flying a Convair B-36 Peacemaker. With his crew of 16, Barouch's landing at Bolling awed even other military personnel as the 160 foot long aircraft descended to the ground powered by six piston engines while Barouch left the B-36's four jet engines off. Then the largest aircraft in the world, the B-36 was reportedly the most popular plane at the air show. To help taxpayers better understand how much defense cost the nation, Air Force officials hung price tags from the aircraft and other equipment. *Washington Post* reporter Richard J. Maloy overheard many a taxpayer awed at the bomber's \$3.5 million price tag.<sup>62</sup>

While the B-36 remained on the ground for the duration of Armed Forces Day, the Marines demonstrated to the estimated 113,000 spectators how they adapted the helicopter for combat assaults in Korea. First, an Army pilot dropped leaflets on the fictional village of "Harbonia." Then a flight of six Sikorsky HRS-1 transport helicopters landed on the field to

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<sup>61</sup> United States Marine Corps. Headquarters, *Memorandum, by Office of the Chief of Psychological Warfare, 14 May*, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-2. "Troops and Weapons Swarm over Bolling Air Force Base."

<sup>62</sup> Richard J. Maloy, "113,000 See Thrill Show at Bolling Base," *Washington Post*, 17 May 1953, M1, M19.



deposit 72 combat-ready Marines and a 75mm howitzer. The men spread out before the spectators and organized a firing line towards their imagined enemy while artillery was simulated by detonating preset charges across the base. With the foothold in “enemy” territory established, a second wave of helicopters delivered more Marines, a jeep, a cannon, and ammunition to the battle for Harbonia. As the “battle” raged on, departing helicopter crews also laid communication wire to connect the Marines on the ground to their leaders.<sup>63</sup>

On the second day, Bolling Air Force Base hosted another 120,000 people wanting to see the men and machines of the American military, once again making the air show the most attended event for Armed Forces Day in the Washington, DC region. A distant second was the destroyer USS Robinson and submarine USS Piper whose crews hosted 19,971 people over the same two days at the Navy Yard. Four miles away from Bolling, the 1953 Armed Forces Day Parade was disappointingly attended by 10,000 people, a mere ten percent of the 1950 attendance.

In his Armed Forces Day report to Defense Secretary Charles E. Wilson, Rear Admiral George H. Fort proudly noted the media printed over 50 news articles, aired two one-hour live television shows and over 300 minutes of other television coverage, and screened military films almost 60 times over the week prior to Armed Forces Day. He called the air show at Bolling Air Force Base “a complete and well-rounded representation of the mission and activities of the services” for the American people. The 500,000 square feet of ground displays, according to Fort, provided ample opportunity for positive interactions between the audience and military

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<sup>63</sup> "500 Parade on Armed Forces Day," *Washington Post*, 14 May 1953, 25; Maloy, "113,000 See Thrill Show at Bolling Base."; "Troops and Weapons Swarm over Bolling Air Force Base." AFD Chairman, Memorandum, by Col. K. B. Chappell, 28 April, *Re: Preliminary Report, Marine*, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-2.

personnel while also displaying the diversity of military equipment from heavy bombers to construction equipment to radars and LORAN.

Even with his commendations, Adm. Fort saw potential problems for future AFD programming. Fort was concerned by how few people visited the six local military installations compared to the air show. He suggested the dismal numbers resulted from “semi-transient” residents not engaging with military personnel. Compounding these concerns, Fort worried DC residents did not fully participate in Armed Forces Day events because they were habituated to “parades, festivals and holidays of local or national significance.” He recommended future AFD organizers “stress” the importance of civic participation on the local and national level simultaneously. Participation could increase by making civilians feel they had a personal role in helping the nation understand the importance of a strong military.<sup>64</sup>

Maj. James Dunton collected reports like Fort’s from AFD organizers nationwide and concluded the programs “effectively” linked the American military and the public. An estimated four million people visited over 500 facilities for Armed Forces Day. Another one and a half million Americans participated in demonstrations, luncheons, and civic activities in 1300 communities nationwide. Dunton was so impressed with the reviews for the air show at Bolling AFB that he advocated it serve as the model for future joint air-sea-ground shows for AFD. In fact, he considered this format so valuable for creating public support for the military that Dunton suggested military aircraft participation at public events the rest of the year could be reduced in areas with large Bolling-style air shows.<sup>65</sup>

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<sup>64</sup> Charles E. Wilson, Memorandum, by G. H. Fort, 12 June, *Re: Final Report, Armed Forces Day, Area VII*, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-6.

<sup>65</sup> Office of Public Information Acting Director, Memorandum, by James G. Dunton, 7 October, *Re: Armed Forces Day*, 16 May 1953, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca.

### 1953 National Aircraft Show

Almost coinciding with Armed Forces Day, private citizens also sought to promote the military in 1953. Staff from the Air Foundation, a nonprofit organization founded in 1946 to promote aviation, debuted the National Aircraft Show (NAS) in 1953 to succeed the National Air Races (NAR), dormant since 1949. NAS staff employed the air show program to link NAS to the past and future of aviation, air shows, and the world at large. In his welcome letter, Air Foundation President Frederick Crawford announced NAS was a new air show to serve as a “dramatic review” of the government’s progress in defending the nation from the air and the nation’s development of commercial aviation. He suggested the review should be impressive because the nation “has awakened from the complacency” following World War II. Crawford, who was also the President of aircraft parts maker Thompson Products, considered the first vestige of this success to be the performance of Air Force jet fighter pilots in Korea who allegedly achieved a 10:1 kill ratio over North Korean MiG-15s. He told Americans unable to travel to Dayton for the 1953 show not to worry because he expected the media to report NAS’ results to the world.<sup>66</sup>

NAS officials announced Dayton would host the largest industry exhibition since a 1946 program in Cleveland. Participants included over 90 US engine makers, “virtually every” major airframe maker, and many accessory and equipment manufacturers. One reason for the high industry turnout was Dayton was the USAF’s Air Materiel Command’s home, the purchasing arm of the Air Force. As a result, exhibiting at NAS could help a company connect with USAF acquisition officers. In addition to voluminous exhibits, each day included four hours of flying

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1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-6.

<sup>66</sup> *National Aircraft Show: Official Program and Log - Dayton, OH, 1953*, (Cleveland, OH: Air Foundation, 1953), In TRW, Inc. Records, 1900-69. Western Reserve Historical Society, MS 3942, 180, NAS 1956, 11. Bryce Walker, *Fighting Jets* (Alexandria, VA: Time-Life Books, 1981), 57, 69.

from all the services and included three world record attempts, three jet teams, and three air events.<sup>67</sup>

One of the flying events was the Allison Trophy, then in its fifth year of existence. Allison Engine officials created the event to salute the service personnel who helped develop aircraft from experiments in the early 1900s into dependable fighting machines. The race began in Indianapolis, where General Motor's Allison Engine Division was located, and finished in Dayton some 110 miles away. New for the 1953 trophy, Allison and Air Force officials decided when the fighter pilots completed the race over Dayton, they would perform a "simulated close support bombing attack." With this change, it was no longer a simply speed demonstration with virtually the entire spectacle occurring beyond the view of spectators. Now the Allison Trophy was presented to the pilot who arrived on a target as quickly as possible and struck a blow to his enemy, whoever they may be in Dayton.<sup>68</sup>

In addition to flying events like the Allison Trophy, officials in each military branch created their own flying performance for the spectators. U.S. Air Force officials used their program to, among other things, demonstrate the climb rates of three interceptor aircraft (the North American F-86D Sabre, the Northrop F-89C Scorpion, and the Lockheed F-94C Starfire) using their afterburners. Officials also made Dayton the first public display site of FICON (an acronym for Fighter Conveyor) where a modified Convair B-36 "Peacemaker" carried a Republic F-84 Thunderstreak deep into enemy territory for an atomic bomb attack.<sup>69</sup> They also

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<sup>67</sup> "Whole World Watches as American Measures Air Progress in Dayton," *Newsletter to Supervision*, 11 September 1953, 1-2.

<sup>68</sup> *National Aircraft Show: Official Program and Log - Dayton, OH, 1953*. 31.

<sup>69</sup> "Dayton to Show Aviation's Best," *Aviation Week*, 31 August 1953, 15.

scheduled a demonstration of the Bell X-5, which tested variable sweep wings and the Boeing B-47 Stratojet performed a rocket assisted takeoff (RATO).<sup>70</sup>

The Air Force began its program with eight Korean War aces in F-86s screaming down from 43,000 feet and punching through the sound barrier at five-second intervals. Then, crowds were treated to series of parachute jumps followed by the finish of the Bendix Trophy Event. The Bendix dated to 1931 to encourage individuals and groups to develop faster cross country speeds. Although originally created for all aircraft types, the 1950 race became solely open to jets, and by extension the military. Ten pilots flew Republic F-84F Thunderjets from Edwards Air Force Base in California to Dayton attempting to break the race's 1951 speed record set of 533.761 MPH. Timing for each pilot began when their wheels started to roll on Edwards' runway and did not stop until the plane passed the finishing pylon at Cox Municipal Airport in Dayton. Not only did all 10 pilots eclipse the old record, but Capt. James S. Carson also succeeded despite his engine failing when he was ten miles from the finishing pylon. Since he was at 40,000 feet when his engine failed, Carson was granted permission to glide to completion of the race.<sup>71</sup>

The Bendix was a cross-country race where only the aircraft flashing across the finish line was visible to the spectators. The Thompson Trophy, by contrast, was created in 1929 to foster development of aircraft with higher speeds and "practical maneuverability," so it was awarded to the pilot able to fly the fastest around a course laid out around the airport. Brigadier General J. Stanley Holtner, the USAF Flight Test Center commanding officer, flew the

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<sup>70</sup> "News Digest," *Aviation Week*, 7 September 1953, 7.

<sup>71</sup> "10 in Air Force Jets Seek to Set Bendix Mark," *New York Times*, 4 September 1953, 33. "10 Jets Race Today for Bendix Trophy," *Washington Post*, 5 September 1953, 9. "Flies from West Coast to Dayton in Three Hours," *Chicago Tribune*, 6 September 1953, 5. *National Aircraft Show: Official Program and Log - Dayton, OH, 1953*, 27.

hundred-kilometer course in a North American F-86D Sabre jet fighter in 5 minutes, 28 second with an average speed of 681mph. However, this flight was really just a staged demonstration as Holtoner achieved a faster time during a trial run a week prior when higher air temperatures favored the engine's efficiency. Holtoner told the crowd after his flight that the record would not stand long because he knew of existing experimental planes able to fly faster than his mass produced fighter. After the 1953 National Aircraft Show ended, officials announced the Thompson Trophy would no longer be run with competitors flying over populated areas due to the potential catastrophe of flying at "near sonic speeds."<sup>72</sup>

One of the crowd favorites during the air show was the Air Force's Fighter Conveyor Project (FICON), a test program to study if the range of a bomber could be coupled to the speed and maneuverability of a fighter. Just a week prior to NAS, Air Force officials whetted public appetites by announcing they "perfected" the techniques necessary for FICON to be successful. When deployed, a B-36 crew flew up to 4000 miles with an F-84K strapped to the bomber's belly. At 45,000 feet, the crew released the fighter and the F-84K pilot could fly another 500 miles before he released a nuclear payload and returned to the mother ship for the flight back to base.<sup>73</sup>

The crowds "gasped" when they saw the demonstration occur at a mere 800 feet. A lumbering Convair B-36 Peacemaker passed the crowds with the Republic F-84K Thunderstreak latched to the bomber's belly via a special trapeze. When the F-84K pilot released his plane from the big bomber, the jet fighter appeared to almost stall, but he regained control of the plane.

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<sup>72</sup> "Whole World Watches as American Measures Air Progress in Dayton." 1-2. *National Aircraft Show: Official Program and Log - Dayton, OH, 1953*, 29. Erwin J. Bulban, "USAF Takes Wraps Off X-1B," *Aviation Week*, 14 September 1953, 14. "Jets, 'Copters Set Records at Air Races," *Washington Post*, 8 September 1953, 17.

<sup>73</sup> Harold B. Hinton, "B-36 with Atom-Laden Jet Now Can Pierce Foe's Core," *New York Times*, 26 August 1953, 1, 14.

Crowds then watched the pilots reunite the aircraft, suggesting it would be possible in the future for a fighter plane to be transported deep into enemy territory for a nuclear strike.<sup>74</sup>

Army officials demonstrated a different lifting capacity by constructing a temporary heliport in Dayton's Riverview Park and shuttled military personnel and media representatives between the park and the airport hosting the National Aircraft Show. The twelve-mile trip could take an hour by a car in traffic, but was reduced to eleven minutes by helicopter. During the air show, Army pilots used 14 Sikorsky and Bell helicopters to shuttle over 600 people between the park and the air show. At times, four helicopters simultaneously operated in the 200 square foot landing zone at Riverview Park with upwards of a thousand spectators watching nearby. No mishaps were recorded during the entire operation.<sup>75</sup>

Compared to the awe and power of the Air Force program, naval officials were criticized for focusing on "semi-obsolescent" propeller planes performing carrier-landing maneuvers on the land locked runways. Compounding this, Navy airmen had problems with their Grumman F9F-6 static display. The swept wing fighter leaked fuel from its wing tanks because heat caused the fuel to expand in the tanks.<sup>76</sup>

The Navy's sister branch, the Marine Corps also had trouble during its flying program at NAS. On the second day of the show, the Marines performed a flyby with four Sikorsky helicopters capable of carrying eight passengers apiece. As the choppers left the performance area, the crowd saw two "plummet out of sight behind the main airport building." Black smoke rose from the area and emergency vehicles sped over to the obscured scene. Officials later

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<sup>74</sup> Alexander McSurely, "Jets, Copters Have Field Day at Air Show," *Aviation Week*, 14 September 1953, 11-13.

<sup>75</sup> "Copter Shuttle Draws Crowds," *Aviation Week*, 21 September 1953, 21. "600 Civilians Given Lift by Army Copters," *Chicago Tribune*, 8 September 1953, 6.

<sup>76</sup> Bulban, "USAF Takes Wraps Off X-1B." 14.

explained the rotors of the two Sikorskys “brushed,” causing the pilots to lose control of their aircraft. The relatively minor incident could have been a disaster because one of the pilots, Major William T. Tebow, Jr., crashed his burning helicopter on an empty playground located in a housing development next to the airport. The other pilot, First Lieutenant P. M. Gish, landed his helicopter but grazed a house with his tail boom in the process. A *New York Times* reporter noted the Sikorskys were the same type of helicopter the Secretary of the Air Force Harold Talbott and his wife used to arrive at the National Aircraft Show. It is not clear if the reporter was implying the helicopters were too fragile for high-ranking officials to travel on or if the statement was meant to show the trust officials had in the equipment and pilots in the U.S. Marine Corps.<sup>77</sup>

Air show participants did not rely solely on performances and ground displays to communicate with visitors. Many companies purchased advertisements in the souvenir program visitors bought for a dollar. Aircraft manufacturers like North American Aviation allocated most of their ad space to depictions of their most notable aircraft, in this case six F-86 Sabres flying towards the viewer. Beneath the aircraft, the company claimed they built more aircraft than any other company in the world. It seemed the only goal for company officials was for the public to know who made the popular F-86.

Only two advertisements in the air show program seem to target the actual purchasing power of the average spectator. First, General Motors marketed its Chevrolet cars’ new and improved fuel economy. However, GM marketers also bought space to market its Allison aircraft engine division and the efforts of Allison’s Indianapolis test center staff to analyze jet engines under realistic conditions. The only other consumer focused ad marketed Champion Spark Plugs where readers learned the military relied on the company’s spark plugs for precise maneuvers

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<sup>77</sup> "2 'Copters Collide at Aircraft Show," *New York Times*, 7 September 1953,32. "'Copter Crash at Air Show; Marine Hurt," *Washington Post*, 7 September 1953,5.



like aerial refueling. Readers were then informed the manufacturer's quality was the consistent from aircraft to automobile, implying that if the product was good enough for Uncle Sam, it was good enough for John Q. Public.<sup>78</sup>

By comparison, parts makers and other lesser-known enterprises used ads to explain how their products or services benefited Americans. Warner & Swasey, a machine maker, wanted readers to understand that consistently investing in new manufacturing equipment could solve the boom and bust cycles that increased inflation and debt. The ad copy suggested that these machines would also lead to efficient workers, stable profits, and lower prices.<sup>79</sup>

While most air show organizers tightly planned events, the non-scheduled moments usually rank among the most instructive. At NAS, Frederick Crawford unexpectedly spoke on the record about potential defense cuts. Lon Kappel reported, in *Aviation Age*, the cuts issue "stole the show" among industry representatives. Crawford claimed to speak for the entire industry (and echoed the Warner & Swasey ad) when he told Kappel the cycle of cutting defense programs in peacetime and ramping them back up for war damaged long-term military effectiveness. A smarter program, according to Crawford, would be for the military to regularly add small amounts of new equipment each year to maintain an effective and modern fighting force. Furthermore, if long-term plans were not created, he posited the military would be "junk" because modern defense systems were too expensive and complicated to design and build quickly.

Crawford then told Kappel the air show was necessary to educate the public why the military needed to be "constant and stabilized." The National Aircraft Show provided an opportunity for 250,000 people to learn the effort involved in the design, construction, and

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<sup>78</sup> *National Aircraft Show: Official Program and Log - Dayton, OH, 1953*, 66, 68.

<sup>79</sup> *Ibid.* 8, 10.

operation of military equipment. Design and production in the aviation industry needed to be on “an even keel” as part of a sane and successful defense plan. With this information, Crawford believed, Americans would understand why Congress should maintain relatively high military spending even during peacetime.

Finally, Crawford told Kappel he believed programs like NAS were effective because Americans could see world records fall to operational aircraft outfitted with full equipment and armor. Speed records, climb records, and the like used to fall to aircraft designed specifically for each record. When records fell to standard issue military equipment, Crawford alleged the public could then understand the effectiveness of the American military-industry complex.<sup>80</sup>

In planning and writing about the 1953 National Aircraft Show, organizers and supporters alike proclaimed the show would honor the Wright Brothers during the fiftieth anniversary of powered flight. However, beyond that statement and three articles in the air show program reviewing the history of aviation, nothing during NAS seemed to look back on the Wright Brothers. None of the flying events involved older aircraft. None of the milestones achieved by Bendix, Thompson or Allison pilots were couched in terms related to speed, distance, or flying skills of the Wrights and their contemporaries. In the end, air show organizers were concerned with the present and future of military aviation but claimed their purpose by draping their goals with the ideals of American history.

In the weeks after the National Aircraft Show, Frederick Crawford received congratulatory letters from government luminaries like Air Force Chief of Staff Nathan Twining and the Chief of the Army Matthew Ridgeway. Lt. General Edwin Rawlings, commander of the Air Materiel Command, wrote Crawford how proud the entire Air Force staff was for the opportunity to demonstrate the state of aviation’s development. Rawlings then committed Air

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<sup>80</sup> Lon C. Kappel, "How to Get Modern Air Power Cheaper," *Aviation Age*, November 1953, 21-3.

Materiel Command resources to any future programs bringing the “facts about airpower” to the public.<sup>81</sup>

Despite executing a well-received air show, Crawford was privately unhappy with the media coverage from magazines like *Time* and *Newsweek*. He criticized Roy E. Larsen, the vice-chairman of *Time*, for his decision to cover Britain’s national air show at Farnborough instead of America’s National Aircraft Show. Crawford claimed *Time*’s staff created the impression the English were the world leaders in aviation and America lagged behind by covering Farnborough instead of Dayton. He decried Farnborough as a show with only sample aircraft on display while the National Aircraft Show demonstrated military aircraft currently serving the nation in large numbers. Finally, Crawford exclaimed Farnborough did not help create a positive image for aviation. He cited the 1952 show when 29 spectators were killed after deHavilland test pilot John Derry tried to ascend in his deHavilland Sea Vixen after a supersonic demonstration and the wings failed. Crawford countered American military pilots safely demonstrated supersonic operations and deserved positive coverage for their success. No reply from Larsen has been found.<sup>82</sup>

However, not everyone appreciated the sonic boom demonstrations over Dayton. When pilots demonstrated sonic booms, the sound waves rippled out and broke windows and damaged nearby buildings. Insurance claims for the air show cost twelve hundred dollars. While the actual financial cost was small, the negative public relations could not have been more serious.<sup>83</sup> In May 1954, Air Force officials banned breaking the sound barrier and the ensuing sonic booms

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<sup>81</sup> Lt. Gen. E. W. Rawlings, "Letter to Frederick C. Crawford, 1953," TRW, Inc. Records, 1900-69, Cleveland, OH, 1.

<sup>82</sup> Frederick Crawford, "Letter to Roy E. Larsen, 1953," TRW, Inc. Records, 1900-69, Cleveland, OH, 1. *Des Barker, Zero Margin Error: Airshow Display Flying Analysed* (Johannesburg: Freeworld Publication, 2003), 132.

<sup>83</sup> H. J. Raymond, "Letter to Benjamin T. Franklin, 1954," TRW, Inc. Records, 1900-69, Cleveland, OH, 1.

over populated areas in response to public complaints and the threat of lawsuits from residents surrounding air shows like NAS.<sup>84</sup>

Crawford also contacted Malcolm Muir at *Newsweek* for their supposedly inadequate coverage for Dayton. He wrote Muir that without adequate media coverage, the public would be uninformed about the state of military airpower. Muir replied that articles published in *Newsweek* in the September 7<sup>th</sup> and September 14<sup>th</sup> issues were sufficient.<sup>85</sup>

More important than the media's perspective on was the Department of Defense officials' evaluation of the Dayton show's impact on public relations. In December 1953, the Deputy Secretary of Defense Roger Kyes informed Crawford that Defense officials wanted to support only a single national air show per year to eliminate the costs of duplicating efforts across the country. Implicit in this statement was Defense officials believed they could accomplish a year's worth of public relations in a single air show. This decision pitted major cities against each other for the privilege of hosting the 1954 National Aircraft Show. In response Crawford told Kyes he knew officials in Washington, DC, Chicago, Birmingham, AL, Detroit, and Dayton all wanted to host the National Aircraft Show in 1954. He then suggested Dayton repeat as NAS host because, in his experience from the National Air Races, Crawford found repeating at a site would control costs but also enticed the public with an established product. However, Crawford also informed Kyes that members of the Aircraft Industries Association (AIA) planned to debate what they believed would provide the best exposure for the military.<sup>86</sup>

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<sup>84</sup> "News Digest," *Aviation Week*, 17 May 1954, 13.

<sup>85</sup> Frederick Crawford, "Letter to Malcolm Muir, 1953," TRW, Inc. Records, 1900-69, Cleveland, OH. 1.

<sup>86</sup> C. J. Reese, "Letter to Frederick Crawford, 1953," Air Foundation Records, Cleveland, OH. 1. Roger Kyes, by Frederick Crawford, 5 November, Letter to Roger Kyes; Frederick Crawford, "Letter to Roger M. Kyes, 1953," TRW, Inc. Records, 1900-69, Cleveland, OH, 1; Frederick Crawford, Letter, by Roger Kyes, 21 December, Letter to Frederick Crawford, 1.

Crawford's warning was necessary because AIA members organized an Aircraft Show Committee in 1953 to debate the value of air shows. Members worried postwar air shows were neither a success nor failure, which made them unsure if the financial and organizational costs of participation were worthwhile. When comparing export sales from air show years to non-show years, committeemen could not find any direct impact on sales from air shows. Furthermore, they believed most postwar air shows lacked a clear purpose or mission. On the positive, United Aircraft vice-president, L.D. Lyman suggested televising programs like the 1953 National Aircraft Show, could benefit export sales and "arouse public interest" in aviation. However, he did not explain how an air show would correlate to sales and public support.<sup>87</sup>

On January 20, 1954, the committee members convened at the Union Club in Cleveland, Ohio to debate their role in air shows, particularly the National Aircraft Show. Among the attendees were Fredrick Crawford, James S. McDonnell, founder of McDonnell Aircraft, and Malcolm Ferguson, President of Bendix Aviation. All had a stake in air shows but they also had to protect their business interests. McDonnell told the group he believed Americans would organize and attend air shows regardless of what industry leaders supported. As a result, he believed the AIA needed to take a public position on the goals and structures of air shows. Ferguson expanded McDonnell's view by suggesting air show organizers needed to look beyond developing domestic aviation audiences and "play to the small nations" and large alike to build US aviation leadership worldwide.

L. D. Lyman's statement at the Union Club echoed Crawford's concerns to *Time* executive Roy Larsen. He explained United Aircraft commissioned a poll that found half of the people questioned believed British aircraft were as good or better than American aircraft. Lyman

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<sup>87</sup> Avery McBee, "Meeting Report: Aircraft Show Committee, 1954," TRW, Inc. Records, 1900-69, Cleveland, OH, 1-12. "Next Air Show," *Aviation Week*, 12 April 1954, 12.

thought this was a result of the difference between the England's Farnborough air show and American shows. He reminded the group British military officials allowed Farnborough organizers to showcase the newest British designs at Farnborough, even experimental aircraft, while US military officials denied the use of classified equipment in American shows. Lyman insinuated American air shows could not impress crowds if they only had established technology to display. He suggested more sensitive equipment could be displayed with proper security measures.

Crawford concluded the meeting by theorizing it was time to use the new power of television to bring air shows and their messages into the homes of millions. He contended every modern industry required good public relations to be successful. For most industries, quality publicity cost a lot of money, but Crawford maintained air shows benefited from public dollars. This minimized the financial risks for companies while providing them a stage for their products and philosophy. If anyone at the Union Club disagreed with the sentiments of these men, it was never recorded.<sup>88</sup>

In late February, AIA staff surveyed 32 industry executives, government officials, and media leaders to better understand their perspective on air shows. Of the 24 responses, eleven supported air shows and eleven did not; the remaining two were neutral.

Many of the leaders of the major aircraft manufacturers, like Boeing, Lockheed, North American Aviation, and Republic Aviation, comprised the negative camp. Lockheed Vice-President Carl B. Squier told the group, "the day of the air show is past" because the public believed in aviation as a form of transportation and whenever a plane crashed at an air show, it destroyed a year's worth of good publicity. Republic Aviation President Mundy I. Peale agreed

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<sup>88</sup> Avery McBee, "[Meeting Report, NAS Committee], 1954," TRW, Inc. Records, 1900-69, Cleveland, OH, 1-12; Avery McBee, "Memorandum, 1954," Air Foundation Records, Cleveland, OH, 1.

and explained the company only participated in air shows when Air Force or industry officials pressured them. Boeing considered air shows expendable because they did not think the public cared for informative ground exhibits while the aerial demonstrations could be replaced with television programs.

Donald Douglas was one of the few major executives to not condemn air shows, however he did not give them rousing support either. He simply said it should be left to individual companies to decide their level of air show participation and organizations like the AIA should stay out of the process entirely. The only truly positive responses came from parts manufacturers like Continental Motors president C. J. Reese who proposed a single national show supported by three regional shows, but he did not explain why this configuration would be helpful. However, considering he also led the drive for national air shows in Detroit in 1951 and 1952, his support for air shows was unsurprising.<sup>89</sup>

Government officials were also polarized in their air show viewpoints but more nuanced than the corporate executives. Former Air Force Secretary and then Missouri Senator Stuart Symington considered air shows to be trouble, especially publicly funded ones because they seemed to lack a clear purpose. Speaker of the House Sam Rayburn bluntly stated neither the public nor Congress needed to be sold on aviation in the Cold War, which made air shows expendable.

The most detailed response came from General Lauris Norstad, then Air Deputy to the Supreme Allied Commander in Europe, General Alfred Gruenther. Norstad preferred a single national air show, even if it resulted in fewer spectators. He believed with a single site, a national show was superior to regional and local shows because media outlets could focus coverage in

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<sup>89</sup> "The Big Show," *Aviation Week*, 8 September 1952, 14; Ben S. Lee, "Races Prove Crowd-Appeal of Air Power," *Aviation Week*, 27 August 1951, 13-4.

one place in the weeks before and after the national air show. Being stationed in Europe, Norstad was probably influenced by the air shows in Paris and Farnborough, and that experience may have influenced his opinion.<sup>90</sup>

Much worse was Associated Press' News Executive Allen Gould's explained that the only reason the AP covered air shows was to "play up the crashes." Even these disasters, he said, would only be news for one day and then ignored. Slightly better was the *Wall Street Journal's* Barney Kilgore who supported annual air shows provided they relocate annually to maintain public interest. Like Lyman, he thought achieving success required military officials to lift secrecy in order to get more impressive equipment at air shows to compete with Farnborough and Paris. However, *Aviation Week* editor Robert Wood countered the military would never decrease security enough to allow the latest technology to truly be on display. Considering that, Wood believed an air show with obsolescent aircraft was "pointless."

On May 1, 1954, the National Air Show Committee Report was released stating the Aircraft Industries Association would not participate as a group but leaders encouraged all member corporations to participate in air shows. The authors further described how Committee members believed a Farnborough-style air show would never occur in the United States for three reasons. First, Farnborough cost the British government \$1.5 million dollars and members did not believe the American government would invest that much money in an air show. Second, British officials waived some security regulations in order to exhibit advanced aircraft while American officials were content displaying only obsolescent aircraft. Finally, and perhaps most importantly, England could function with a single national air show because it was a geographically small nation.

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<sup>90</sup> *Digest of Views on National Aircraft Show, "1954,"* Air Foundation Records, Cleveland, OH, 1-6. Aircraft Industries of America, "[*Supplementary Record*], ca. 1954," Air Foundation Records, Cleveland, OH, 1-2.



The National Air Show Committee members then suggested Americans avoid “aping the British” and consider an effective, annual televised report to the nation. Such a program could consist of short films showcasing individual aircraft or other equipment edited into a feature-length production. Airing such a program on or around December 17<sup>th</sup> to honor the Wright Brothers and the anniversary of powered flight was considered apt.<sup>91</sup>

The National Aircraft Show in 1954 went ahead in Dayton as planned. It largely mimicked the 1953 show with one tragic exception. When Major John L. Armstrong was attempting to set a new speed record on a hundred kilometer course when his F-86 fighter exploded in a “ball of fire” while in a high-speed turn at an altitude of 300 feet. The crash occurred three miles away from the show site with over 101,000 people waiting to see his plane flash across the field, but organizers did not even announce the crash to the crowd for over an hour. Armstrong, born in the Dayton suburb of Fairborn and stationed at the Wright Air Development Center in Dayton had even survived a similar incident during a test flight in 1950.<sup>92</sup>

Armstrong’s death reopened the debate about what, if any flying was appropriate at air shows. A naval official told *Aviation Week* Armstrong’s death was unnecessary because Americans understood the value of aviation since World War II and ensuing technical developments. NAS, according to the anonymous official, was simply an expensive and tiring “carnival.” Others did not believe Air Force Secretary Harold Talbot, when he said Armstrong

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<sup>91</sup> Ira Eaker, “Show Committee Report, 1954,” Air Foundation Records, Cleveland, OH, 1-12.

<sup>92</sup> “Air Hero Dies in Bid to Top His Own Mark,” *Chicago Tribune*, 6 September 1954, 7; “Jet Pilot Dies Seeking 2d Record,” *New York Times*, 6 September 1954, 1, 3. “Jet Ace Killed in Air Crash an Hour after Speed Mark Is Credited to Him,” *Washington Post*, 6 September 1954, 1.

died “for his country.” Critics said the crash added no new understandings about the F-86, while NAS sponsors received poor publicity for the money they invested in the air show.<sup>93</sup>

Ultimately, the National Aircraft Show was the nation’s air show until 1956 and was moved to cities like Philadelphia and Oklahoma City to diversify its audiences. After 1956, Defense officials discontinued NAS and returned to participating in dozens of air shows across the country each year. While the format and costs changed, the messaging and choreography became more scripted.

### Joint Services Open House

Since the 1950s, American military officials refined their air show presence to ensure consistent messages and programs across the country. In many ways, they followed Major James Dunton’s recommendation to create air shows patterned on the 1953 air show at Bolling Air Force Base. Since then the US Air Force’s Air Combat Command (ACC) staff developed, scheduled, and implemented USAF appearances at air shows at both military installations and civilian sites.<sup>94</sup>

In 2009, Mark Thibeault, a civilian working for the ACC, released a manual to air show organizers detailing the operational needs and goals for USAF demonstrations like the Republic A-10 Thunderbolt II, the General Dynamics F-16 Fighting Falcon, and the Lockheed Martin F-22 Raptor. On the first page, Thibeault explicitly stated USAF demonstration teams served to “recruit and retain personnel, display USAF airpower to the public and, finally, to act as

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<sup>93</sup> *Was It Necessary?*, "1954," TRW, Inc. Records, 1900-69, Cleveland, OH, 1; Claude Witze, "National Aircraft Show to Leave Dayton," *Aviation Week*, 13 September 1954, 14-6.

<sup>94</sup> Memorandum, by James G. Dunton, 25 November, *Memorandum for Armed Forces Day Liaison Officers and OPI Branch Project Officers, Department of Defense*. Washington, DC, Correspondence and Subject Files, compiled 1953-1953, documenting the period ca. 1775-1953, P2 Box 12; Division of Public Information; U.S. Marine Corps; Department of the Navy; Department of Defense, Record Group 127; National Archives at College Park, College Park, MD, 1-2.

ambassadors for the United States of America.” If local air show organizers failed to follow the ACC requirements, they were considered to be endangering USAF personnel’s ability to meet their operational goals. The consequences could be as severe as ACC staff canceling local demonstrations of the popular aircraft.<sup>95</sup>

These regulations and expectations were on display at the 2009 Joint Services Open House (JSOH) at Andrews Air Force Base in Washington, DC. Air Force officials organized the JSOH each May, in keeping with the tradition of honoring Armed Forces Day with an air show. Each year, the base, which was home to the Presidential aircraft, hosted Air Force, Navy, and Army aircraft but also aircraft from Immigration and Customs Enforcement (ICE), the State Department, and the U.S. Coast Guard. In many ways, the JSOH was a general federal government equipment show as boats, trucks, and mobile weapons systems were on display alongside aircraft. However, military flying was always central to the program. In 2009, Air Force officials scheduled over six hours of flying demonstrations and ten of the 17 performers flew military aircraft.<sup>96</sup>

Capt. Johnny Green was one of the military pilots scheduled to demonstrate his Republic A-10 Thunderbolt II at JSOH in 2009. Early on, rain grounded many performers and Green spoke over the public address system with air show announcer Rob Reider. Green described the A-10 as an extraordinarily maneuverable aircraft designed around a gun the size of a Volkswagen Bug and capable of shooting bullets the size of Coke bottles. Combined with wing-mounted anti-tank missiles, Green told listeners, there was no ground target an A-10 pilot could not destroy. However, he continued, it was a small miracle the Air Force still used the ground

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<sup>95</sup> Thibeault, *ACC Aerial Events: 2009 Demonstration Team and Heritage Flight Support Manual*, 1.

<sup>96</sup> Joint Services Open House Schedule, *Joint Services Open House 2009 Program*, Comprint Publications, Gaithersburg, MD, May 2009, 4

attack plane because it was designed in the 1970s to destroy Russian tanks during the Cold War. With the collapse of the Soviet Union in 1989, Air Force officials considered the A-10 expendable and planned to retire the aircraft. The Gulf War in 1990 resurrected the A-10 since the Iraqi army used thousands of Soviet-built tanks. With the ability to attack ground targets at speeds up to 300 mph while only 150 feet off the ground, Green said many an American soldier owed his or her life to an A-10 pilot in Iraq.

Before Green returned to his aircraft, Reider asked him to explain why he joined the United State Air Force. Green replied it was his dream to fly since he was twelve years old. He told the children in the audience that if they wanted to be like him, they needed to follow his lead and first focus on their schoolwork. With good grades, they could attend the Air Force Academy in Colorado Springs, CO, just like him. Then they too might fulfill their dream to fly and defend the nation as an A-10 pilot like himself.<sup>97</sup>

When the weather finally cleared, Technical Sergeant Matt Harris narrated Capt. Green's performance in his Thunderbolt. As Green taxied down the runway, Harris told the crowd they were about to see an aircraft designed for "lethality, survivability, simplicity, and maneuverability." Once airborne, Green flew past show center while barrel rolling the plane repeatedly. As the aircraft rolled, Harris called attention to a faux cockpit painted on the A-10's fuselage meant to confuse enemy observers trying to anticipate an A-10 pilot's next maneuver. Green then began a simulated strafing attack by repeatedly flying figure-eights in the sky to demonstrate the A-10's small turning radius and a pilot's ability to fire at a target and then return to a firing position within thirty seconds. Harris explained how two A-10 pilots working together could hit an enemy target every ten to fifteen seconds. The crowd also learned from Harris the

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<sup>97</sup> Lt. Col. Steven M. Shepro, ed. *2009 Joint Services Open House* (Gaithersburg, MD: Comprint Military Publications, 2009).

plane's primary armament was a huge General Electric-built seven barrel Gatling gun capable of firing with more force than a conventional 20mm cannon.

To conclude his demonstration, Capt. Green flew a slow "dedication pass" to honor those fighting terrorism and anyone who sacrificed their life in the fight for freedom. It also afforded spectators one last chance to see "your" aircraft in action and maybe capture a photograph of the airborne weapon. Throughout the demonstration, whenever T/Sgt. Harris mentioned the A-10, he reminded the audience they paid for the equipment by prefacing it with the pronoun "your."<sup>98</sup>

Narrators for the Air Force's Thunderbirds team also referred to the pilots as representing "your United States Air Force." At the 2009 Joint Services Open House, Lt. Col. Greg Thomas, the Thunderbirds commanding officer, began the team's program by inducting dozens of new Air Force recruits from the Washington region. He reminded the crowd that inductees, wearing dark blue T-shirts emblazoned with the Air Force logo, decided to forgo "regular" jobs to join the 700,000 airmen already serving the nation.<sup>99</sup>

Following the induction ceremony, the Thunderbirds performance began with a ground show spotlighting some of the enlisted personnel responsible for maintaining the aircraft. Few air show performers include these personnel in their air show programs. With recorded music playing, twelve enlisted personnel wearing dark blue coveralls marched in two lines toward the six red, white, and blue General Dynamic F-16 Fighting Falcons. Each time the line passed an aircraft, two airmen briskly broke off and marched toward the plane. They stood at attention next to the F-16s until each aircraft was staffed. The six pilots then repeated the march. The crowd watched the precision and ceremony of preparing pilot and plane for takeoff. No words were

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<sup>98</sup> Ibid.

<sup>99</sup> Air Force Thunderbirds, *Joint Services Open House 2009 Program*, Comprint Publications, Gaithersburg, MD, May 2009, 3

heard and only synchronized hand signals were used to strap pilots into cockpits, perform final checks, and remove the wheel chocks.<sup>100</sup>

A recorded narrator then informed the audience that the Thunderbirds were a fifty-year tradition and served as symbols of freedom and a projection of U.S. military might. He explained the Thunderbirds flew the F-16 since 1982 and listed the various aircraft they performed with previously, including the Northrop T-38 Talon and the North American F-100 Super Sabre. The speaker concluded by informing the multitudes they were about to see the “premier demonstration team of the finest air force in the world.” With the Thunderbird pilots ready to fly, Major Anthony Mulhare began a live narration about the Thunderbirds, the U.S. Air Force history, current military operations, and each maneuver the pilots flew during their performance.

In the air, the Thunderbirds, like most military demonstration teams, had two alternating elements to their air show performance. First, they flew formation flights, which for the Thunderbirds were primarily four pilots flying their F-16s with three feet of each other. Accompanied by graceful and patriotic music like “God Bless America,” the formation pilots demonstrated how Air Force aviators worked together by flying loops and rolls with seemingly perfect unison. What appeared to be smooth movements from the ground, Mulhare described as very difficult for pilots buffeted by the air and the exhaust of the other aircraft.

Alternating with the formation passes were “solo passes” performed by two different pilots. The solo pilots performed dynamic, powerful, and fast maneuvers set to rock music like Limp Bizkit’s “Rolling” for a pass of continuous barrel rolls and War’s “Low Rider.” Just like the Brazilian Smoke Squadron, the solo pilots performed a mirror pass but with only two F-16s.

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<sup>100</sup> Air Force Thunderbirds, *Joint Services Open House 2009 Program*, Comprint Publications, Gaithersburg, MD, May 2009, 3

The Thunderbird solos sometimes performed with the formation pilots. In one such maneuver the four formation pilots flew slowly past the crowd with their landing gears down (also called a dirty pass because of the increased drag). The two solo pilots interrupted the formation by streaking through the formation at hundreds of miles faster than the formation pilots. The intended result was to demonstrate the F-16s slow speed handling in formation while also showing the raw power the aircraft's General Electric jet engine.

For the final maneuver, all six pilots joined together in a diamond formation for a slow pass so spectators, once again, had a final opportunity to photograph the fighter planes. Mulhare reminded everyone the pilots flew to exhibit the power and teamwork needed for the Air Force to function. He then asked everyone to "dream big and serve your community and families." Once the Thunderbirds landed, Mulhare suggested people could meet the pilots, get autographs from the pilots, and "learn how you can be part of the Air Force." The Thunderbirds performance began with an induction ceremony. The team members concluded by working on their next set of potential recruits.

Since World War II, military officials evolved their air show presence from an ad hoc program into one of the most desirable airborne media presentations. They participated in or organized air shows to exhibit the results of military spending, to recruit servicemen and women, and to create or maintain positive relationships with the public. Among the ways officers attempted to accomplish these goals was by providing a variety of aircraft and other military equipment for ground displays and airborne demonstrations.<sup>101</sup>

Over the decades, officials adapted their programs to meet the issues of the day. In 1950, military leaders were concerned the average American viewed the military as squabbling and

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<sup>101</sup> Col. Eric A. Snadecki, ed. *Joint Services Open House* (Gaithersburg, MD: Comprint Military Publications, 2008). Robert Verbsky, "Joint Services Open House, May 17-8," (American University, 2008).

unprepared for war. Three years later, questions about competence were largely assuaged by the Korean War, only to be replaced with the financial cost of war and exactly how taxpayer dollars were allocated. The similarities between the government organized Armed Forces Day air shows and the privately organized National Aircraft Show illustrates how anxious military elites were that the American public might not support military expenditures. Both military and civilian organizers also used the air show to wed the relatively new military aviation in the long history of American patriotism. By constantly telling the public they were viewing “their” military, participants hoped to imbue the average citizen to support the military through vicarious ownership.

The similar goals and methodology of the Brazilian Smoke Squadron suggests American military officials activities were valued by outside observers. Brazilian officials furnished a demonstration team to exhibit a national aviation product, the Embraer Tucano, and flying skills rarely demonstrated elsewhere in the world. By painting the aircraft in Brazilian national colors and performing in the United States, the Brazilian Air Force was able to telegraph to fellow Brazilians they too should be proud of their Air Force because it was worthy of lavish attention from Americans.

Military officials and suppliers consistently had three clearly defined goals when developing air shows. Regardless of their methods and relative success, these air shows programs are far easier to understand in comparison to corporate air shows. In military air shows, participants attempted to recruit new service personnel, retain current personnel, and demonstrate fiduciary responsibility with taxpayer dollars. By contrast, corporate air shows served the far more fickle goal of brand recognition.



## CHAPTER 3

### CORPORATE AIR SHOWS

Most people go to air shows to see the power of military aircraft or the finesse of aerobatic aircraft, yet many Americans in the 1970s and 1980s went to air shows to see Bob Hoover fly the six passenger executive airplane, the Aero Commander. Visually, the Commander was completely unremarkable with its 49-foot wingspan mounted atop an almost 37-foot fuselage and two-piston engines slung on either side of the plane's cabin. On the ground, the Commander's belly was mere inches off the ground since the landing gear was also mounted high in the plane's wings. Capable of carrying only a half-dozen passengers 1000 miles at an average speed of 200 miles per hour, the Commander was the airborne equivalent of the family sedan, not exactly fodder for air show fame.

Hoover, however, was not the average pilot having worked as a test pilot for the Army Air Force after World War II and he served as the backup pilot when Chuck Yeager broke the sound barrier in the Bell X-1 in 1947. Hoover left the military in 1948 to be a test pilot for companies like General Motors' Allison Engine Division and North American Aviation (NAA). In 1968, Hoover was the test and demonstration pilot for NAA when it merged with Rockwell International, which included the Aero Commander Division. At the time, the Division was losing \$13 million per year as sales averaged just one plane per month.

NAA Vice-President of Sales, Dick Robinson asked Hoover to develop a demonstration to "instill confidence in and gain attention" for the Aero Commander. After Hoover's first performance at the 1968 Reading Air Show, Robinson was impressed but suggested Hoover could fly closer to the ground than he did with his other air show plane, the company's World War II-era P-51 Mustang fighter because the Commander had smaller propellers set higher off the ground than the P-51. In his following performance, Hoover flew the utility plane so low to

the ground, the Commander's belly actually scraped the runway. This unintended demonstration of the plane's durability helped increase sales to eight per month.<sup>102</sup>

Over the twenty years Hoover demonstrated the Aero Commander, later renamed the Shrike Commander, and one of the key elements was his "Power Management" demonstration. First, Hoover dove towards the ground at speeds up to 287 mph with the engines at full power, streaming theatrical smoke from the plane's exhaust pipes. Near show center, he would suddenly redirect the plane from its dive into a near vertical climb until the plane stalled and nosed over as Hoover maintained control of the plane, despite the lack of aerodynamic lift. He then repositioned the plane back at an altitude of 2500 feet and repeated the dive, but this time no smoke was visible and the crowd heard no noise from the engines as Hoover shut them off for the rest of the flight. Without the use of his engines, Hoover then performed a classic barnstorming loop followed by an 8-point roll, where he rolled the plane, wing over wing and stopped the roll at eight, equidistant points during the circle. After the roll, Hoover was beyond the runway and had to turn the plane around for landing. When flown properly, Hoover had enough power to land and taxi the Aero Commander to a stop right in front of the crowd.<sup>103</sup>

Hoover performed these feats at hundreds of air shows throughout the United States and demonstrated to customers the aircraft was rugged, capable, and worth purchasing. This was the goal of corporate air shows and performances dating back to the Wright Brothers and Glenn Curtiss in the 1910s. They organized air show teams to tour the country demonstrating the new feat of powered flight. Their objectives were little different from those of corporate air show performances after World War II: target customers who could afford the expensive technology and demonstrate the capabilities of the product while boosting the brand with the general public. By demonstrating to both the few buyers and the masses, present and future customers were

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<sup>102</sup> Shaw, *Forever Flying: Fifty Years of High-Flying Adventures, from Barnstorming in Prop Planes to Dogfighting Germans to Testing Supersonic Jets*. 220-2

<sup>103</sup> Ibid. 264-5.

exposed to their products while also theoretically garnering good publicity for the company, especially if they sought government contracts in addition to corporate customers.

The challenge for all corporate air show organizers was creating demonstrations that were neither boring nor dangerous yet still showcased the aircraft's assets. In September 1910, Wilbur Wright wrote a harsh letter to one of his exhibition pilots, Arch Hoxsey, stating Hoxsey's reputation for "stunting" at air shows would not be tolerated. Wright wanted his pilots to make only "plain flights" of ten to fifteen minutes at a safe distance from the crowd to demonstrate the existence of flight. He decried what he called "fancy flying" because the resulting fatal crashes damaged public support for developing the airplane into a weapon and a competitor to the railroad. Conversely, "stunters" argued pilots executing rolls, steep dives, and other aerobatics created clear visual evidence to the crowd the aircraft was the best designed and manufactured product in the world.<sup>104</sup>

Wilbur Wright's concerns were based on real experiences with the risks and consequences of fatal crashes during public demonstrations. The Wrights first encountered this problem in 1908 when Orville Wright crashed while demonstrating a Wright Flyer for the Army at Fort Myers, Virginia. The force of the crash tore the rear-mounted engine from its anchors crushed the passenger, Lt. Thomas Selfridge, to death; he was the first person to die in an airplane crash.

The Wrights also had a role in the first fatality at an air show when one of their exhibition pilots, Ralph Johnstone, died on November 17, 1910 in Denver, Colorado when he fell out of his airplane at an altitude of 800 feet. By the time Hoxsey, who was also at the air show, reached Johnstone's body, souvenir hunters already stripped Johnstone of all his clothing and reportedly began to try to remove his fingers. Despite these risks, the Wrights kept operating the Wright

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<sup>104</sup> Marvin W. McFarland, ed. *The Papers of Wilbur and Orville Wright, Volume 2: 1906-1948* (New York: McGraw-Hill, 1953), 998-9. Wagstaff, *Fire and Air: A Life on the Edge*, x. Robert Verbsky, "2005 Jones Beach Air Show Collection," (2005).

Exhibition Company for another year and until profits fell dramatically as competition from other pilots increased.<sup>105</sup>

### 1946 General Electric Air Show

Thirty-five years after the Wrights shuttered their air show business, General Electric officials employed the Brothers' legacy to demonstrate the company's growing aviation assets. On June 21-22, 1946, General Electric executives, military officers, and government officials oversaw an air show at the Schenectady County Airport in Glenville, NY, approximately ten miles west of New York's capital in Albany. GE officials organized the air show to dedicate the company's new Flight Test Center at the airport as part of their investment in the aviation industry.

With a local test facility, GE executives theorized company researchers would participate in experiments and could respond faster to results, thus decreasing the amount of time to get products into the marketplace. Prior to this, company employees performed flight tests in New York City and Brownsville, TX, while the GE designers and scientists were based in Schenectady.

The new facility included an arched hangar large enough to house GE's B-29, two floors of laboratories and offices, and its own control tower. The products GE crews planned to test in Schenectady had primarily military applications but company officials were confident the

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<sup>105</sup> David Nasaw, *Going Out: The Rise and Fall of Public Amusements* (Cambridge: Harvard University Press, 1999), 88. Donald W. Nyrop, Oswald Ryan, & Joseph P. Adams, *Civil Aeronautics Board Accident Investigation Report* (Washington, DC: Civil Aeronautics Board, 1952). Tom D. Crouch, *The Bishop's Boys: A Life of Wilbur and Orville Wright* (New York: W. W. Norton and Company, 1989), 383, 433-4. Courtwright, *Sky as Frontier: Adventure, Aviation, and Empire*, 52-70. Hallion, *Legacy of Flight: The Guggenheim Contribution to American Aviation*, 17.

products would trickle into the commercial and general aviation markets because they considered all work a collaboration between the company, the military, other manufacturers, and airlines.<sup>106</sup>

Organizers expected some 100,000 air show attendees eager to see how the nation benefited from GE engineered and built aviation products during World War II and how they would continue to benefit in the future. Executives also sought to show Schenectady residents how GE was investing in the community. Officials wanted spectators to know General Electric employees created the remote-controlled gunnery systems on the Boeing B-29 Superfortress, best known for carrying the atomic bomb, and the turbo-supercharger used on aircraft like Republic's P-47 Thunderbolt fighter and Consolidated's B-24 Liberator bomber.<sup>107</sup>

To dedicate the Flight Test Center and open the show, company President Charles E. Wilson spoke to a crowd of over 10,000 people including Assistant Secretary of War Stuart Symington, Lt. Gen. Nathan Twining, the head of the Army's Air Materiel Command, and the MGM & Fox Movietone news cameras.<sup>108</sup> He told his audience the new facility affirmed the company's commitment to maintain the nation's status as the world's best airpower, which was also how to "guarantee peace." Wilson continued that although airpower was useless and expensive during peacetime, it was also a "strength that is overwhelmingly our shield rather than a weapon to be abused." State of the art air power, he concluded, served as an insurance policy the nation could ill afford to not have and required the continuous investment in new technology, like the products GE employees developed and tested in Schenectady.

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<sup>106</sup> "Laboratory on Wings," *Monogram*, June-July 1946, 20-1, Schenectady Museum. G-E Air Research Demonstration, (Schenectady, NY: General Electric, 1946), Schenectady Museum, 3.

<sup>107</sup> "Army Air Force's Newest Jet Fighter Plane to Be Exhibited Here," *Schenectady Works News*, 14 June 1946, 1, 9, Schenectady Museum. "Gen. Doolittle Will Speak at Opening Ceremony Tomorrow for GE Air Show," *Schenectady Gazette*, 20 June 1946, 15. G-E Air Research Demonstration, 3.

<sup>108</sup> "Symington Will Attend Air Show," *Schenectady Gazette*, 19 June 1946, 11.

Lt. Gen. Jimmy Doolittle, then head of the New York City Airports, also spoke at the ceremony and repeated Wilson's sentiments during his dedication speech when he advocated maximum military spending to assure future national security through mobile, modern weapons. Doolittle also announced he valued military research and development because it usually led to commercial advances as well.<sup>109</sup>

Through shrewd programming, the air show organizers further buoyed what was essentially a local corporate open house into a national event. One of the major events they scheduled was an aerial parade of military aircraft equipped with GE engines or instruments from New York City to Schenectady. The parade leader was to be a Lockheed P-80 Shooting Star, the first operational jet fighter in the American air forces. The pilot was scheduled to begin the parade of aircraft by flying over the George Washington Bridge, which spans the Hudson River between Manhattan and New Jersey. Once clear of the bridge, the pilot would fly low over the Hudson and recreate the first New York air show performance by circling the Statue of Liberty, just as Wilbur Wright did in 1910.

The historic connections to early aviation were further cemented by scheduling the pilot to perform Glenn Curtiss' 1910 *New York World* Prize winning flight from Albany to New York City along the Hudson River, albeit in reverse. While Curtiss completed the route in just under three hours and landed for fuel twice, P-80 pilot Major Martin L. Smith would only need fifteen minutes for the entire flight with plenty of fuel remaining to perform a 500 mile per hour flyby of the Schenectady Airport to open the flying portion of the air show, where the crowd expected to see history made thanks to local technology. GE President Charles Wilson exclaimed the

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<sup>109</sup> "Pres. Wilson Dedicates Company's New Flight Test Lab at Airport," *Schenectady Works News*, 28 June 1946, 2. "Air Show Establishes G.E. As National Leader in Jet Propulsion Equipment for Advanced Aircraft," *General Electric Sales Promoter*, July 1946, 6. "GE Dedicates Unit for Jet Research," *New York Times*, 22 June 1946, 25.

dramatic change in flight times in only 36 years told “a clear and concise story of air research and development.” In 1910, Curtiss was flying cutting edge aviation technology with one of the best engines in the world. The Shooting Star’s engine, built by GE, was eighty times more powerful than Curtiss’. However dramatic the improvements from 1910 to 1946, Wilson also saw the flight as proof continued intense aviation research would maintain the nation’s air leadership worldwide.<sup>110</sup>

Among the two dozen other aircraft in the parade was the company’s flying testbed, a modified Boeing B-29 Superfortress bomber. The major difference between GE’s B-29 and a military version was the bomb bay was altered to carry a fully operational J-73 turbine instead of explosives. By June 1946, tests on the J-73 engine were successful enough that, during the aerial parade, flight crews planned to fly the B-29 over Manhattan solely on the power from the single jet engine. All four piston engines, once capable of delivering an atomic bomb to Japan were silent and the propellers frozen in the air. There could be no better demonstration of the skills of GE’s scientists, designers, and builders than the mighty B-29 flying looking like it was powerless and might fall from the sky. Unfortunately, weather caused the cancellation of all but the re-enactment of the Curtiss flight.<sup>111</sup>

To attract more public attention to the relatively small airport in upstate New York, GE officials organized first ever mail delivery via jet-powered aircraft. On June 22, two Lockheed P-80 Shooting Stars took off from the air show to each delivery 750 air mail letters. One pilot flew

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<sup>110</sup> "Jet Plane to Re-Enact Curtiss' Historical \$10,000 Flight," *Schenectady Gazette*, 11 June 1946,1. "Chicago Gets Its First Mail by Jet Plane," *Chicago Tribune*, 23 June 1946,1. G-E Air Research Demonstration, 5.

<sup>111</sup> "Aerial Armada to Fly over City Today as the Opening Phase of G-E Air Research Demonstration," *Schenectady Works News* 1946, 2, Schenectady Museum. "GE Engineers Work in Superfortress at Airport," *Schenectady Gazette*, 10 June 1946, 7. "Science's Best Planes to Roar over N.Y. Fri.," *Chicago Tribune*, 16 June 1946, 14. "Boeing XB-29G", United States Air Force Museum <http://www.nationalmuseum.af.mil/factsheets/factsheet.asp?id=2576> (accessed 26 January 2012); Larry Murray, "Sky Lines," *Schenectady Gazette*, 15 June 1946,12. "Pres. Wilson Dedicates Company's New Flight Test Lab at Airport," 2.

to Washington, DC; the other flew to Dayton and then Chicago. Among the mail were letters addressed to President Harry Truman, Chicago Mayor Edward Kelly, and Orville Wright. The Dayton stop and letter for Orville Wright served to connect GE's aviation products to the still living father of powered flight. The USAF pilot flew from Schenectady to Dayton, a distance of 580 miles in just 80 minutes. After delivering Orville Wright's letter, he continued on to Chicago, 252 miles away, in just 29 minutes.

The Postal Service also accepted 15,000 additional letters with an eight-cent airmail stamp for a quick jet flight over Schenectady. Postal officials set up a temporary post office at the airport's Municipal Hangar to sell the special postage envelopes GE printed for the airmail flights. Due to nationwide appeal, over a thousand letters arrived per day after the event was announced on June 11<sup>th</sup>. Postal officials responded by increasing the total number of letters to be flown over Schenectady to 20,000. While they were succinct the Post Office had no plans for regular jet airmail services, officials explained they supported the stunt because it demonstrated the possibilities of such a service.<sup>112</sup>

The air show GE staff organized was not just fighters and bombers. Among the aircraft at the show was the Republic Rainbow, an airliner capable of carrying 53 people up to 4100 miles with a cruise speed of 400mph. Another massive transport at Schenectady was the Martin Mars Flying Boat. At the time of the air show, three of the amphibious aircraft were operating in the Pacific region and each aircraft was capable of carry 133 fully equipped troops and a crew of eleven. The Martin was so massive it could not safely land at the Schenectady County Airport, so

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<sup>112</sup> "Jet Plane to Re-Enact Curtiss' Historical \$10,000 Flight." "First Jet-Carried Air Mail to Leave Local Airport," *Schenectady Gazette*, 15 June 1946, 20. "Jet Mail Flights Set," *New York Times*, 15 June 1946, 35. "Chicago Gets Its First Mail by Jet Plane."; "City to Get Air Mail in Flash - by Jet That Is," *Chicago Tribune*, 22 June 1946,8; "First Jet Air Mail Cachets to Be Sold at Airport," *Schenectady Gazette*, 18 June 1946,22. *G-E Air Research Demonstration*,9-10.



a crew flew the plane from the company's headquarters near Baltimore, MD to New York just to fly over the show and then return to Baltimore.<sup>113</sup>

On the smaller side of aviation, Navy sailors demonstrated a TDD radio-controlled plane for air show crowds. Hollywood film actor Reginald Denny designed the plane, with only a 12-foot wingspan, as a target drone (TDD stood for Target Drone Denny) as a cheaper training alternative than converting full size aircraft to radio-control technology for target training. The sailors demonstrated how they simulated enemy tactics and maneuvers with the TDD to train sailors defending the Pacific Fleet. As the demonstration concluded, GE officials stated the advent of jet aircraft required a new jet drone to be developed for up-to-date training.<sup>114</sup>

Army Air Force personnel also performed in Schenectady as pilots landed a Douglas C-74 Globemaster with a 35,500-pound load including 15 jeeps with drivers and then taxied to the front of the Test Center hangar to unload in full view of the crowd. By having the soldiers drive the jeeps off the C-74, spectators saw the Army's rapid deployment capabilities in the field as well as aviation innovation. Not only was it a demonstration for the public, but Army officials also announced the crew's flight from Dayton, OH at 10,000 feet was a new unofficial altitude record for that cargo weight.<sup>115</sup>

The poor weather that cancelled the air parade from Manhattan also reduced the attendance at the air show from a projected 100,000 to a mere 10,000 hardy spectators. Perhaps more important than the number of locals at the air show, the program GE executives organized drew national media coverage from newspapers like the *Chicago Tribune* and the *New York*

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<sup>113</sup> "Fastest Transport Coming Here," *Schenectady Gazette*, 12 June 1946,23. "Martin Craft at GE Air Show," *Schenectady Gazette*, 13 June 1946,13.

<sup>114</sup> "Pilotless Aircraft Will Be Demonstrated at Air Show," *Schenectady Gazette*, 14 June 1946,5.

<sup>115</sup> "Latest Planes to Fly Here for Air Show," *Schenectady Gazette*, 17 June 1946,13. "City to Get Air Mail in Flash - by Jet That Is." 8. "GE Movie News: Air Research Lab Dedication," (USA: General Electric Company, 1946),Schenectady Museum.

*Times*, radio coverage from both the Mutual and NBC networks, and MGM & Fox Movietone camera crews filmed the air show for cinema newsreels. As a result, Schenectady County Airport provided a stage for General Electric executives to announce to millions of Americans they fully invested company resources in aviation. Furthermore, by couching this investment in maintaining U.S. national security and developing a self-sufficient commercial air industry, company officials appeared altruistic and civic-minded with their corporate goals. While the local crowds were small, they saw these arguments made live, not just in words, but in the actions of dozens of pilots flying the latest technology. Company executives hoped they also showed residents Schenectady was the permanent home of aviation design and development.

#### Transpo '72

A quarter century after GE executives staged an air show to inform the nation they were investing in aviation products, federal officials decided the United States needed a national air show to help the aviation industry sell their products both domestically and internationally. Since the days of the Wright Brothers, aircraft makers hoped air shows could be venues to complete sales of aircraft, parts, and services. The most famous of these air shows was the biennial Paris Air Show dating to 1909. Over the past century, the Paris Air Show was a place to unveil the latest technology from the Concorde to the Mirage 2000 fighter and sales teams from all aspects of the aerospace industry from small parts to spacecraft participated. At the 2011 Paris Air Show, organizers claimed 1400 aircraft were sold during the weeklong air show while over 200,000 visitors viewed 150 aircraft on display. Considering American companies, like Boeing, McDonnell, and Douglas, seemed to dominate the international aviation market for decades,

many people believed the United States was better suited to host the premier commercial air show in the world.<sup>116</sup>

Representative Mendel Rivers, Chairman of the House Armed Services Committee, hatched the idea of holding a Paris competitor in the United States in the 1950s, but the idea was dormant for years. In 1965, Federal Aviation Administration Administrator (FAA) Najeeb Halaby supported the idea of “an aerospace and scientific exposition” at Dulles International Airport, outside Washington, DC, to increase foreign sales of US products and increase US prestige. At the 1967 Paris Air Show, FAA Office of International Affairs official Chester A. Spurgeon reinvigorated Rivers’ conception that American prestige abroad was hurt by the absence of a US version of the Paris Air Show. Spurgeon, who coordinated the US presence at the air show, argued to Rivers this failure actually made military products more expensive for the federal government.

The viability of a US-based international air show was further supported when the National Aviation Club staff organized two air shows at Dulles International Airport in 1967 and 1969. These programs proved the location could draw crowds and exhibitors. While the two shows had a combined attendance of 350,000, they also lost approximately \$40,000 because no admission was charged and little was done to help exhibitors complete sales at these shows.<sup>117</sup>

In 1970, Rivers provided the initial push to make the show a reality by inserting a \$750,000 appropriation for air show development into a military construction bill. When Nixon signed the bill, it allowed government officials to “establish and conduct an International

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<sup>116</sup> "49th International Paris Air Show: 2011 Show Report", Salon International de l’Aeronautique et de l’Espace [http://poolo.kermeet.com/Data/km\\_siae/block/F\\_6e1e4e581f3187cc4994438a700946b64f84447a21e6a.pdf](http://poolo.kermeet.com/Data/km_siae/block/F_6e1e4e581f3187cc4994438a700946b64f84447a21e6a.pdf) (accessed 5 December 2012), 2-4. "Show History", Salon International de l’Aeronautique et de l’Espace, Paris <http://www.paris-air-show.com/GB/THE-SHOW/History.htm> (accessed 5 December 2012). Berliner, *The Paris Air Show*.

<sup>117</sup> Lou Davis, "Wanted or Not, the U.S. Gets a Show," *Airline Pilot*, May 1972, 6-10.

Aeronautical Exposition with an appropriate emphasis on military aviation at a location of his choice and within two years.” On June 29, 1970, President Richard Nixon signed an executive order authorizing the Secretary of Transportation John Volpe “[t]he power to exercise without approval, ratification or other action of the President” the terms of the Military Construction Authorization for 1970. To assist the Secretary, Nixon used the order to command other federal departments and agencies to support the Exposition as much as the law and funding would permit.

Volpe soon requested and got Congress to increase funding to \$3 million. He then placed primary responsibility for the exposition in the Federal Aviation Administration led by John Shaffer. In overseeing development, Shaffer believed the role of the exposition was to serve as a “central market place to display the full spectrum of our transportation products...” and increase the US share of the international markets. By the time the gates opened on May 26, 1972, the Aeronautical Exposition morphed into a “*total* transportation show” with exhibits for aviation, rail, shipping, and automotive industries. In addition to displaying many more industries, the targeted audience shifted from international buyers to “anyone who [was] responsible for moving people swiftly and safely, [and] moving goods quickly and economically.” However, by the time the final reports on the air show were publicized in 1973, much of the nation thought the entire operation was simply a boondoggle.<sup>118</sup>

By the end of February 1971, FAA officials created eight objectives for the Exposition. They intended the air show to be a forum for teaching the public about issues while providing

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<sup>118</sup> Richard M. Nixon, *Executive Order 11538*, 1970.1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1. Roger Mola, "Paris Envy," *Air & Space*, Aug.-Sept. 2000, 53-9. Carl Bernstein, "Parachute Team Pinpoints Perfect Dulles Landing," *Washington Post*, 27 May 1972, E1, E3. Thomas E. Bolger, *Letter*, by J. H. Shaffer, 7 January, Letter, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-2.

opportunities for corporate representatives to conduct business with the buyers of transportation products, like local, regional, and national government officials from all nations, other transportation companies, and private individuals. In addition to increasing sales, some of the objectives were to create a new, higher, standard for marketing and sales transportation shows worldwide; to improve the nation's "prestige and image" internationally; and to create a self-sufficient development program for American industries. Domestically, officials also hoped the Exposition would help Americans understand the value of transportation for the US economy and the need for a unified, planned transportation system to serve the nation in the future.<sup>119</sup>

The staff at the FAA also marketed the show as the beginning of a transportation "revolution" where all travel modes would be an integrated system with each method only utilized for its strengths within the larger world. However, they did not say what this unified system would look like. Instead they suggested the products on display could be used to create this system through the commercial ingenuity of exhibitors and buyers.

FAA officials hoped the variety of programs would result in a million attendees to the Exposition. They expected over one-third of all attendees to be business visitors thus creating a huge networking and sales potential. Since the program site was at Dulles International Airport, less than 30 miles from Washington, DC, organizers also anticipated sizable delegations from Congress, federal departments, high-ranking military officials, and foreign government representatives.<sup>120</sup>

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<sup>119</sup> J. H. Shaffer, *U.S. International Transportation Exposition: Management and Operation Plan* (Washington, DC: 1971), 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-4.

<sup>120</sup> *United States International Transportation Exposition*, (New York: Clapp & Poliak, Inc., 1971), 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National

As a stunt to engage regional officials and business executives in the Exposition's planning, Thomas Bolger created an airborne meeting for members on May 18, 1971 on an American Airlines 747 orbiting Dulles Airport. During the meeting Volpe told the assembled group the show's official title was the wordy United States International Trade Exposition (USITE) and it would bring some \$50 million into the local economy.<sup>121</sup>

Not all business leaders supported USITE, including Boeing President Bill Allen who complained to DOT Secretary John Volpe that domestic trade expositions had been unsuccessful for the past 25 years. Allen stated members of the Aerospace Industries Association (AIA) routinely researched the value of air shows and they never found enough benefits to offset the time and money participants committed. He commended Volpe for considering an exposition in response to the depressed airline and aircraft industries, but Allen still disagreed it would work. Volpe replied to Allen that he was well aware of AIA's position on air shows but Congress and President Nixon charged the Department of Transportation with producing an air show. Volpe explained he was more concerned a bad air show might "damage...our national prestige" rather than Allen's worry about one with minor benefits.<sup>122</sup>

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Archives at College Park, College Park, MD, 4-10 . Gene Berg, "Travel Notes: Transportation Show, South Pacific Festival, Mobil's Stars," *New York Times*, 2 April 1972,xx4.

<sup>121</sup> [The U.S. Department of Transportation Welcomes You to Transpo 72], (Washington, DC: U.S. Department of Transportation, 1972),National Air and Space Museum Technical Files J1-1972-300-01 1972 Dulles, VA, Transpo 72: United States, Documents, 1-3. *Visitor's Guide: Transpo 72 - United States International Transportation Exposition*, (Washington, DC: United States Department of Transportation, 1972),National Air and Space Museum Technical Files J1-1972-300-01 1972 Dulles, VA, Transpo 72: United States, Documents, 2. *Facts About Transpo 72*, (1971),National Air and Space Museum Technical Files J1-1972-300-01 1972 Dulles, VA, Transpo 72: United States, Documents, 1-2. John A. Volpe, Memorandum, by J. H. Shaffer, 1 April, Re: *U.S. International Transportation Exposition*,1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1.

<sup>122</sup> John A. Volpe, Memorandum, by J. H. Shaffer, 9 April, Re: *Secretary's Committee: U.S. International Transportation Exposition*,1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD 1. John A. Volpe, *Letter*, by William M. Allen, 5 April, Letter,1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82;

Despite his reservations, Allen later accepted Volpe's invitation to join The Secretary's Committee for the United States International Transportation Exposition, which grappled with the very issues he had with the show. The Secretary's Committee consisted of approximately three-dozen American transportation executives advising organizers how to meet their objectives.<sup>123</sup> Among the aerospace members were Allen, General Electric President Jack Parker, and United Aircraft President William Gwin.

On the committee, Allen led the charge to change the goal of the show away from selling aerospace technology to foreign buyers and towards a total transportation show to educate the public about the need for Americans to develop an "interrelated system" for transportation. Parker agreed with Allen saying trade elements should be de-emphasized and focus on the "image" of American transit. To meet these goals, Parker suggested building a rail line from Washington, DC to Dulles Airport to help emphasize the contemporary ground transportation needs. Committee members ended the meeting by unanimously voting to change the show's name from the wordy "United States International Transportation Exposition" to the simple "Transpo '72." They suggested the new name emphasized to participants and spectators should

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Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-2. Rep. William L. Scott, *Letter*, by John A. Volpe, 18 August, *Letter*, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-2. , Quarterly Report, by J. H. Shaffer, 15 June, *U.S. International Transportation Exposition 2nd Quarterly Report - Period Ending 31 May 1971*, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-14.

<sup>123</sup> Volpe, *Letter*. J. H. Shaffer, *Letter*, by Russell W. Meyer Jr., 17 June, *Letter*, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1. Shaffer, *Letter*, 1.

be focused on all contemporary and future transportation needs. They also finalized Transpo's dates for ten days starting May 26, 1972.<sup>124</sup>

During the summer of 1971, organizers mailed promotional materials to approximately 18,000 potential exhibitors and relied on the Committee members' ideas to market Transpo. In his introduction to recipients, Nixon wrote the nation's transportation capacity needed to double in the next twenty years or modern society would be hindered by gridlock. He envisioned the inaugural Transpo as a world market for addressing transportation issues plus "an ideal forum for furthering public understanding" of transportation's role in everyday life. John Volpe followed Nixon by asking potential exhibitors to imagine Transpo as a transportation World's Fair showing Americans how to "increase safety without sacrificing mobility, convenience, or attractive design." Transpo, according to Volpe, would also demonstrate how to "blend" ground, air, and water transportation into a unified safer, faster, and cheaper system.<sup>125</sup>

Organizers sympathized with readers that the transportation industry was already well aware of the problems plaguing the nation. In 1971, it was possible to fly across the country at near supersonic speeds, but drivers crawled through city traffic to get from their homes to the airport. Although commuter railroads were decayed and slow, organizers conceded Americans valued them because at least they could travel faster than cars mired in traffic. Organizers expected displays would include traffic alleviating ideas like cars operating on efficient computer-controlled highways, high-speed mag-lev trains, hydrofoils, and the simplicity of container shipping.

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<sup>124</sup> *Minutes of June 16 Meeting of the Secretary's Committee for the United States International Transportation Exposition*, (1971), 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-6.

<sup>125</sup> *United States International Transportation Exposition*, 1-3.



As FAA officials courted exhibitors, at least one private citizen took umbrage at the government air show. John C. Evans, a suburban resident living in the Airport's shadow, complained to Transportation Secretary John Volpe how the publicized admission fees ranging from fifty cents to three dollars was too high for the public. Evans believed a government program on government land should be free for the people to see and, since corporations were charged exhibition fees, these costs should remove the financial burden from families. Ultimately, he felt the fees discriminated against lower income families and told poor kids they would only see Transpo if they worked for it in the future.<sup>126</sup>

Chester Spurgeon, now Transpo '72's Managing Director, responded for Volpe and informed Evans the fees were created with families in mind and were well below the cost of attending a movie. Unlike a movie though, he countered, the air show would provide a chance to learn the history and future of transportation. Corporate representatives, Spurgeon continued, improved the value of admission by explaining all the "modern transportation devices and technology" while military pilots amused and educated the public with demonstrations of American "expertise" in design and operations that resulted in no air transport fatalities in 1970.<sup>127</sup>

Spurgeon's arguments did not mollify John Evans because Evans then wrote his congressman, William L. Scott, concerning the admission fees. First, Evans criticized Spurgeon's movie analogy because for-profit companies produced them while Transpo was a

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<sup>126</sup> John A. Volpe, *Letter*, by John C. Evans, Letter, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1. Thomas Grubisich, "Transpo 72: From the First Bike to Apollo... And Beyond," *Washington Post*, 4 April 1972, H1, H7-8.

<sup>127</sup> John C. Evans, *Letter*, by Chester A. Spurgeon, 30 June, Letter, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-2.

government operation. He did accept the value of military flying demonstrations as part of the government's need to publicize how officials spent taxpayer money. However, Evans believed the public already paid for these performances through taxes, making admission fees an onerous charge. If the performances could not be covered by taxes, Evans suggested industry representatives should pay demonstration costs since they directly benefited from public support.<sup>128</sup>

Representative Scott brought Evans' critique to Volpe, who tried to quell the situation by explaining if he and his staff created a premium product, premium prices were a necessity and the burden must be borne by all who benefit from Transpo. He explained the entire show was budgeted at \$6.5 million but Congress appropriated only \$2.8 million for it. If the remaining \$4 million in costs were the sole responsibility of corporate participants, the air show would be cost prohibitive for their budgets and the show would be a failure. A poor show, according to Volpe, would not "carry out the will of Congress" and would fail to equalize international transportation trade in the nation's favor. While Volpe precisely countered Evans' complaints point by point, it is unknown if Scott or Evans were persuaded by the arguments nor is it known if Evans ultimately attended Transpo.<sup>129</sup>

When promotions for Transpo began appearing in April 1972 in newspapers nationwide, people were told to expect over 500 exhibits and daily demonstrations in the air and on the ground throughout the "first international exposition devoted to land, sea, and air transportation.

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<sup>128</sup> Rep. William L. Scott, *Letter*, by John C. Evans, 15 July, Letter, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1.

<sup>129</sup> John A. Volpe, *Letter*, by Rep. William L. Scott, 21 July, Letter, 1971-1240A International Exposition; A1 14 Box 344; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1. Volpe, *Letter*, 1-2.

Among the expected performers were the Thunderbirds, the Blue Angels, the Army's Golden Knights, and several foreign teams like the Royal Air Force Red Arrows. However, potential visitors were cautioned that morning hours were reserved for trade show participants only. When admitted in the afternoon, guests could stroll through exhibits of aircraft, experimental safety cars, the Apollo XII command module with moon rocks, and four "personal rapid transit systems."<sup>130</sup>

Two weeks prior to Transpo's May 26th opening, the *Washington Post* published a promotional article detailing the whimsical views of the show, including the Navy's Blue Angel pilots flying their F-4 jets "faster than the speed of sound" with only a yard between their wings; Bill Bennet, the Australian Birdman, flying beneath a giant kite; and a car powered by underground electricity. When describing the air show, reporter Marion Clark focused on the military demonstration teams, aerobatic pilots, and military and civilian skydivers. She made little mention about Transpo as a forum on air transportation or transportation in general. Her focus was firmly on being wowed in the here and now.<sup>131</sup>

A week later, *The New York Times* published an overview of the upcoming show and suggested it would be educational. According to reporter Jim Augustine, visitors would find solutions to transit woes like Amtrak losing \$500,000 a day, overloaded urban transit systems, congested airports, and traffic jams. Transpo's General Manager William J. Bird told readers if all the exhibited systems were implemented, America's traffic woes would be solved, particularly congestion and pollution.<sup>132</sup>

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<sup>130</sup> Berg, "Travel Notes: Transportation Show, South Pacific Festival, Mobil's Stars." Grubisich, "Transpo '72: From the First Bike to Apollo... And Beyond." Horace Sutton, "Transpo '72: 'People Movers' Inc.," *Chicago Tribune*, 7 May 1972, F17.

<sup>131</sup> Marion Clark, "Try It!," *Washington Post*, 14 May 1972, PO16.

As part of the May 26<sup>th</sup> opening ceremonies, Boeing officials linked Transpo to commercial aviation's history by donating their DASH-80 jet to the National Air and Space Museum. 25,000 people attended the early afternoon transfer from Boeing President William Allen to Museum Director Michael Collins of Boeing's prototype for the famed 707 airliner, the first American jetliner in service in the 1950s. Looking to the future, Volpe told the gathering they were at "a new industrial marketplace where creativity and innovation [were] on display" as the world worked together to improve mobility. He then inaugurated Transpo '72 by triggering dozens of small rockets and releasing 100,000 balloons, followed by a mass jump by 110 skydivers, each carry the flag of either one of the 50 states or 60 nations.

At the airport, there were over a hundred government and commercial aircraft to be scrutinized by government officials, foreign dignitaries, commercial representatives, and the general public. Similar to Schenectady in 1946, a Lockheed C-5 Galaxy crew used the flight to Dulles to demonstrate the plane's hauling capabilities by carrying 140,000 pounds of vehicles, airfield equipment, and a 2.5-ton cargo container to Washington.<sup>133</sup>

After the opening, initial reviews of Transpo were not positive as Wolf Von Eckardt of the *Washington Post* called Transpo an exposition of future traffic jams because DOT officials provided corporations a space for displaying future products but they did not provide "instructions for proper use" to buyers. Since many of the exhibits were simply rows of equipment, it seemed implausible Transpo could convince people to overthrow the "tyranny of

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<sup>132</sup> Jim Augustine, "Transpo 72 to Open on Saturday Amid a Traffic Jam of Its Own," *New York Times*, 21 May 1972, 4, 36.

<sup>133</sup> Bernstein, "Parachute Team Pinpoints Perfect Dulles Landing." "Transpo 72 Opens Today," *Transpo 72 Daily*, 26 May 1972, 1, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents. "C-5 Bringing in 'Modest Load' Today," *Transpo 72 Daily*, 26 May 1972, 2, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents. "Clear Cloudless Skies," *Transpo 72 Daily*, 27 May 1972, 1, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents. Jack Eisen, "150,000 See Transpo at Opening," *Washington Post*, 28 May 1972, D1, D5.

the automobile.” The new technology, Von Eckardt critiqued, could not solve the transportation problems unless Americans confronted the “underlying” transit issues like poor urban planning and urban blight. Instead of an equipment display, Von Eckardt wished Transpo were an updated version of General Motors’ Futurama exhibit from the 1939 World’s Fair where Norman Bel Geddes imagined a transportation utopia based on contemporary transportation issues. Von Eckardt ultimately decided Transpo was not a show for solving transportation problems, but simply an entertaining air show with misguided exhibits.<sup>134</sup>

Volpe disagreed with Von Eckardt and reacted by equivocally stating the government would not have invested so much money and effort in a show ignoring issues like pollution and congestion.<sup>135</sup> Volpe and the other organizers continually trumpeted Transpo as both a public show and a marketplace. However, no one publicly estimated the sales attributable to the show, explaining it was impossible to determine those numbers. By the second day of the show, Volpe announced the show a success because sales negotiations were occurring and exhibitors were “swapping ideas.” At least one sale was completed and announced at Transpo when Fairchild Industries President Edward G. Uhl announced the company sold five passenger planes worth \$8.5 million. Uhl told reporters he sold both the 60 passenger F-28 airliner and the 20 passenger Metro airliner to an unnamed customer while also praising Secretary Volpe and Transpo overall.<sup>136</sup>

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<sup>134</sup> Marchand, "Corporate Imagery and Popular Education: World's Fairs and Expositions in the United States, 1893-1940."; Marchand, "The Designers Go to the Fair II: Norman Bel Geddes, the General Motors 'Futurama,' And the Visit to the Factory Transformed," 22-40.

<sup>135</sup> Wolf Von Eckardt, "Transpo: You Can't Tell the Technology without a Program," *Washington Post*, 27 May 1972, B1, B4. Wolf Von Eckardt, "A Commentary," *Washington Post*, 28 May 1972, K3. "Early East Coast Newspaper Coverage," *Transpo 72 Daily*, 29 May 1972, 7, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents, 1-4.

Throughout Transpo, organizers, exhibitors, and visitors constantly confronted the question if Transpo was a show about sales. Many exhibitors conceded that although a million people might pass through Transpo's turnstiles, only the few thousand representing governments or transportation companies were worth their attention. Without citing specifics, Frank Gard Johnson, a senior Vice-President at North American-Rockwell, believed Transpo confirmed a sense that the economy and the public's perception of the entire transportation industry was improving. An official with the Aerospace Industries Association of America (AIAA) maintained the group's opposition to Transpo because association members still needed to exhibit their products abroad to bring their products to their foreign customers. Despite such the condemnation, 50 AIAA members were at Transpo.

deHavilland of Canada President B. B. Bundesman and Vice-President Donald Buchanan expressed frustration with Transpo, because they too felt there were not enough international customers present. Further complicating their effort, the men criticized organizers' failure to group exhibitors by industry, creating a confusing hodge-podge of displays for buyers to navigate. They did accept that as a new show, it could develop into a much better one over the years.<sup>137</sup>

While sales may have been stunted, at least one visitor grasped the educational goals of Transpo. High school student Larry Burns came to Transpo from Englewood, NJ to use the air

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<sup>136</sup> Jack Eisen, "Transpo 72: World Industrial Showcase," *Washington Post*, 28 May 1972, K1. David W. Boldt, "Fairchild Lists Transpo Orders," *Washington Post*, 1 June 1972, E3. "Exhibitors Express Enthusiasm," *Transpo 72 Daily*, 1 June 1972, 1.

<sup>137</sup> "Big Buyer Is Target of Transpo," *Washington Post*, 28 May 1972, K3. *Transpo 72: Exhibitors' Catalogue and Directory*, (New York: Spencer Marketing Services, 1972), National Air and Space Museum Technical Files J1-1972-300-01 1972 Dulles, VA, Transpo 72: United States, Documents, 4. "Quote Box," *Transpo 72 Daily*, 30 May 1972, 1, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents. "Sizing up Transpo: Candid Canadian Comment," *Transpo 72 Daily*, 2 June 1972, 7, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents, 1-4.

show to research a school project on urban transportation. He was “surprised” to see how much equipment was already at work to improve transportation systems.<sup>138</sup> Among the marquee displays he may have viewed was *Man in Motion*, a temporary museum of transportation. Among the artifacts on display were a 1910 Curtiss pusher airplane, a 1931 Packard auto, and 1910 Vienna streetcar. With this display, visitors could tangibly see transportation change over 60 years since nearby was one of the cars built for San Francisco’s recently opened BART mass transit system.

For the general aviation pilot, Cessna officials erected a 50,000 square foot exhibit anchored by a Skylane NICM, the 100,000<sup>th</sup> plane built by the company since its 1911 founding. In addition to the Skylane, visitors could see 23 other commercial, military, and jet aircraft created by Cessna.<sup>139</sup>

In the air, the public saw the near future of aviation fly when it was announced Grumman’s experimental F-14 fighter needed to return to its home airport on Long Island. When the pilot took off at 1:15pm, prior to the official air show, he did not simply taxi down the runway and takeoff. Instead, when the wheels lifted off the ground, he nosed up and lit the plane’s afterburner, rocketing into the sky trailing fire, smoke, and a cacophony of noise. This awesome sight could have ended in disaster, both physical and political. By not being on the official demonstration schedule, the pilot and aircraft were not included in paperwork and inspections required of air show performers. This meant safety and emergency personnel were uninformed about the potential risks and effective response if a crisis arose during takeoff.<sup>140</sup>

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<sup>138</sup> Jack Eisen, "150,000 See Transpo at Opening," *Washington Post*, 28 May 1972, D1, D5.

<sup>139</sup> "Cessna's 100,000th Airplane Highlights Display," *Transpo 72 Daily*, 26 May 1972, 6, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents. Eisen, "Transpo 72: World Industrial Showcase."

Although the F-14 flight was successful, tragedy struck Transpo on Memorial Day when a crowd of 200,000 watched 26-year-old kite rider Robert Kennedy suffer fatal injuries during his afternoon performance. Kennedy was part of the Australian Birdmen team demonstrating the plausibility of piloting giant kites. Kite riders, like Kennedy, attempted these feats around the world but Kennedy sadly exhibited how tenuous that control was soon after being pulled aloft by a speeding car. When he was approximately 500 feet in the air, the kite performed a loop and then it and Kennedy plummeted into a grassy field at the end of the runway. An Army medivac team airlifted Kennedy to an onsite medical station where he died within fifteen minutes of his crash.<sup>141</sup>

The air show was plagued by two more safety mishaps the next day, but luckily no one was injured in either incident. First, air show pilot Bob Hoover had to land his World War II-era P-51 fighter on one wheel after he was unable to unlock his left landing gear at the end of his aerobatic performance. Later the same day, retired Air Force officer and test pilot Richard Hunt performed a high-speed diving pass for the grandstand in his Aeronca A-610 Super Pinto jet trainer when both canopies blew off the two-seat jet. Hunt used the plane earlier at Transpo to set four climbing records for light planes in a single flight. Unfortunately, in this basic demonstration flight, when the canopies tore off of the aircraft, they hit and destroyed a large section of the plane's tail stabilizer. Despite the visual destruction, Hunt and his copilot circled

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<sup>140</sup> Frank N. Piasecki, David D. Thomas & Alan B. Shepard, *Report to the Secretary of the Department of Transportation: Review of the Transpo '72 Air Demonstrations* (Washington, DC: Federal Aviation Administration, 1972), 1972-1240A International Exposition; A1 14 Box 379; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 14-7. "Navy's Secret F-14 Flies," *Transpo 72 Daily*, 31 May 1972, 1, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents.

<sup>141</sup> "Transpo 72 Throng Sees Kite Rider Die," *Los Angeles Times*, 30 May 1972, A6. "Kite Rider Killed in Crash at Transpo 72 Air Show," *New York Times*, 30 May 1972, 21. "One Fine Day Except," *Transpo 72 Daily*, 30 May 1972, 1, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents.



Dulles Airport to test the A-610's flying characteristics to determine if they could land safely. The testing successful, the men easily landed the plane, attesting to the plane's durability and their skills.<sup>142</sup>

Despite three accidents in two days, people kept visiting Transpo and Transpo officials learned on June 2 that total attendance neared one million people with two show days remaining. Punctuating this news, Boeing officials scheduled an evening demonstration of their relatively new 747 airliner. Using a freight version of the wide-bodied aircraft, officials "managed to spray nearly all of [the corporate chalets] with noise, fuel and fumes" before the plane took off.<sup>143</sup>

High attendance numbers and a 747 were not enough to avert the public relations nightmare caused by two more fatal crashes on June 3rd and 4th. Throughout the ten-day show, a regular feature was Formula I air racing, which was limited to aircraft with 100HP Continental engines, a 16-foot fuselage and a 17-foot wingspan. Even with these limitations, pilots could average over 200 MPH during their races. On June 3, crop duster pilot Hugh Alexander battled USAF Major Charles Andrews for the lead heading into the first turn of an eight lap semifinal race. Suddenly, Alexander's blue and white plane "jerk[ed] upward and to the side," colliding with Andrew's yellow racer. Alexander's plane cartwheeled to the ground and crashed behind a line of pine trees west of the grandstands. Soon after spectators saw smoke rise from the trees while Andrews successfully landed his damaged plane. Pilots and race officials blamed the

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<sup>142</sup> "Bad Luck Mars Flights," *Transpo 72 Flights*, 31 May 1972,1,National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents. "Surprise --- No Traffic Jams at Transpo 72," *Los Angeles Times*, 28 May 1972,12. Eisen, "150,000 See Transpo at Opening." "Air Climb Record Attempt to Be Made This Morning," *Transpo 72 Daily*, 27 May 1972,7,National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents; Hank Burchard, "2 Performing Pilots Crash-Land Safely at Transpo Show," *Washington Post*, 31 May 1972,C2. "The Crowd Never Knew," *Transpo 72 Daily*, 3 June 1972,1,National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents.

<sup>143</sup> Hank Burchard, "Transpo Nears 1 Million Mark," *Washington Post*, 3 June 1972,B8. "The Boeing 747 Is Coming," *Transpo 72 Daily*, 2 June 1972,2,National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents.

collision on the “centrifugal force of the turn,” making the collision with Andrews’ plane nearly inevitable.

Upon hearing about the fatal crash, consumer advocate Ralph Nader telegraphed Secretary Volpe to demand he cancel aerobatic flying at Transpo. With two dead and a few close calls, Nader also wanted an investigation into the planners and supervisors of “such self-destructive entertainment.”<sup>144</sup>

Volpe and other Transpo officials decided not to cancel the final day of flying. Perhaps they hoped a day of exciting and successful aerobatic performances and product demonstrations would highlight the positive aspects of Transpo like business networking and public education. During the air show, the British Red Arrows executed a formation flight where they used their nine small jet fighters to create the profile of the supersonic Concorde. Bob Hoover was in the air once again, this time successfully demonstrating the Shrike Commander.

The famed Air Force Thunderbirds in their McDonnell-Douglas F-4 Phantom fighter jets were the last scheduled performers at Transpo. With most of their afternoon performance completed, five pilots arranged their aircraft into a giant flying wedge and then performed a barrel roll in unison while maintaining their positions within the wedge. As the planes began to climb out of the roll, one of the planes seemed to halt in the air and then rolled to left. Over the radio, Major Joe Howard, a pilot with over 300 combat missions, reported a problem with his Phantom and numerous voices told him to eject at a mere 600 feet. Howard complied and the F-4 fell to the ground and exploded in flames. The relief of 250,000 people at seeing his parachute blossom open turned to horror when the wind pushed Howard over the fireball. The flames

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<sup>144</sup> David W. & Ken Ringle Boldt, "Pilot Killed in Air Race at Transpo," *Washington Post*, 4 June 1972,A1, A22. "Pilot Killed at Transpo 72," *Los Angeles Times*, 4 June 1972,A2. "Racer Killed in Crash," *Transpo 72 Daily*, 4 June 1972,1,National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents; "Racing Planes Collide, Pilot Is Killed in Crash," *New York Times*, 4 June 1972,S17.

burned Howard and destroyed his parachute. The final act of Transpo '72 was the Major falling to his death.<sup>145</sup>

With three fatalities, including a decorated combat pilot, and the destruction of a \$2.5 million fighter, the role of air shows at Transpo and the future of Transpo itself was questioned. General Manager William J. Bird publicly argued the fatal accidents, while sad, were the risks of air shows and the Paris Air Show was not hindered by accidents. Ralph Nader disagreed with Bird and called for a Congressional investigation into the “utterly unnecessary” air shows when Transpo was marketed as a demonstration of transportation systems and safety devices. The air show, according to Nader, only served to draw large crowds and “symbolized the glorification of risk for commercial exploitation.” Senator Warren G. Magnuson found it “ironic” that an exhibition of safety technology should end in a fiery disaster.<sup>146</sup>

In an attempt to control the bad publicity, Transpo officials touted the show’s supposed successes, including announcing an estimated 1.5 million people visited the exhibition over the ten-day schedule. Transportation Secretary John Volpe proclaimed Transpo a seller’s success with at least \$50 million in sales completed during the show and maybe upwards of \$250 million. However, he did not detail the companies with sales. Other officials declared the show successful at “combating the ‘antitechnology’ syndrome” sweeping America by displaying an increasingly sophisticated transportation system able to serve all people. Staff at the Dulles

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<sup>145</sup> "Thunderbird Pilot Dies at Transpo as Jet Crashes," *Chicago Tribune*, 5 June 1972,3. "Air Force Pilot Killed in Stunt at Transpo 72," *Los Angeles Times*, 5 June 1972,A4. "Thunderbird Pilot Killed in 3d Fatal Transpo Accident," *Washington Post*, 1972, A1. Nancy Scannell, "AF Pilot Died from Fall after Chute Caught Fire," *Washington Post*, 6 June 1972,C1. "A Skyful of Entertainment: Air Teams to Provide Exciting Shows," *Transpo 72: Official Program*, (1972), 28-33, 73, 77. "Concorde Visits Transpo, Sort Of," *Transpo 72 Daily*, 28 May 1972,2,National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents. "Transpo Show Schedules," *Transpo 72 News*, 20 April 1972,1-6,National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents.

<sup>146</sup> "Thunderbird Pilot Killed in 3d Fatal Transpo Accident," *Washington Post*, 5 June 1972,A1, A10.

Marriott Hotel interpreted Transpo '72 a success because all hotel's rooms were already reserved for an expected Transpo '74.

A *Washington Post* editorialist disagreed with Volpe and argued the exhibits and performances failed to introduce new products or educate the public about transportation's role in improving society. Too many of the displays, the author wrote, failed to explain how new products would be integrated into the contemporary world. The editorialist concluded attendance and sale figures should not be interpreted as a reason for future Transpos, especially one with "an aerial circus."<sup>147</sup>

Regardless of the business successes or failures, what stuck in the public's mind were three fatal accidents. Some air safety experts advised future Transpo's should not have an air show component. An anonymous official with the National Transportation Safety Board publicly explained civilian aerobatics, like the Australian Birdman, and pylon racing, which killed Hugh Alexander, were the most dangerous forms of flying because a high number of risks and variables were coupled to limited recovery times due to the low altitudes they flew.

Max Karant, a Senior Vice-President at the Aircraft Owners and Pilots Association, joined the chorus of Transpo detractors and compared all air shows, including Transpo, to a "publicly-sponsored version of throwing Christians to lions." Karant complained the average person did not really understand flight mechanics. Even with almost 70 years of powered flight, he pointed out few people had personally piloted an aircraft. As a result, they interpreted the aerobatics at air shows as scarcely averted disaster rather than legitimate precision flying. Karant hoped for the day when the public viewed flying like driving where they differentiated between the family car and a racecar. Contemporary air show crowds, Karant concluded, would not fly in

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<sup>147</sup> David W. & Jack Eisen Boldt, "Sellers Pleased with Transpo," *Washington Post*, 6 June 1972, C1, C4. "Transpo 72," *Washington Post*, 9 June 1972, A26.

any airplane once they witnessed a “super pilot cream himself in a ball of flame right in front [of] you.”<sup>148</sup>

Federal Aviation Administration information officer, Dennis Feldman, attempted to counter these critiques by announcing the air show staff took all the proper safety precautions in planning and executing Transpo’s air shows. Prior to the show, he explained, FAA employees studied the planned maneuvers of performers and determined spectator and parking areas would be safe in any crash. According to Feldman, it was simply unlucky three men died while performing at Transpo.<sup>149</sup>

Transpo’s planners couched their evaluations of the show in terms of making Transpo ’74 more successful. Less than two weeks after the close of Transpo ’72, Executive Secretary William V. Vitale suggested eliminating air shows due to the “recent adverse circumstances.” Only if an aviation exhibitor required a product demonstration would he allow an airborne demonstration at future Transpos. Vitale also recommended future shows be more business oriented with a focus on all transportation equipment and manufacturers displaying and demonstrating their wares. To improve the business environment, Vitale offered to restrict public access from business areas.<sup>150</sup>

FAA Administrator John Shaffer expanded on Vitale’s points about the conflict of interest between business visitors and the general public by advising the interval between shows be increased to at least three years due to the long development time of transportation

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<sup>148</sup> Max Karant, "Transpo Nothin But..." *Washington Post*, 5 July 1972, National Air and Space Museum Technical Files J1-1972-300-02 1972 Dulles, VA, Transpo 72: United States, Documents, 1.

<sup>149</sup> Vern Haugland, "Air Show in Doubt in Future Transpo," *Washington Post*, 7 June 1972, B6.

<sup>150</sup> Director of International Aviation Affairs, Memorandum, by William V. Vitale, 15 June, *Re: U.S. International Transportation Exposition '74*, 1972-1240A International Exposition; A1 14 Box 379; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1.

technology. He also suggested future shows include business only days or a physically separate business areas from general public displays. For the flying portions of future Transpos, Shaffer echoed Wilbur Wright by wanting to change the “character” of the air shows to focus on “technical, industrial display of transportation development.”

At future shows, Shaffer also claimed there would be no air racing and “stunt” performances to clash with the Transpo’s mission of sales and public education. In spite of the fatal Thunderbirds crash, he still saw a role for precision military demonstrations at Transpo. He might have believed military demonstrations embodied the ideals of cutting edge technology and training to operate at the edge of failure as integral to defending the nation. If so, the fatal risks were considered part of that mission. However, the contradiction remained between this and Transpo’s stated mission of displaying safe transportation methods.<sup>151</sup>

The Operations Planning Officer for Transpo, M. A. Yates agreed with much of Shaffer’s evaluation. Yates found including a traditional air show “deemphasize[d]” Transpo’s primary purposes of marketing and education. Any future flying demonstrations, according to Yates, should be limited to just an hour each day for displays of “current transportation and/or modern technology.” Sales and networking activity could be improved by allowing the public on the ground only for weekend days, making a majority of the show purely business-oriented. Yates also responded to critics who questioned whether Transpo should continue as a government organized event or if a non-government entity could be more successful when freed from “cumbersome” federal regulations. In his view, the Department of Transportation or another

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<sup>151</sup> John A. Volpe, Memorandum, by J. H. Shaffer, 21 July, *Re: U.S. International Transportation Exposition '74*, 1972-1240A International Exposition; A1 14 Box 379; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-3.

federal entity was the ideal organizer because officials were responsible for “fostering” and “safeguarding” American commerce.<sup>152</sup>

In July 1972, President Nixon congratulated Secretary Volpe for executing a successful program. He was particularly proud of Volpe and his staff for turning early negative media reports about Transpo into positives reports by the end of the show. Nixon then encouraged Volpe to continue teaching the public that Transpo was a success and it was necessary to solidify American trade abroad and improve domestic employment.<sup>153</sup>

Despite Nixon’s compliments, Department of Transportation officials recognized the safety incidents required further examination. They convened a review board led by astronaut Alan Shepard, helicopter designer and executive Frank N. Piasecki, and FAA Deputy Administrator David D. Thomas. In their October 1972 report to Secretary Volpe, the board members recognized one of Transpo’s objectives was to exhibit aviation as a “major and mature mode of transportation.” To meet this objective, the men argued future air shows should focus on low risk product demonstrations with an emphasis on commercial and military technologies. Powered flight, they believed, should not be “exploited” as an attraction so air racing, low flying, and parachuting should be banned from future shows since they were not directly related to transportation exhibits. The board members conceded organizers allowed these performances on the inaugural program because they were viewed as demonstrating the “art of aviation” and the joy of sport flying. However, board members agreed such activities had no place at a commercial

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<sup>152</sup> John A. Volpe, Memorandum, by M. A. Yates, 31 July, *Re: Transpo 72 and Future Transpo's*, 1972-1240A International Exposition; A1 14 Box 379; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1-3.

<sup>153</sup> John A. Volpe, Letter, by Richard M. Nixon, 21 July, *Letter*, 1972-1240A International Exposition; A1 14 Box 379; Subject and Correspondence Files, 1959-82; Office of the Administrator, Federal Aviation Administration, Department of Transportation; Record Group 237; National Archives at College Park, College Park, MD, 1.

transportation event because the risks “degraded” the overall promotion of aviation. Unusual but acceptable demonstrations could include helicopters airlifting the victims of staged accidents, the loading and unloading of cargo aircraft, or heavy equipment airlifts.<sup>154</sup>

In accordance with their view, the board members argued the fatal Thunderbirds crash was an acceptable accident compared to the deaths of Kennedy and Alexander. They decided Major Howard’s crash was caused by the “random failure of a generally reliable system,” while his death was the result of a series of coincidental and unpredictable events. The other deaths, the board opined, involved equipment and personnel with less rigorous design, oversight, and skills. They considered the other, numerous incidents throughout Transpo, like the failure of Bob Hoover’s P-51 landing gear, to be reasonable operational mishaps in light of the volume of flying at Transpo. It was not some sort of systemic failure or negligence by Transpo staff or performers. The board members concluded by suggesting future organizers reduce the total number of performance hours from 68 over the ten days to between ten and twenty hours. This alone would reduce the strain on staff and improve safety.<sup>155</sup>

After Transpo ’72 closed, the new Secretary of Transportation Claude S. Brinegar<sup>156</sup> announced a second internal task force to evaluate Transpo and the members determined organizers accomplished the goals of Transpo ’72 by both educating the public and helping boost American sales. Brinegar then, on the advice of the task force, cancelled Transpo ’74 because there would not be enough technological developments to hold a meaningful show. The members “cautiously suggested” a Transpo ’76 might be possible, but it never materialized. With that, the

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<sup>154</sup> Piasecki, *Report to the Secretary of the Department of Transportation: Review of the Transpo ’72 Air Demonstrations*, 2-7.

<sup>155</sup> Ibid. 1,7-11.

<sup>156</sup> Volpe resigned his post to become the ambassador to Italy in February 1973.



attempt at a biennial national aviation and transportation show was moribund in America in the 1970s.<sup>157</sup>

### United States Air & Trade Show

A decade later, organizers in Dayton, OH followed in the footsteps of Transpo and attempted to create a national, biennial, commercial air show. Dayton hosted numerous major national air shows since 1924, but the 1980s, was their first real attempt to make the city the permanent host of a commercial air show akin to Paris.

In February 1982, McGraw-Hill Publisher James R. Pierce, owner of *Aviation Week & Space Technology*, announced he was considering sponsoring a new, major air show in the United States. He budgeted \$250,000 to investigate the possibility of organizing an air show for the spring of 1984 because he believed foreign companies wanted to gain access to the North American markets. Among the sites he wanted to study were Dulles and Dayton. Senator Barry Goldwater supported a new air show because he believed the Farnborough show would soon fold and the US could fill the void and while simultaneously protecting domestic industry. Critics retorted there were already too many air shows worldwide resulting in high costs for exhibitors with “no discernible” benefits. Executives from the Aircraft Industries Association, McDonnell Aircraft, General Dynamics, Boeing, and more announced they did not support developing an American air show.<sup>158</sup>

Pierce did not seem to get beyond the study phase for an American air show but the summer of 1984 did see a two-day Dayton International Air Show and Trade Exposition attended by 200,000 people from 22 nations. In 1984, Dayton was the beneficiary of corporate aviation

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<sup>157</sup> Jack Eisen, "Transpo Show for 1974 Is Eliminated," *Washington Post*, 2 June 1973, D1, D3.

<sup>158</sup> "McGraw-Hill Weighing Decision on Air Show," *Aviation Week & Space Technology*, 1982, 16. Timothy R. Gaffney, "Area Air Shows Go Back to Earliest Years," *Dayton Daily News*, 19 July 1990, 19.

exhibitors looking for a new air show after the annual Reading Air Show, in Pennsylvania, shutdown in 1980 after 40 years. Approximately 120 companies rented space at Dayton's air show to display aviation products and services but almost half of the all visitors came for the weekend air shows.<sup>159</sup>

Growth, both in exhibitors and visitors, in 1986 and 1988 convinced local air show organizers to schedule 1990 as the year Dayton entered the "big-leagues" of air shows by building a partnership with industry, Wright-Patterson Air Force Base (located in Dayton), and the general business community. Organizers intended the Dayton Air Show to be a business show, but the existing atmosphere was more akin to a corporate picnic staged by the Dayton Area Chamber of Commerce and Wright-Patterson Air Force Base (WPAFB). In 1988, the local Air Force Association (AFA) chapter held a similar view after members rented an air show chalet for corporate executives and military officials. AFA officials found WPAFB guests thought the event a big success while corporate guests felt there were no viable customers at the show. AFA officials decided corporate guests misunderstood that Dayton was a public relations opportunity rather than a "hard sell conference."

Lockheed CEO Larry Kitchen expanded on corporate concerns in a letter to Ohio Senator John Glenn when he argued Dayton was successful because it was a social space for corporate and military personnel to interact without high-pressure sales or meetings. Its assets, according to Kitchen, were an atmosphere of "baseball caps, hot dogs, and camaraderie." By expanding Dayton into an international air show, Kitchen feared the foreign companies organizers planned to court would hurt domestic companies if foreign buyers did not also participate. Commerce Secretary C. William Verity replied to Kitchen's concerns and wrote Dayton's history of

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<sup>159</sup> Berl Brechner, "Dayton's Tenth Show," *Flying*, October 1984, 91. *A Business Plan for the Dayton Air & Trade Show into the 1990's: Draft*, ca. 1990, Air Force Association: Wright Memorial Chapter, Dayton, OH, 1.

drawing hundreds of thousands of air show visitors meant it was an ideal space to sell aerospace products to foreign buyers. Verity reasoned if Dayton could draw so much of the general public, industry insiders must also be interested in participating.<sup>160</sup>

To reorient the air show, organizers first worked with the U.S. Department of Commerce to get certified in the Department's Foreign Buyers Program. Once certified, Commerce officials used staff at embassies and consulates abroad to recruit international buyers to attend the air show. Department officials also hosted a business center at the air show, including translators and international banking services.<sup>161</sup>

Second, and potentially more importantly, organizers discarded the local sounding "Dayton Air Show" and renamed the entire venture the "United States Air and Trade Show" (USATS) for 1990. Organizers decided USATS would be patterned on other international air shows and be scheduled biennially. In odd years, they planned to organize a community air show for locals and aviation enthusiasts (See Chapter 4).<sup>162</sup>

With these changes, organizers believed the air show would help small and medium American firms compete on the international market while creating a permanent air show in Dayton. Organizers also maintained in promotional materials that Dayton was ideal for an

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<sup>160</sup> *After Show Meeting*, "1988," Air Force Association: Wright Memorial Chapter, Dayton, OH; "Dayton's Double Challenge," *Aviation Week & Space Technology*, 30 July 1990, 7; Senator John Glenn, Letter, by Lawrence O. Kitchen, 8 November, Letter, Air Force Association: Wright Memorial Chapter, Dayton, OH: Wright State University Special Collections & Archives, MS-351, Box 13, 1. [10 August 1989 Air Show Meeting], "1989," Air Force Association: Wright Memorial Chapter, Dayton, OH; *A Business Plan for the Dayton Air & Trade Show into the 1990's: Draft*, 1; Lawrence O. Kitchen, Letter, by C. William Verity, 21 September, Letter, Air Force Association: Wright Memorial Chapter, Dayton, OH: Wright State University Special Collections & Archives, MS-351, Box 13, 1.

<sup>161</sup> "Tomorrow's Technology and Beyond," ed. United States Air and Trade Show (Dayton, OH: United States Air and Trade Show, 1990), National Air and Space Museum Technical Files: J1-1990-200-01 1990 Dayton, OH Air and Trade Show, 2. *Press Release: America to Fly Higher with Birth of United States Air and Trade Show*, "1990," Technical Files, Washington, DC, 1.

<sup>162</sup> *Press Release: America to Fly Higher with Birth of United States Air and Trade Show*, 1; *Press Release: United States Air & Trade Show Adopts Name - Logo, Adds Stealth Fighter and International Flight Demonstrations*, 1990, Technical Files, Washington, DC, 1.

international air show because the area already was home to over 400 aerospace companies with a total workforce of over 60,000 employees.<sup>163</sup> They additionally used promotional materials to remind potential exhibitors that Wright-Patterson AFB was the home to the Air Force's research and development offices with a budget of \$70 billion.

Finally, the 1990 USATS was slated to host of the Armed Forces Communication and Electronics Association International Conference and Exposition. The conference theme was exploring the role of commercial computers and communication in military operations. Even as USATS organizers tried to strengthen the civilian air show, its success was focusing on military, not commercial aviation.<sup>164</sup>

The day before the air show's July 21 opening, the ambiguity of USATS' importance was exposed when WHIO television General Manager Neil Pugh announced the CBS station would reduce its live television coverage in favor of the Major League Baseball game between the Cincinnati Reds and Philadelphia Phillies. Originally Pugh agreed to provide continuous local coverage of the air show for six hours. Now only two hours aired live from its 11 am start until the start of the game at 1 pm. Once the game ended, viewers saw what remained of the air show followed by a broadcast of air show highlights. Pugh responded to critics that he was downplaying the air show in favor of baseball by stating the taped highlights would provided the air show exposure when more people watched television. Despite his statement, it does suggest

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<sup>163</sup> Ray Van Overschelde, Letter, by Ronald D. Wine, 8 April, *Letter*, Air Force Association: Wright Memorial Chapter. Dayton, OH: Wright State University Special Collections & Archives, MS-351, Box 13, 1-6. Stan L. VanderWelf, "Dayton's Big Event," *Aerospace America*, October 1986, B5. "Dayton Air Show Attracts Global Market," *Aviation Daily*, 30 January 1990, 209. "Dayton Air Show Plans Growth to International Status," *Aerospace Daily*, 26 March 1990, 518B; "Organizers to Cast Dayton Air Show as Premiere U.S. Aerospace Event," *Aviation Week & Space Technology*, 26 March 1990, 30. "Tomorrow's Technology and Beyond." 2. *Press Release: America to Fly Higher with Birth of United States Air and Trade Show*, 1; *Press Release: United States Air & Trade Show Adopts Name - Logo, Adds Stealth Fighter and International Flight Demonstrations*, 1.

<sup>164</sup> "Tomorrow's Technology and Beyond." 3-4.

the community prioritized a single game in a 162 game season over the inauguration of the locally hosted, biennial international air show.<sup>165</sup>

During the USATS opening ceremonies the next day, General Charles McDonald ignored the apparent public disinterest and recalled how the air show grew from a small event with barnstorming pilots at a county airport into a premier air and trade show. Since the Wright Brothers invented flight in Dayton, he believed the city was suited to host such a prestigious air show.

The planned highlight for the air show's first day was to be the ground breaking for the organization's \$7 million headquarters. Unfortunately, officials cancelled the event that morning because they were unable to secure financing for the 120,000 square foot building. Instead, Dayton Director of Aviation James Wood announced he hoped to find a private contractor to erect a 100,000 square foot building the city could lease and then sublet to the USATS staff. Progress was now delayed for USATS despite over 265 exhibitors displaying products at Dayton ranging from footlockers to space exploration equipment to nuts and bolts.<sup>166</sup>

Many exhibitors said the permanent exhibition building was necessary for them to "cement" participation in future shows. The previous afternoon, heavy rain and wind damaged tents housing some 50 exhibits, including Learjet's Lear 31 corporate jet demonstrator that suffered scratches on its fuselage. Company pilot Susan Anderson announced the company would not exhibit a damaged aircraft and flew the plane back to the company's Wichita, NB

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<sup>165</sup> Bob Batz, "Channel 7 Aims for the Sky with Air Show Telecast," *Dayton Daily News*, 19 July 1990,1C, 3C. Bob Batz, "Air Show Strikes out to Baseball," *Dayton Daily News*, 20 July 1990,12B.

<sup>166</sup> Jim Bohman, "Dayton, Aviation Industry in the Forefront," *Dayton Daily News*, 20 July 1990,1A, 8A; June R. Herold, "Air Show Building Stalls," *Dayton Daily News*, 21 July 1990,6B; Diane Solov, "Nuts, Bolts under Air Show Glitz," *Dayton Daily News*, 20 July 1990,8B.

headquarters for repairs. More seriously, the storm collapsed the air show's command center tent and Martin Marietta's electronics displays were damaged as well.<sup>167</sup>

The weather, however, did not stop the air show and over 300,000 people attended USATS over the four-day schedule. Organizers also increased the volume of exhibitors by 60% compared to 1989. However, most of the 170 aircraft exhibited were still military aircraft because corporate executives viewed Dayton as an air show for making sales to the U.S. Air Force.

Further exposing USATS' reliance on the military, organizers convinced military and Lockheed officials to display the F-117 Nighthawk, the world's first stealth fighter, at Dayton. This also demonstrates how corporate executives were inspired by the language and image of military air shows when developing their own exhibitions. By focusing on technical prowess and financial austerity, Lockheed officials worked to grow their brand recognition with the public.

When Lt. Col. John Zink arrived over Dayton with the F-117, he flew two low passes over Dayton International Airport and then landed the plane just before the rain blanketed the area. For the remainder of the show, the F-117 was on ground display with the cockpit closed from public view. For added security, air show staff maintained a 25-foot buffer between the public and the still secret technology on board. Organizers liked to remind the public that while Americans elsewhere already saw the revolutionary aircraft before Daytonians, Dayton was a homecoming for the F-117 since WPAFB housed the plane's development team.<sup>168</sup>

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<sup>167</sup> Timothy R. & Jim Dillon Gaffney, "Air Show Has Close Call with Sudden Storm," *Dayton Daily News*, 21 July 1990,1A, 5A; Mizell Stewart III, "Backers Hail '90 Show as Successful Transition," *Dayton Daily News*, 23 July 1990,5A.

<sup>168</sup> Timothy R. Gaffney, "Stealth Booked for Ground Display," *Dayton Daily News*, 10 July 1990,3A; Stanley W. Kandebo, "Dayton Debuts as Biennial U.S. Air and Trade Show," *Aviation Week & Space Technology*, 30 July 1990, 30-1. Timothy R. Gaffney, "'Black Jet' Dream Come True for Pilots," *Dayton Daily News*, 19 July 1990,3. Timothy R. Gaffney, "Air Force Wove Shroud of Secrecy around Stealth," *Dayton Daily News*, 19 July 1990,3. Gaffney, "Air Show Has Close Call with Sudden Storm."

Zink described the odd looking F-117A to the public as a “cubist rendering of an airplane,” which did not look very aerodynamic yet could fly while deflecting radar beams. He also used his appearance at Dayton to disarm critics who reported control problems in the F-117. Zink said in five years of flying the fighter, he never heard the plane called by the media’s moniker of “Wobblin’ Goblin.” Zink found the controllability of the strange plane to be much like any other aircraft he piloted because he benefited from a computer flight control system designed for the F-16 Fighting Falcon.<sup>169</sup>

To further publicize their work on the F-117, Lockheed officials bought a full page ad in the July 19 edition of the *Dayton Daily News* to proclaim the company fulfilled its USAF contract the previous week by delivering the 59<sup>th</sup>, and final, F-117A to the Air Force. With this delivery, Lockheed employees exclaimed they completed the Stealth project ahead of time and under budget. Officials claimed this success was directly attributed to the company’s “Skunk Works” division where corporate and military personnel cooperated on technical and project management issues.<sup>170</sup>

In addition to the F-117 appearance, Dayton organizers counted themselves among the lucky air shows to attract the Soviet Union’s first North American displays. When the Soviets agreed to stop in Dayton on July 10, 1990, Soviet pilots Valery Minitsky, Roman Taskayav, and Marat Alykov already demonstrated their two MiG-29 Fulcrum jet fighters in Ottawa, Canada, Kalamazoo, MI, and Rockford, IL. USATS spokesman Douglas McLarty announced the event as

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<sup>169</sup> Gaffney, "'Black Jet' Dream Come True for Pilots."

<sup>170</sup> "Ahead of Its Time," *Dayton Daily News*, 19 July 1990, 11.

“Glasnost come[s] to Dayton,” while *Dayton Daily News* reporter Tim Gaffney noted this was the first time Soviet pilots and aircraft operated so close to WPAFB.<sup>171</sup>

With all four North American stops, Soviet officials intended to demonstrate the economic changes occurring in the USSR and to sell the MiG-29 outside Soviet bloc nations. Officials like McLarty and Dayton Area Chamber of Commerce president Thomas Heine pointed to the Soviet visit as proof of Dayton’s international air show “credibility.” However, it cannot be ignored the Soviets decided to extend their tour to stop in Dayton. To believe McLarty and Heine is to presume Kalamazoo and Rockford were also international air show centers.<sup>172</sup>

Throughout their North American tour, the MiG pilots gave test rides to select Americans like Capt. Pat Moneymaker, the commanding officer of the Navy’s Blue Angels, and Terry Stinson, the president of Hamilton-Standard and a former fighter pilot. Stinson compared the fighter to the Navy’s F/A-18 Hornet since both aircraft were twin tailed, twin-engine multi-role fighters and he found the MiG met and exceeded the Hornet in some operational respects. The only notable failure Stinson found in the MiG was the Russians still relied on tradition dials and switches in the cockpit instead of the computerized systems found in American cockpits.

In Dayton, the *Dayton Daily News* publisher Brad Tillson secured a flight for aviation reporter Tim Gaffney by agreeing to pay the Russians \$4500. Gaffney, who held a private pilot license, had a similar reaction to the MiG experience as Stinson. After the tour, MiG officials announced they planned to raise the price of flights to \$10,000 in 1991.<sup>173</sup>

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<sup>171</sup> Timothy R. Gaffney, "The Russians Are Coming with Mig 29s, Cargo Jet," *Dayton Daily News*, 11 July 1990,1A, 7A.

<sup>172</sup> Kandebo, "Dayton Debuts as Biennial U.S. Air and Trade Show." 30-1. Benjamin S. Lambeth, *From Farnborough to Kubinka: An American MiG-29 Experience* (Santa Monica, CA: RAND, 1991), 5. Gaffney, "Stealth Booked for Ground Display." Gaffney, "The Russians Are Coming with Mig 29s, Cargo Jet."; Timothy R. Gaffney, "Soviet Jets Sweep in for Air Show," *Dayton Daily News*, 19 July 1990,3A.



Aircraft stars like the MiG-29 and the F-117 could not overcome the poor weather and the resulting ankle deep mud that kept the 1990 audience down around 300,000 when organizers expected numbers to jump dramatically. Observers called the 1990 USATS a “noble effort” to remake Dayton into a corporate air show, but they thought the transformation was incomplete. USATS Vice-President of Marketing and Development Ron Wine appeared to agree when he reminded the public and exhibitors that 1990 was a transitional year and set a new goal to attract at least 50-100 new international exhibitors for the 1992 show. He also announced the creation of a National Advisory Council to evaluate industry executives’ complaints there were too many commercial air shows worldwide. Wine chided critics that Dayton was intended as a cost-effective alternative to programs like Paris or Farnborough where the price of participation could clear \$2 million. Dayton, by comparison, could cost a company only \$100,000-200,000. Unfortunately, by 1992 Dayton also competed with a new air show staged on the same biennial schedule in Berlin, Germany, which even Wine thought “create[d] a wasteful, costly, and unnecessary competition” amongst air shows.<sup>174</sup>

Like Transpo ‘72, Dayton organizers created such a long business itinerary to enhance USATS 1992’s sales potential, they also scheduled two weekends of air show performances. Essentially, USATS opened with an air show from July 13-15, then closed to the public for weekdays, and concluded with another public air show on July 21-22. USATS spokesman

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<sup>173</sup> Kandebo, "Dayton Debuts as Biennial U.S. Air and Trade Show." 30-1. Lambeth, *From Farnborough to Kubinka: An American MiG-29 Experience*, 5. Tom Beyerlein, "American's Dream Soars in Soviet Plane," *Dayton Daily News*, 19 July 1990,26; Timothy R. Gaffney, "Impressive Plane from Russia with Love, Thankfully," *Dayton Daily News*, 19 July 1990,26. Timothy R. Gaffney, "Writer Holds on Tight in MiG-29," *Dayton Daily News*, 23 July 1990,1A, 5A. Timothy R. Gaffney, "Lessons Learned from Mig-29," *Dayton Daily News*, 25 July 1990,6A.

<sup>174</sup> "Air Show Flies Despite Rain," *Skywriter*, 27 July 1990, 2, 15, Air Force Association: Wright Memorial Chapter. Dayton, OH: Wright State University Special Collections & Archives, MS-351, Box 13; Mark Fisher, "Air Show Ponders Mud Muddle," *Dayton Daily News*, 25 July 1990,3A. "Hard Decisions Needed on Air Show," *Aviation Week & Space Technology*, 1 July 1991, 7. "1992 Dayton Show to Stress International Participation," *Aerospace Daily*, 24 October 1991, 138. *A Business Plan for the Dayton Air & Trade Show into the 1990's: Draft*, 1.

Douglas McLarty announced organizers created this schedule because corporate exhibitors feared allowing the public unlimited access to exhibits hampered their ability to conduct legitimate business. In response to these doubts, weekday programs were geared for direct sales and industry debates while the weekends focused on educating the public and allowing citizens to question the experts. The closing weekend show was a much bigger spectacle with headliners like the USAF Thunderbirds, the Army's Golden Knights skydiving team, civilian aerobatic fliers like the Holiday Inn Team and Tom Jones, and classic barnstormers like Jim Franklin.

Missing from the air show were advertised performances by the Russian Knights, a Russian military team flying Su-27 Flanker fighters, and the McDonnell-Douglas C-17 Globemaster cargo plane. Air show director George Wedekind admitted the Russian visit fell apart when he failed to find enough sponsors to underwrite the costs of bringing the team to North America. Wounding Dayton more was an Air Force spokesperson explaining no one in the military ever promised the "first flying test model" of the C-17 would appear in Dayton despite air show officials statements to the contrary.<sup>175</sup>

To open the 1992 show, *Dayton Daily News* Publisher Brad Tillson prophesized historians would mark the year as when Dayton "claim[ed] its identity as the aviation capital of the world." Organizers spent over \$6 million upgrading USATS including new exhibitor chalets, to serve as private entertainment and meeting spaces, and building the previously stalled permanent exhibition and trade pavilion. Despite these outlays, USATS Executive Director James Wood did not meet the exhibitor participation goals. Instead of 300 American and over 50 foreign exhibitors, only 184 and 22 exhibitors respectively signed up for USATS. Staff also

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<sup>175</sup> Timothy R. Gaffney, "Russian Fighter Team Won't Be in Dayton," *Dayton Daily News*, 3 June 1992, 1A. Timothy R. Gaffney, "Air Show Cancels 1 Symposium," *Dayton Daily News*, 12 June 1992, 1B.

failed to attract the 2500 industry representatives they hoped would register to attend the trade show; only 2000 decided to participate.<sup>176</sup>

USATS organizers believed their expectations were not flawed and reflected changing attitudes in the aerospace industry towards Dayton's air show. This was plausible because of examples like the US representative for British HAD Forgings, Andrew Clark, who decided to exhibit at Dayton because he saw companies like General Electric put up Paris-like displays in Dayton in 1989. Clark visited Dayton shows for years but perceived it as a "little celebration" rather than a serious trade show. The increased presence of GE and other corporations convinced Clark to reconsider Dayton as a viable marketplace.<sup>177</sup>

Beyond people like Clark, Wood publicly admitted USATS staff could not establish Dayton as a major aerospace forum for doing "business with America in America." He blamed part of the problem on an economic downturn in the aerospace industry and three competing air shows for USATS' slow maturation. While domestic military companies still exhibited in volume thanks to the presence of nearby Air Force officials, Wood believed more airlines and airline makers needed to come to Dayton for USATS to grow. Executives from airliner manufacturer McDonnell-Douglas were in Dayton but the competing Boeing and Airbus representatives and products were not. Further hurting the public image of USATS occurred when the staff cancelled a four-day symposia on general, commercial, and military aviation issues citing lack of interest and the \$1200 registration fee as too high.<sup>178</sup>

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<sup>176</sup> Keith L. Alexander, "'92 Air Show Off to Roaring Start," *Dayton Daily News*, 17 June 1992,1B; Keith L. Alexander, "It's Back to the Future for Trade Show," *Dayton Daily News*, 18 June 1992,3; Timothy R. Gaffney and Mizell Stewart III, "Show Roars with Hope," *Dayton Daily News*, 22 June 1992,1A, 3A; J. Bradford Tillson, "1992: It's Time for Dayton's Aviation Assets to Soar!," *Dayton Daily News*, 21 June 1992,9B.

<sup>177</sup> June R. Herold, "Foreign Presence in Air Show Growing," *Dayton Daily News*, 19 July 1990,36.

<sup>178</sup> Gaffney, "Air Show Cancels 1 Symposium."

Statistically, the 1992 USATS attracted over 207,000 visitors for an air show featuring 110 aircraft and the U.S. Air Force Thunderbirds. With the disappointment of 1992, Wood worked to reorient public and corporate expectations for USATS' future development. While 1990 and 1992 were both supposed to be breakthrough years, Wood now projected USATS would not be a world-class event until 1996.

*An Aviation Week & Space Technology* editorialist wondered if the commercial air show should be moved out of Dayton, despite the millions invested in construction of an exhibition hall and chalets or if USATS was even necessary. The writer reiterated Wood's concerns about air show competition and the need for more diversity among exhibitors so the show was less dependent on American military contractors. As a result, the future for the United States Air and Trade Show in Dayton was very hazy after 1992.<sup>179</sup>

A scandal in the Dayton Area Chamber of Commerce further hurt USATS and resulted in the resignation of the Chamber president and other officials for padding expense reports related to USATS. Soon after the scandal, in summer of 1993, Henry Ogrodinski was hired as USATS president and he also confronted an aerospace industry hammered by defense budget cuts resulting from the end of the Cold War, plus weak commercial markets. With these obstacles, he still attempted to convert USATS into a true business forum and not a place to "wave the corporate flag" to the Air Force.<sup>180</sup>

For 1994, officials dramatically changed USATS, but most of the alterations were cuts. First, Wood eliminated an entire day from the trade show schedule to reduce exhibitor costs at

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<sup>179</sup> Stanley W. Kandebo & Edward H. Philips, "U.S. Air and Trade Show Debuts in Permanent New Facility," *Aviation Week & Space Technology*, 22 June 1992, 31-2. "Air Show Jury Still Out," *Aviation Week & Space Technology*, 22 June 1992, 11. "Enginemakers Ponder Air and Trade Show in Tight Times," *Aerospace Daily*, 22 June 1992, 473.

<sup>180</sup> Timothy R. Gaffney, "New 'Pilot' Rolls out Trade Show," *Dayton Daily News*, 17 July 1994, 1G, 4G.

Dayton and to better compete with the Berlin Air Show. He then tried to entice corporate participation by cutting the cost of renting chalets by 30% from \$12,000 to \$7500. He also decreased billed catering costs by 15% because catering was upwards of 80% of a company's air show costs.

Unfortunately, Wood and his staff still unsuccessfully battled the impression that USATS was really an alternative open house for Wright-Patterson Air Force Base, where 90% of all Air Force purchasing originated. While only 20% of 1994 USATS exhibitors sold products or services to the military, the primary air show attractions remained military products like the Thunderbirds, the Northrop B-2 Spirit bomber, seven aircraft competing to be the new Joint Primary Training Aircraft, a mock air assault by the Army's 82<sup>nd</sup> Airborne and the USAF 23<sup>rd</sup> Composite Air Wing, and the first public appearance of the Northrop E-8C Joint STARS reconnaissance aircraft.<sup>181</sup> By 1994, USATS appeared to be an entertaining military air show masquerading as a business show. Organizers may have honestly tried to create a successful business air show, but their efforts only succeeded at bringing diverse air show performances to Dayton.

In 1994, Ogrodinski straddled the line between military and personal aviation by securing demonstrations of the BD-10, marketed as the "world's first personal jet." The BD-10 was a tiny jet powered airplane, barely able to seat a pilot but was still fast, sleek, and maneuverable. Military officials viewed the airplane as potentially a relatively cheap training aircraft, while private pilots coveted it as a fast, fun toy.

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<sup>181</sup> Paul Seidenman, "Air Show Mirrors and Customer Base Shift," *National Defense*, May/June 1994, 53. L. M., "Air and Trade Show Refurbished for 1994," *Business and Commercial Aviation*, June 1994, 29. "Dayton Show Targets Commercial Aerospace," *Aviation Week & Space Technology*, 6 June 1994, 29. Wine, Letter. *1992 U.S. Air & Trade Show: AFA Business Center, Meeting Minutes*, 1992, Air Force Association: Wright Memorial Chapter, Dayton, OH; Timothy R. Gaffney, "Air Show Bares Trade's Variety," *Dayton Daily News*, 17 July 1994, 1B. Timothy R. Gaffney, "Persian Gulf Star Debuts to Public This Weekend," *Dayton Daily News*, 21 July 1994, 32.

Firmly on the entertainment side, the 1994 air show included Formula V air racing, an attempt at revitalizing air racing in the America. General Motors also sponsored the Wright Brothers Award for the best homebuilt aircraft at the air show, an attempt to add a touch of the EAA to Dayton. Since 1994 was the fiftieth anniversary of the Allied invasion of Normandy during World War II, organizers were also able to secure the Army's 82<sup>nd</sup> Airborne division to airdrop 800 paratroopers from vintage aircraft during the air show.<sup>182</sup>

Despite these events, the 1994 USATS demonstrated it was an international commercial air show by illustrating the changes in international aviation since the collapse of the USSR in 1991. Alexander Velovich came to Dayton in 1990 as part of the MiG-29 tour. He returned in 1994 as a capitalist with the consulting firm, R-Avis Ltd., to help Western companies find business opportunities in Russia. A post-Soviet product at Dayton was the Polish built PZL 150A Koliber II. PZL's US representative Bruce Prince demonstrated the all-metal four-seat plane and the plane's unique design element, slats usually found on airliners. With the slats, the small plane, whose name meant "hummingbird," achieved excellent low speed performance. Prince explained the plane was a response to the moribund general aviation industry where new private planes cost over \$100,000. The Koliber cost only \$89,500 and was built and tested in Poland before being disassembled and shipped to the US. Prince assuaged potential maintenance concerns by explaining 60% of the plane's parts were American-made so replacements were usually easy to acquire. While USATS suffered with a reputation for being a bastion of

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<sup>182</sup> Timothy R. Gaffney, "Built-It-Yourself Kit Becomes Personal Jet," *Dayton Daily News*, 21 July 1994,31; *Highlight for the United States Air and Trade Show, July 20-24, 1994*, 1994, Technical Files, Washington, DC, 1.

American military aircraft, in 1994, it did attract the few former Eastern bloc business interests seeking to make it to America.<sup>183</sup>

However, USATS' continued failure to be little more than a military and government air show caused Henry Ogrodinski to comment the show must change or die. For survival, he set more lofty goals for 1996 including a renewed endorsement of the federal government, similar to Transpo, and to encompass all forms of aviation from ultralights to heavy transports by 2003. Unfortunately, he would not be there to make the attempt. In December 1995, the group's board of trustees effectively killed USATS when they outsourced the air show's management and dropped the trade show entirely from future events in Dayton. Although the USATS name and organization remained, Ogrodinski and James Wood resigned in protest of the trustees' gutting the mission and work of the United States Air and Trade Show.<sup>184</sup>

When compared to early aviators like the Wright Brothers and Glenn Curtiss, only the 1946 General Electric air show closely matched their methods, goals and outcomes. Here, the organizer and performer was a singular business seeking to use the air show to promote their product to customers and the public at large. At Transpo and USATS, by comparison, the organizer and the performer(s) were distinct entities with mutually exclusive goals. As a result, determining the overall success of corporate air shows is more difficult for programs like Transpo and USATS compared to GE.

General Electric's air show was a definitely a triumph, with the exception of the cancelled aerial parade due to weather. Organizers put on a program announcing to the nation the

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<sup>183</sup> Timothy R. Gaffney, "Ohio Can Be World Aviation Capital, Voinovich Says," *Dayton Daily News*, 21 July 1994, 5B; Timothy R. Gaffney, "Polish Plane Earns Wings," *Dayton Daily News*, 23 July 1994, 4B.

<sup>184</sup> David M. North & Stanely W. Kandebo, "USATS Charting Future Course," *Aviation Week & Space Technology*, 25 July 1994, 60. James R. Asker, "Losing Altitude," *Aviation Week & Space Technology*, 4 December 1995, 19. "[USATS Staff]," USATS, Fall 1993.

company was invested in aviation product development while exhibiting the company's credentials with an array of major aircraft utilizing GE equipment. The whole production was capped off with the first jet airmail delivery, which executives used to demonstrate how the company's products were shrinking the world and the time needed to navigate it.

The far more ambitious Transpo and USATS air shows were a combination of failure and success. For the US Department of Transportation organizers, Transpo was a terrible failure because they planned a biennial program touting the miracles of America's transportation industry. Instead, the final product was a single event overwhelmed by a series of fatal crashes. However, individual companies did achieve some of Transpo's stated goals. Fairchild's president proudly announced aircraft sales supposedly sealed during the air show schedule. Also notable was the unscheduled demonstration of Grumman's F-14 Tomcat fighter. While the plane's pilot could have quietly taken off to Dulles to return the then experimental fighter to New York, he instead made a memorably loud and visceral demonstration of the aircraft's potential to military officials and the public.

United States Air and Trade Show organizers in Dayton were slightly more successful than Transpo staff in developing a biennial program by having at least three iterations of their air show before it faded away. On the performer level, USATS was successful for some like Lockheed and the US Air Force when they brought the F-117 Stealth fighter to Dayton in 1990. Furthermore, the organization still existed in the 2010s and the staff was once again developing air shows and aviation trade conferences in Dayton.

All three air shows not only highlighted the current state of aviation, they also focused international attention on their host communities. For a few days or weeks, Schenectady, Dulles Airport, and Dayton were on the lips and minds of the people worldwide. Locally, residents



could unite around the common experience of hosting these unique events. Occasionally though, it was the host community and not aviation that was the intended focal point of an air show.

## CHAPTER 4

### HOMETOWN AIR SHOWS

Just after noon on May 27, 2005, over 100,000 people at Jones Beach State Park in Wantagh, NY watched a skydiver land in the cold Atlantic Ocean a few hundred feet from the shore. Soon, an 106th Air National Guard Sikorsky HH-60 helicopter swooped onto the scene and a six-man search and rescue team jumped into the ocean to pull the parachutist from the water. The crowd cheered as the Guardsmen attached a rescue line from the helicopter to the parachutist and pulled him from the water. However, drama was completely staged as part of the Jones Beach Air Show's opening act for the Beach's 75<sup>th</sup> anniversary.

Over the next four hours, the crowd watched a half-dozen World War II fighters and bombers fly in formation, a U.S. Air Force pilot displayed his McDonnell-Douglas F-15 Eagle's power and maneuverability, and the Red Baron Pizza Squadron and the GEICO Skytypers performed formation aerobatics in their World War II training aircraft. The culmination of the afternoon of aerial power and grace was a performance by the Air Force's elite demonstration team, the Thunderbirds. For almost thirty minutes, six pilots in red, white, and blue General Dynamics F-16 Fighting Falcon jets twisted, spun, flew upside-down, and performed barrel rolls while keeping the planes within three feet of each other. As a grand finale, the six pilots, flying in a diamond formation, pointed the noses of their planes straight up in the sky and, after gaining a few hundred feet of altitude, all six broke formation in different directions for their famous "bomb burst" maneuver.<sup>185</sup>

New York State Department of Parks and Recreation officials organized the Jones Beach Air Show to celebrate the value the beach added to the Long Island and New York City

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<sup>185</sup> "Busy Weekend at Local Beaches," *New York Times*, 31 May 2005. Verbsky, "2005 Jones Beach Air Show Collection."

community. The beach was a popular destination for local residents and tourists since it opened in August 1929. In 2005, Parks officials used an air show to focus attention on the stage, in this case the popular beachfront. Officials were part of a larger trend of groups and individuals who regularly organized air shows to create a spectacle worthy of public attention and media coverage for aviation.

The community aspects of air shows can be more difficult to discern because the aerial performers and their causes of patriotism, military demonstration, and corporate promotion are usually the more newsworthy displays. Yet a successful community air show drew attention to facilities, like New York's beautiful beaches, and community demographics, where residents reaffirmed their love for the state parks, while tourists and newcomers learned about them while being awed by powerful aircraft. Furthermore, air show organizers attracted industry representatives to an area so politicians and community boosters could exhibit the commercial aspects of the area.<sup>186</sup>

Overall, there were numerous non-aviation reasons to stage an air show in the United States. Determining organizers' success at these more subtle air show goals can be difficult because most media coverage focused on the aviation. Success for the Jones Beach organizers was established after the 2005 event because air shows became an institution for Memorial Day Weekend at Jones Beach and they came to serve as the official start of summer for hundreds of thousands of New Yorkers.

#### 1948 New York International Air Show

In 1947, New York City officials, including Mayor William O'Dwyer, needed to maintain a billion dollar municipal budget without the economic boom produced by World War

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<sup>186</sup> Rydell, *All the World's a Fair: Visions of Empire at American International Expositions, 1876-1916*, 2-3.

II. Members of the Board of Estimates claimed government officials needed to help market the city to the world or New York City would lose business and international status to other cities. With the newly formed United Nation's taking root in New York, municipal officials decided New York was the world capital, but it was not yet a functional community sprawling through all five boroughs. Similarly, people generally interpreted the city as a "beacon of hope" allowing people of all races and nations to work together, but they did not see themselves firmly linked to the other eight million city residents.

Recognizing the City was a "product" to be sold to the world, Board of Estimates members recommended municipal officials celebrate the city's assets during the fiftieth anniversary of New York's consolidation. This "Golden Jubilee" honored when, in 1898, Manhattan, Queens, Staten Island, Brooklyn, and Bronx representatives agreed to unite under a single municipal government. In the course of such a celebration, Board members impressed upon the Mayor that events should illustrate how the city provided a template for commercial success, "the general sciences of government and... as a home for all nations." In reporting the successes of the city government, the "achievements of yesterday, leadership of today, and opportunities of tomorrow" should be portrayed for all and "stimulate travel to the city."<sup>187</sup> Philosophically, city officials wanted to exhibit the city as "a beacon of hope to all in a world shaken by fear, stalked by want, and torn by dissention." They wanted to remind people the city was a multi-racial city plus the capital of the world since the United Nations was headquartered in the city.

Furthering the metaphor of New York City as a "product" for the world to consume was officials' goal to market Golden Jubilee events as demonstrating the "pattern for the

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<sup>187</sup> *Report to the Honorable William O'Dwyer: The Board of Estimate on Preliminary Plans and Specifications for the Commemoration of the Golden Jubilee of the City of New York*, 1947, New York, 1-6. Grover A. Whalen, "New York.... 1898-1948," *The Westsider: The Magazine of New York Business*, Spring 1948, 27.

opportunities” the city offered commerce, industry, the science of government, and a home for people and nations of the world. Included in this was the admission that city staff could not maintain these opportunities if officials did not ensure the continued economic growth necessary to fund billion-dollar operating budgets. Part of this also meant city officials recognized smaller cities were their economic competitors.<sup>188</sup>

New York City officials decided to make 1948 a year long celebration for the city and included diverse programming like the International Ballet and Folk Dance Festival, a Municipal Mobilization Demonstration, a fashion showcase, “golden” lighting for streets and highways, and the New York International Air Exposition. To showcase the city government’s evolution over the previous fifty years, New Yorkers were inundated with coverage of the Municipal Mobilization Demonstration on Saturday, June 12, 1948. The six and a half hour procession encompassed 45,000 marchers from 82 city, borough, and county departments, 75 bands, 200 floats, and a truck towing a police aircraft through the streets of New York. For those not present, WNYC broadcast the entire procession live on the radio while newsreels of the event were screened in cinemas around the country.<sup>189</sup>

Events like the parade focused attention on existing city strengths while the New York International Air Exposition was geared as a dramatic way to dedicate the brand new New York International Airport being constructed on the former Idlewild golf course. Idlewild remained the unofficial name of the airport for decades. In his memoirs, Grover Whalen, who planned events like the 1939 World’s Fair and the City’s Golden Jubilee, recalled the purpose of the air show

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<sup>188</sup> *Report to the Honorable William O'Dwyer: The Board of Estimate on Preliminary Plans and Specifications for the Commemoration of the Golden Jubilee of the City of New York*, 1948, 1-6, New York.

<sup>189</sup> *Report to the Honorable William O'Dwyer: The Board of Estimate on Preliminary Plans and Specifications for the Commemoration of the Golden Jubilee of the City of New York*, 11, 20. *New York at Work*, 1948, New York, 13-14.

was to focus city leaders on the need for long range planning for aviation. The nine day air show, running from July 31-August 8, 1948, also “dramatically” demonstrated the necessity of air power to defend the nation.<sup>190</sup>

The air show organizers recognized the public in 1948 still interpreted air shows through the lens of the 1920s and 1930s when barnstormers and air circus operators performed dangerous stunts that left many pilots dead. In the October 1947 *New York Times* article announcing the air show, Whalen and other organizers emphasized there would be nothing “Coney Island” about this air show, referring to the City’s pleasure grounds. By publicly stating this, officials sought to blunt criticism that the New York International Air Exposition would be a carnival of airborne debauchery and danger on public land.

However, some criticized the air show almost immediately after city officials made their plans public in 1947. Among the most vocal critics were officials at the Commerce and Industry Association of New York, an organization similar to a Chamber of Commerce. They were disappointed city officials planned to spend so much money on frivolous events when the world was still reeling from World War II. Association officials even sent a proposal to city officials for an alternative to the year-long celebration. They suggested a week long celebration designed to raise \$4.5 million dollars to construct a hospital or memorial auditorium to serve the public. Funding, Association officials recommended, could come from the public buying souvenir stamps and coins while businesses and speakers would contribute a portion of their income derived from the events. The proposed celebration would allegedly cost a mere \$15,000 to operate.<sup>191</sup>

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<sup>190</sup> Grover A. Whalen, *Mr. New York: The Autobiography of Grover A. Whalen* (New York: G. P. Putnam's Sons, 1955), 279-83.

As the Golden Jubilee neared in April 1948, the Association's Board of Directors denounced city officials for creating the Golden Jubilee on a "false premise" since New York City was founded with the Dongan Charter on April 27, 1686. The fiftieth anniversary, they admonished municipal boosters, commemorated only the political consolidation of the five boroughs. The group's Executive Vice-President Thomas Jefferson Miley argued if consolidation was a cause for celebration then the borough presidents should fund and organize the events. He believed the presidents could properly honor consolidation at a tenth of the proposed cost of the city-sponsored events. Miley and the Board of Directors also suggested city officials and the public examine financial records for the last major event held in the city, the 1939 World's Fair. He believed the records would indicate the projected profits and enduring business for the city and participating businesses were not assured. Officials concluded their criticism by stating all the topics municipal officials want to highlight in the Golden Jubilee, like aviation, were worthy of publicity but "not in the garish mood of ballyhoo and carnival."<sup>192</sup>

Air Show Director Tom Compere outlined seven objectives the public should learn at the air show including the evolution of air transportation and its impact on commerce and travelers; that New York City was the "air transport capital of the world;" and the traditional air show role of demonstrating air power for national security. In a special Jubilee issue of *The Westsider*, a local business magazine, Whalen publicized Compere's objectives by calling the International Air Exposition "the greatest demonstration of airplane development in the history of aviation." The air show would have air sections from every military branch as well as civilian flyers. The spectators were part of the show too because President Harry S Truman, members of Congress,

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<sup>191</sup> Commerce and Industry Association of New York Inc., "A Proposed Plan for New York City's Golden Jubilee Memorial, 1947," New York, 1-3.

<sup>192</sup> "Association Hits 'Wasteful' Golden Jubilee Plans," *Bulletin of the Commerce and Industry Association of New York, Inc.*, 19 April 1948, 1.

governors, mayors, and international government officials were scheduled to attend the airport dedication.<sup>193</sup>

The Board of Estimates also contributed objectives to the Exposition. Board members wanted air show organizers to recall the 1909 Hudson-Fulton Celebration, which honored Henry Hudson's and Robert Fulton's nautical successes in the region. Among the highlights in 1909, Wilbur Wright flew from the city's first airport located on Governor's Island for a flight around the Statue of Liberty. They wanted the Exposition to "offer a striking contrast between this makeshift field and the new, vast world headquarters for transport aviation at Idlewild." Further comparison, they thought, should be made between the fragile aircraft the Wrights built and flew and the modern, transoceanic airliners soon operating from Idlewild.<sup>194</sup>

As with any air show, the target audience guided how organizers developed the program. For the Idlewild show, city officials imagined an immense audience beginning with the ten million people living within relatively easy travel of the airport. They also invited members of Congress, foreign dignitaries, industry representatives, civic groups, and civilian and military aviation groups. To maximize exposure, city officials also invited United Nations correspondents, every city newspaper, and the entire Aviation Writers Association membership. By inviting such a broad spectrum of the media, New York City officials attempted to create a flying event that would be known to everyone, regardless of their location.

Officials also cast a wide net for air show participants. Since they believed they were creating the "first authentic international air exposition," the staff presumed civic groups like the

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<sup>193</sup> Tom Compere, "Report: The City of New York Golden Anniversary International Air Exposition, New York International Airport (Idlewild), July 31 through August 8, 1948, 1948," New York, 1. James P. Brady, "Transportation Has Expanded," *The Westsider: The Magazine of New York Business*, Spring 1948, 34-5, 50; Whalen, "New York.... 1898-1948."

<sup>194</sup> *Report to the Honorable William O'Dwyer: The Board of Estimate on Preliminary Plans and Specifications for the Commemoration of the Golden Jubilee of the City of New York*, 48-54.



American Legion and the Boy Scouts, business leaders, industry groups, and aviation groups of all types would clamor to exhibit at the air show. Since the East Coast had not hosted a major aviation show since before World War II, organizers hoped industry executives would bring the latest airliners, personal and executive airplanes, helicopters, and aviation equipment. To further entice the public, city officials planned to have air racing, women pilots, radio controlled planes, mail pickups by aircraft in flight, and cargo flights. The organizers believed they could get over \$10 million worth of aircraft on site at no cost to the city. <sup>195</sup>

In April 1948, with the air show three months away, the organizers received public support from powerful politicians like Maine's Senator Owen Brewster, chairman the Congressional Aviation Policy Board. Brewster wrote to Director Tom Compere that he considered the air show key to making Americans more "air-minded" and the nation's survival depended on public support for air power. Nevada Senator Pat McCarran paralleled Brewster when he wrote to Compere, "Air power is national security; lack of it, insecurity." It is not surprising in the early days of the Cold War that senators and other federal officials saw airpower as the defense against Soviet aggression. It does seem peculiar the Senators inferred an air show could be the difference between victory and defeat from communist aggression.

To improve the chances the public would attend the air show, officials provided free admission to all 700,000 elementary school children in the city provided they attended with a paying adult. To claim this offer, residents had to attend the air show on their borough's designated day. In theory, all children from Queens would attend on Queens Day on August 2nd while Staten Island kids would attend on Richmond Day on August 6th. Not only did adults now have extra incentive to attend the air show, officials also developed a system they hoped would

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<sup>195</sup> Tom D. Crouch, *The Bishop's Boys: A Life of Wilbur and Orville Wright* (New York: W. W. Norton and Company, 1989), 406-8. *Report to the Honorable William O'Dwyer: The Board of Estimate on Preliminary Plans and Specifications for the Commemoration of the Golden Jubilee of the City of New York*, 21-5, 48-54.

generate consistent attendance throughout the air show. This was especially true because the borough days were scheduled on weekdays, which were traditionally the most sparsely attended days of an air show.<sup>196</sup>

For the each of the major components of the Golden Jubilee, city officials commissioned a commemorative souvenir book. Air show organizers used their book, The World of Flight to emphasize the quality of the new airport and document the speeches and spectacles of the air show. In addition to recalling why the air show occurred, the book served as the air show program with the schedule of events and many pages of paid advertisements from aircraft and parts manufacturers, aviation equipment makers, and airlines.

Port of New York Authority Chairman Howard S. Cullman introduced the book by recalling when New York City was consolidated in 1898. Back then, there was no need for airports at all but now, he argued, there was an urgent need to expand New York's aviation capacity while also planning for continued growth in the future. Cullman explained Idlewild was developed to be the most modern airport in the world with the latest navigational aids. Looking to the future, Cullman boasted the airport's wide concrete runways and ample lighting were proof the New York International Airport would be world class for years. He was so sure of Idlewild's success, Cullman claimed airline executives were moving their operations from nearby LaGuardia Airport to Idlewild despite the latter still primarily operating with temporary buildings. Cullman overstated this last claim as one of the reasons the air show was necessary was many airline executives did not want to move from the overcrowded LaGuardia with fully developed services to the isolated and incomplete New York International Airport.<sup>197</sup>

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<sup>196</sup> "N. Y. School Children Invited to Air Show at Golden Jubilee," *Chicago Daily Tribune*, 1948,16.  
"Congress Invited to City's Air Show," *New York Times*,1948,33.

Grover Whalen continued praising New York City's aviation prowess by stating the city led the nation for both imports and exports traveling by air. Among the good works of that air cargo, he claimed, was international humanitarian relief and medical supplies. Whalen estimated by 1959, the city's cargo facilities would move three million pounds of freight per day and it would be the heart of international air cargo. This would be impressive growth considering in 1932, all the air cargo hauled in the United States was a mere 143,000 pounds.<sup>198</sup>

The World of Flight was not only the title of the souvenir book, but it was also the name for the ground exhibits area at Idlewild. Spectators found 1.2 million square feet inside *The World of Flight* to explore "the achievements of industry, technological research, transportation and communication." Exhibits were housed in custom built tents utilizing "aero-dynamic design principles" and colored blue, white and orange so that when erected, they would form a 244 foot city flag.<sup>199</sup> Exhibitors ranged from parts makers like General Electric and Sperry Gyroscope to aircraft manufacturers like Grumman, as well as American Airlines, the Port of New York Authority, and Frank B. Hall & Co., an insurance company. With exhibits covering the latest developments in jet engines, radar, electronics and more, air show Director Tom Compere hoped to provide "the average citizen a clear understanding of the forces which underlie the nation's air supremacy and the imperative need for maintaining it."<sup>200</sup>

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<sup>197</sup> Howard S. Cullman, "New York International Airport: A City within a City," in *The World of Flight* (New York: 1948), Mayor William O'Dwyer, Subject Files 1946-50. New York: New York City Municipal Archives, 1948. Roll #28. George Sullivan, *International Airport: The Story of Kennedy Airport and U.S. Commercial Aviation* (Boston: Brown, Little & Co., 1968), 87-90.

<sup>198</sup> Grover A. Whalen, "New York's Airpaths to Prosperity," in *The World of Flight* (New York: 1948), Mayor William O'Dwyer, Subject Files 1946-50. New York: New York City Municipal Archives, 1948. Roll #28, 13.

<sup>199</sup> Grover A. Whalen, "Progress Report to Mayor William O'Dwyer, 1948," 8-21, New York.

<sup>200</sup> Compere, "Report: The City of New York Golden Anniversary International Air Exposition, New York International Airport (Idlewild), July 31 through August 8, 1948," 8-21.

Over a dozen manufacturers and industry associations installed exhibits at Idlewild. Most were aviation-related businesses like Louisiana's Cherry Rivet Corporation, a maker of blind rivets used in assembling aircraft, and United Aircraft Corporation's display of Pratt & Whitney engines and Hamilton-Standard propellers. More surprising was the exhibit mounted by the Portland Cement Association officials including photo murals of the airport's construction. The Walter Motor Truck officials displayed the world's second largest snowplow, while Gulf Oil showed magnometers used to detect oil and mineral deposits from the air. In addition to products, a few of the exhibits were by aircraft service companies and industry associations, like the National Air Council tent that served as an aviation news center.<sup>201</sup>

To increase the City's exposure at the air show, Port of New York Authority staff erected an animated exhibit to explain the agency's operations to the general public. The exhibit's focal point was a large model of the Earth with the city's skyline silhouetted behind it. Ringing the model Earth were small models of the different transportation systems Port Authority workers supervised, including airplanes, ships, trains, and trucks. Above each transport method, a sign displayed the daily passengers and cargo loads transported by the industry. In a clean and comprehensible exhibit, Port Authority officials were able to teach visitors how much of their daily lives relied on the oversight efforts of Port Authority employees.<sup>202</sup>

Military officials also flaunted their hardware in *The World of Flight*. The Air Force's ground exhibit was so large it arrived at Idlewild from Dayton, Ohio on 24 Army trucks. Among the Air Force's offerings, the public found a 200 foot long Air Materiel Command (AMC) display describing how staff members developed new aircraft from blueprints through wind

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<sup>201</sup> Ibid., 4.

<sup>202</sup> "Air Show's Planes Fly Off, Tents Fold," *New York Times*, 1948, 29; [*Port of New York Authority at Idlewild Air Show*], "1948," William O'Dwyer, 1948: Golden Anniversary [Photos], International Air Show, New York.

tunnel models to production.” The public was also able to see a cutaway exhibit of a B-29 fuselage, a captured German jet engine, and large model aircraft with ten-foot wingspans. Over these newly known wonders, officials hung a sign proclaiming the AMC was “Where Aeronautical *theory* is transformed into aeronautical *actuality*” (their italics). Proving their productivity in a time of budgetary limits between World War II and Korea, AMC leaders possibly felt a need to show their value in American tax dollars.<sup>203</sup>

*New York Times* reporter Austin Stevens described the ground display area as a “boardwalk made of concrete,” suggesting an Atlantic City, Coney Island, or World’s Fair midway rather than the serious educational environment promised by organizers. He supported this opinion by arguing the aviation displays competed with kewpie dolls and watermelon slices for the visitor’s attention. Despite the carnival-like atmosphere, Stevens found the public engaged with both the exhibits and military personnel. Walter S. Sullivan, who flew over the air show in a USAF photo plane filled with journalists, also described the public area as a “Coney Island Beach on a holiday” while the actual beaches looked deserted. While Sullivan did not criticize the spectator’s character, the allusions were probably inescapable.<sup>204</sup>

One positive interaction regularly occurred with the Air Force’s largest aircraft, the Convair B-36 Peacemaker, an eight engine, propeller driven bomber. Captain John D. Bartlett and his 14 crewmen “astounded” spectators who primarily understood long-range bombers as the venerable B-29s used to drop the atomic bombs on Japan just three years earlier. Many in the crowd were particularly confused by the massive plane’s pusher configuration, where the

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<sup>203</sup> "Air Force Exhibit Reaches Idlewild," *New York Times*, 32; "Great Air Armada to Soar over City," *New York Times*, 21. [*School Children Visit Air Exhibit at Idlewild*], Photograph, 1948, In William O'Dwyer, 1948: Golden Anniversary [Photos], International Air Show. New York: New York Municipal Archives, 1948. 29786, II, Box #3 .

<sup>204</sup> Meyer Berger, "New 'World of Tomorrow' Planned for City's Jubilee," *New York Times*, 1; Walter S. Sullivan, "Airborne Cameras Record Gala Show," *New York Times*, 1948, 29.

propellers are mounted facing the tail. Bartlett and his crew found many gawkers were too young or simply could not recall the early aircraft of the Wrights and their contemporaries where the pusher designs were the norm.<sup>205</sup>

The air show also illustrated, there was confusion among the public with the new jet technology in the early postwar period. Air Force Lt. John Miller observed spectators at the airport generally believed any aircraft without a propeller was a jet plane, although some of the aircraft lacking propellers at the air show were gliders. However, the public confusion extended beyond identifying jet aircraft because Miller also noticed people touring the Boeing B-50 Superfortress bomber mistook oxygen tanks mounted in the aircraft for live bombs.<sup>206</sup>

While it is impossible to determine how many people watched specific flying events, various exhibitors did monitor their foot traffic. Air show officials estimated 500,000 air show spectators visited the ground exhibits during their time at Idlewild. Air Force officials recorded 21,000 visitors in their five exhibit tents on Opening Day alone while 56,018 people visited the Port Authority exhibits throughout the entire eight days.<sup>207</sup>

New York City officials hoped opening day of the air show would be a public relations coup with the attendance of the two presidential candidates, incumbent Harry Truman and New York Governor Thomas Dewey. For this "Presidential Day," Air Force officials promised the "largest concentration of bombers, the greatest number of jet fighters and the greatest number of other first line and support aircraft ever to be assembled in peacetime." One officer even

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<sup>205</sup> Austin Stevens, "Aircraft Exhibit Awes Spectators," *New York Times*, 1 August 1948, 1; "World's Largest Bomber Evokes Awe of Throngs," *New York Times*, 1 August 1948, 28.

<sup>206</sup> "No One Is Idle at Idlewild," *New York Sun*, 31 July 1948, 1.

<sup>207</sup> [The Backbone of Our Air Fleet], Photograph, 1948, New York, In William O'Dwyer, 1948: Golden Anniversary [Photos], International Air Show. New York: New York Municipal Archives, 1948. 29786, II, Box #3. ; Compere, "Report: The City of New York Golden Anniversary International Air Exposition, New York International Airport (Idlewild), July 31 through August 8, 1948," 1-19.

promised “every flyable Air Force plane” in America would fly over Idlewild on Saturday, July 31. Mission planners initially wanted a thousand planes over Idlewild but scaled back plans when they needed to redirect cargo aircraft to the Berlin Airlift. American aircraft were the primary source of supplies for West Berlin, which the Soviet cordoned off on June 18, 1948.<sup>208</sup>

The day also marked the first presidential review of the Air Force since it became an independent military branch in 1947. Air Force officials ran the complicated parade like a World War II bombing mission with pilots rendezvousing over Philadelphia before vectoring toward the target airport. A *New York Times* reporter compared Truman and Dewey on the reviewing stand to an arsenal in Osaka, Japan, a ball bearing plant in Schweinfurt, Germany, or a bridge in Italy.<sup>209</sup>

Among the hundreds of thousands attending the opening ceremony were over a hundred members of Congress, the Secretaries of Defense, Air Force, Navy, and Treasury, the Air Force Chief of Staff, the Chief of Naval Operations, and the leaders of many civilian aviation organizations and businesses. Forty of the Congressmen arrived at the show on board the Navy’s Lockheed A6V *Constitution* airliner. Compere explained the members of Congress needed to attend the air show because as the people “entrusted with vital decisions” concerning the nation’s air power [they] must see the nation’s newest front line aircraft.<sup>210</sup>

The opening ceremonies began with New York City Mayor William O’Dwyer mediating a handshake between President Harry Truman and New York Governor Thomas E. Dewey, the

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<sup>208</sup> "1,000 Planes to Fly at Idlewild Show," *New York Times*, 1948,22; "200 B-29s to Roar Low in Review Opening City's Jubilee Air Show," *New York Times*, 1948,41; "Great Air Armada to Soar over City."

<sup>209</sup> "Great Air Armada to Soar over City." "1,000 Planes to Fly at Idlewild Show."; "Truman to Review Separate Air Force First Time July 31," *Washington Post*, 1948,12.

<sup>210</sup> Meyer Berger, "Late Jobs Rushed for the Dedication of Idlewild Today," *New York Times*, 1948,1; Compere, "Report: The City of New York Golden Anniversary International Air Exposition, New York International Airport (Idlewild), July 31 through August 8, 1948," 1; "Congress Invited to City's Air Show."; "Great Air Armada to Soar over City."

Democratic Presidential Candidate. O'Dwyer spoke how a half century ago, when the city was consolidating, America was transitioning from the pedal power of bicycles and getting into autos for the first time. Now, he was proud to bring the "greatest air show on earth and the greatest airfield in the world" to the spectators and media cameras.

Dewey followed O'Dwyer and spoke of New York State's status as a world trade leader with almost 800 miles of waterfront to serve shipping. He considered New York International Airport long overdue because existing airfields were long since "saturated" and pilots circled airports for an hour waiting to land. Such waits, Dewey believed, prevented "the free flow of ideas, of people, and of goods..." For Dewey, the airport was the beginning of trouble free travel for the foreseeable future and New York City was both the origin and destination of many goods and valuables.<sup>211</sup>

Truman followed the Mayor and Governor and he began by focusing on the new U.S. Air Force. He told listeners the air show was "convincing evidence of our determination to remain strong in the cause of peace." Truman then focused on Idlewild's role in international politics and alluded to the UN as the airport served as the "front door" to America, especially for those in "search of peaceful solution." The problem UN personnel confronted, Truman argued, was many people already forgot how hard the work of peace was, despite the still fresh pain of World War II. The airport would extend the idea of neighborhoods much farther than ever before, Truman asserted, because pilots could now fly local papers all over the world. He suggested a world able to travel and meet its fellow citizens would be a much more peaceful world. Truman even spoke of the value of cargo aircraft operating from New York International Airport as eliminating the bloody conflicts emanating from "mass poverty." Here, he was probably making a reference to the ongoing Berlin Airlift, as Allied pilots flew the necessities

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<sup>211</sup> "Texts of Truman, Dewey, O'Dwyer Speeches," *New York Times*, 1948,28.



into West Berlin, keeping the city's residents alive despite road blocks erected by Soviet soldiers.<sup>212</sup>

As Truman concluded his speech by saying "[p]apers printed in the morning in New York will be on the streets of European cities that night," three Lockheed F-80 Shooting Star jet fighters roared over him, drowning out his remaining words. This high decibel punctuation of Truman's thoughts on the power and speed of modern airpower was the result of a timing miscalculation by Air Force personnel. Many interpreted this as a display of the very ideas Truman tried to articulate while others construed it as an Air Force faux pas showing the President in poor light as he fought for re-election against long odds.<sup>213</sup>

For the next thirty minutes, the sky over New York International Airport filled with hundreds of Air Force planes, including dozens of World War II fighters, three massive, state-of-the-art Convair B-36 Peacemakers, and a smattering of new jet fighters few Americans had ever seen. Imperfect weather over the rendezvous point broke up the intended continuous stream of Air Force planes, which "tended to cool off the enthusiasm of the crowd" to the display. *Times* reporter Walter Sullivan noted the Air Force pilots saw little of their target airport, as they were over Idlewild for only a few seconds before returning to their home bases many hours away.<sup>214</sup>

At the end of the aerial parade, eight pilots from the Long Island-based 56<sup>th</sup> Fighter Group flying Lockheed F-80 Shooting Star jet fighters broke from their formation and demonstrated the ground attack tactics of the new Air Force. The men dove on a small target positioned just a few hundred feet from the President's reviewing stand from disparate

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<sup>212</sup> Meyer Berger, "Truman Dedicates Idlewild Airport; Hails It as 'Front Door' for the U.N.; 900 Planes Stage Parade of Air Might," *New York Times*, 1948, 1; "Texts of Truman, Dewey, O'Dwyer Speeches."

<sup>213</sup> "Truman, Dewey Stress U.S. Strength for Peace," *Los Angeles Times*, 1948, 1. Marshall Andrews, "215,000 Attend Dedication of Idlewild," *Washington Post*, 1948, M1.

<sup>214</sup> John Stuart, "Navy Steals Show," *New York Times*, 1948, 1; Sullivan, "Airborne Cameras Record Gala Show."

directions. At an altitude of 500 feet, each pilot dropped a smoke bomb on the target, vividly illustrating to the public the melding of technology and technique of the Air Force. USAF officials considered the air show as their debut as an independent military branch, in addition to proof of their revitalization after demobilization after World War II in 1945 left the service “impotent.”<sup>215</sup>

After the USAF performance, spectators were directed to pay attention to a faux city block not far from the Presidential box. A formation of Grumman F8F Bearcats, the Navy’s current propeller driven fighters swooped down on the “city.” The pilots unleashed their machine guns and decimated the city with their withering fire. When the smoke cleared, Truman and the tens of thousands present saw four giant, ten-foot letters spelling “NAVY” aglow with red fireworks standing where the city lay in ruin. The message was clear, the power and skill of naval aviators were the scourge of whatever city they targeted. In a less stable nation, such a performance would surely be a threat to the rulers. Here, it was proof that a solid investment of American tax dollars in technology and personnel protected the nation from potential enemies.

For the next half hour, 200 naval fighters, torpedo bombers and dive-bombers from the *USS Philippine Sea* performed more simulated attacks on New York International Airport, but they flew “lower and in closer formation than their Air Force predecessors.” The demonstrations finished with one last “sudden explosion” as the crew of a Lockheed P-2V Neptune patrol bomber, a massive four-engine aircraft, executed a Rocket Assisted Take-Off (RATO). As the plane plodded down the runway, the pilot ignited rockets attached to the fuselage to seemingly blast the plane off the earth at a 45-degree angle<sup>216</sup>

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<sup>215</sup> "1,000 Planes to Fly at Idlewild Show." Stuart, "Navy Steals Show."

<sup>216</sup> Andrews, "215,000 Attend Dedication of Idlewild."; Stuart, "Navy Steals Show."

Naval officials further contrasted the Air Force display with exhibitions of the “swift, deck-scraping agility of its fighters...” and promised “acrobatic fighting” demonstrations of how naval aviators “knocked the initially superior, land-based Japanese Zeroes out of the Pacific skies.” Not content to live in the past, naval aviators also demonstrated the Navy’s newest aircraft, the Douglas AD-1 Skyraider attack plane. Finally, naval officials built a full-scale reproduction of an aircraft carrier deck at the airport, complete with catapults and arresting gears. President Truman received the honor of triggering the first plane launched at Idlewild so naval aviators could demonstrate to Truman and the public how carriers provided a mobile airfield able to defend ships and attack the enemy far deeper than any land-based airfield.<sup>217</sup>

In a preliminary report, organizers noted the air show needed to demonstrate to the public the city’s role in the development and maintenance of air power and air commerce. Despite suffering awful weather for six of the nine scheduled days, 754,000 people still visited Idlewild during the International Air Exposition. Organizers estimated attendance as double any other aviation exposition in the world to date. With good weather, they estimated over two million would have traveled to Idlewild. For those not present, 1150 radio stations, including all 17 local stations broadcast the air show’s opening ceremonies, while an estimated 100 million people saw newsreel coverage of the air show in their local cinemas.<sup>218</sup>

A *New York Times* editorialist commended the organizers for creating an air show that increased public awareness of the new airport and provided an opportunity to see fantastic aerobatics. The writer also expressed his or her disappointment the public did not see the airport’s daily purpose prominently displayed. The airport was meant as the “anti-thesis of

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<sup>217</sup> "200 B-29s to Roar Low in Review Opening City's Jubilee Air Show."; Stuart, "Navy Steals Show."

<sup>218</sup> *Mayor's Committee for the Commemoration of the Golden Jubilee of the City of New York, Preliminary Report* (New York: New York City Hall Library, 1949), 3-5, 12.

spectacular or exhibition military flight” but little attention was focused on the host airport or the growing commercial traffic slated to utilize the modern safety devices of a “true all-weather” airport. The editorialist suggested New Yorkers should not only be proud that Idlewild was the world’s largest airport, but also the safest.<sup>219</sup>

Other criticism was not directed at the air show, but at the new airport. In a letter to the editor printed on Opening Day, city resident Sidney P. Voice decried the new airport would lead to increased congestion problems, not alleviate them. He did not question the airport’s impact on aviation, but its effect on ground transportation and real estate. Voice saw the airport primarily producing increased traffic in South Queens and Long Island that not even the new Van Wyck Expressway could stave off. The only potential solution, as Voice saw it, was to build an elevated roadway on top of the Long Island Railroad tracks and terminated at the airport. He also forecast increased real estate development around the once bucolic golf course cum airport would ruin the area.<sup>220</sup>

Organizers had a far different perspective than Voice and other critics. In their final report by the Mayor’s Committee about the air show, they reaffirmed the New York International Air Exposition was intended to illustrate the important role the city played in the development of aviation. Without the air show, organizers worried the public would not understand or support New York City and aviation. Among their reasons, the public needed to understand the City’s role in aviation, particularly because over 500 daily flights occurred in New York and the authors expected the number to only increase over time.

On July 31, 1949, the first anniversary of Idlewild’s dedication, *Washington Post* reporter David A. Stein found the airport was failing to alleviate the congestion it was built to solve and it

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<sup>219</sup> "Accent on Safety," *New York Times*, 1948,20.

<sup>220</sup> Sidney P. Voice, "Elevated Roadways Proposed," *New York Times*, 31 July 1948,14.

was still not profitable. The airport was so sparsely used, he learned, the total number of flights at Idlewild for the year was fewer than the total flights in May 1949 at nearby LaGuardia Airport. Despite such lousy statistics, airport officials told Stein the long-term future of Idlewild was bright because further construction and development was necessary for success at the airport.<sup>221</sup>

### 1951 Flagler Fall Festival

Most air shows are not blockbuster events in major cities intended to garner worldwide media attention like New York City. Many are small community air shows organized by local civic leaders so residents and neighbors can enjoy living in the community. These air show are akin to community parades, street festivals, and other civic performances. After the fall harvests, numerous small towns in Colorado hosted air shows for local residents and tourists after World War II.

In 1951, Flagler, Colorado was a small dry-farming community of 793 residents some one hundred miles east of Denver. For the previous decade, Flagler residents profited by growing and trading wheat and, in 1951, they reaped another successful fall harvest worthy of celebration. On Saturday, September 15, the Flagler Lions Club and local businessmen organized a full day of classic American leisure activities starting with a morning parade down Main Street and a lunchtime barbeque. The afternoon's activity began with a 2PM air show and was slated to be followed by a baseball game and a gala dance in the evening. Such a schedule could be replicated in thousands of other towns on Memorial Day or the Fourth of July but, to Flagler residents, harvest time was also something worth commemorating.<sup>222</sup>

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<sup>221</sup> David A. Stein, "The Jinx at Idlewild Is an Endurance Flier," *Washington Post*, 31 July 1949,B3.

Less than two weeks before the Flagler show, Salida, Colorado residents held their Fourth Annual Salida Flying Jamboree complete with a trout breakfast. Members of the Salida Civic and Flying Club sponsored the event alongside the Colorado Civil Air Patrol. They contracted William Madsen, who operated Rocky Mountain Airshows, to organize the air show for the mountain town, located 145 miles southwest of Denver. Over the years, crowds thronged the local airport to see parachute jumpers, wing walkers, and even formation flights of Air National Guard fighter planes. While total attendance was tiny compared to the hundreds of thousands of spectators at Idlewild or Dulles, these small air shows could have attendance numbers larger than the town's total population.

Although less than 800 people called Flagler home, an estimated crowd of 1000 turned out for the Flagler Fall Festival air show at the local grass airfield. The official program started when F. W. Ruble disengaged his sailplane, an engineless aircraft relying entirely on air thermals for aerodynamic power, from a tow plane at 2000 feet. For the next few minutes, Ruble demonstrated the silent ballet of flying a sailplane, concluding by diving towards the runway and performing a "split-S"<sup>223</sup> at a mere 50 feet off the ground. After Ruble landed, the glider was towed to one of the hangars, trailing a throng of men and boys eager to inspect the unpowered aircraft and speak to the pilot.<sup>224</sup>

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<sup>222</sup> Robert Stapp, "Riches Now Nothing to People," *Denver Post*, 16 September 1951,3A; "Stunt Plane Plunges into Crowd, 19 Die," *Los Angeles Times*, 16 September 1951,1. "Crash Brings Horror to Peaceful Flagler," *Denver Post*, 16 September 1951,2AA.; "20 Killed, 17 Hurt as Plane Rams into Colorado Crowd," *New York Times*, 16 September 1951,1; Robert Stapp, "Show Backers Not Certain of Liability," *Denver Post*, 17 September 1951,2. Roy Rosenzweig, *Eight Hours for What We Will: Workers and Leisure in an Industrial City, 1870-1920* (New York: Cambridge University Press, 1985). 65-92. Aron, *Working at Play: A History of Vacations in the United States*, 85-92.

<sup>223</sup> A "split-s" involves the pilot flying level and then rolling the plane inverted. He then flies a half loop, which results in the plane flying upright and level but heading in the opposite direction from where the pilot started. Guenther Eichhorn, "Aerobatic Figures", International Aerobatic Club [www.iac.org/begin/figures.html](http://www.iac.org/begin/figures.html) (accessed 4 December 2012).

With Ruble on the ground, Air Force Lieutenant Norman Jones was scheduled to begin his aerobatic performance in a Timm N2T-1 Tutor, a small, twin open cockpit monoplane the Navy used during World War II to train novice pilots. However, Jones was delayed in Denver when the Timm suffered an oil leak he needed to repair. Since the 29 year-old pilot had not yet arrived in Flagler, the next scheduled performer, Flagler airport manager Nelson Stake, prepared to fill the gap. He planned a dynamic dive-bombing demonstration for his neighbors, complete with a shack filled with dynamite to punctuate his flying. As Stake prepared his plane, the silver and blue Timm that Jones borrowed from air show organizer, William Madsen, finally appeared from the south.<sup>225</sup>

Not only did the oil leak delay Jones' arrival over Flagler, but he missed a mandatory safety briefing. Instead of landing for a required safety briefing, he simply began his aerobatic performance. Jones flew the silver and blue Timm approximately 500 feet off the ground along the grass runway. He then descended to a mere 150 feet from the ground and flew within 100 feet of the crowd, despite a federal requirement he stay at least 500 feet off the ground and the same distance from the crowd at all times. Jones began a slow barrel roll but, while he was inverted, he descended more and the plane turned towards the crowd. What was supposed to be an afternoon of fun then turned to horror as the Timm's right wing struck the ground, the force of which catapulted Jones and the airplane through three rows of parked cars and spectators. After 125 feet of carnage, all that remained intact of the 25 foot long Timm was four feet of the

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<sup>224</sup>William J. Barker, "20 Killed by Plane," *Denver Post*, 16 September 1951, 1A, 3A. Oswald Ryan Donald W. Nyrop, & Joseph P. Adams, *Civil Aeronautics Board Accident Investigation Report* (Washington, DC: Civil Aeronautics Board, 1952), 4-1497; "Spectator Tells Story of Tragedy," *Denver Post*, 16 September 1951, 2AA; Robert Stapp, Thor Severson, & William Barker, "17 Injured as Craft Hits Flagler Throng," *Denver Post*, 16 September 1951, 1A, 3A. 5 "Aftermath of Fatal Air Show Plane Crash in Colorado," *New York Times*, 17 September 1951, 3.

<sup>225</sup> Stapp, "17 Injured as Craft Hits Flagler Throng." Clark Seacrest, "Bringing in the Sheaves: The Flagler Harvest Festival, 1951," *Colorado Heritage: The Journal of the Colorado Historical Society* (1996). Stapp, "17 Injured as Craft Hits Flagler Throng."

fuselage. Much worse than the destruction of the plane were the deaths of Jones and nineteen spectators, plus ten injured.<sup>226</sup>

*Denver Post* reporter William J. Barker attended the air show and described as Jones “zoomed over my head” while inverted. Barker saw Jones try to roll the plane upright but he could not get the Timm to climb away from the ground. Instead, plane and pilot “went straight for the mass of shocked human beings standing or sprawling on the field...” Father Edward Dinan, only a hundred yards from the crashing plane, watched in horror as the propeller-driven aircraft “hit the crowd like an egg beater.” As the plane “seemingly disintegrated,” Dinan and Barker saw bodies and body parts “hurled into the air” and survivors covered in the blood of dead relatives and neighbors. No one was seemingly spared as children as young as six were killed alongside their parents.<sup>227</sup>

After the crash, air show announcer Curtis Clarke urged the shocked crowd to deal with the carnage by first guiding the uninjured women and children out of the accident area and then returning to help the remaining casualties. Madsen also took to the microphone to warn everyone to not start any automobile or engine on the field. The catastrophe could have become exponentially worse if an errant spark ignited any of the fuel or oil from the crashed plane or wrecked cars. Making matters worse, the plane’s 300HP radial engine tore off the Timm in the crash and smashed into Flagler’s lone ambulance, rendering it useless to help the wounded. Upon hearing of the tragedy, Air Force officials dispatched four aircraft with medical teams from Lowry Air Force Base in Denver to help the wounded. For some it was already too late. Thirteen

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<sup>226</sup> Donald W. Nyrop, *Civil Aeronautics Board Accident Investigation Report*, 1-11.

<sup>227</sup> Barker, "20 Killed by Plane."; Father Edward Dinan, "Priest Describes Crash," *Rocky Mountain News*, 16 September 1951,8; Stapp, "17 Injured as Craft Hits Flagler Throng."; "Stunt Plane Plunges into Crowd, 19 Die," *Los Angeles Times*, 16 September 1951,1, 20; Leo Zuckerman, "19 Die as Plane Hits Crowd," *Rocky Mountain News*, 16 September 1951,5, 8, 34.



spectators and Jones died at the airfield while five more died at nearby hospitals by the end of the day.<sup>228</sup>

As the hospitals and morgue filled with the human damage from Flagler, the crash site was littered with programs, clothing, broken cars, and “blood on the prairie grass.” Hours after the crash, the area remained unsecured and souvenir hunters descended on the fields and took bits of the plane and wreckage away.

The Flagler community almost immediately pinned responsibility for the crash solely on Lt. Norman Jones. Clyde Coulter, editor of the *Flagler News*, blamed the catastrophe on the “foolish whim of a pilot.” Loyal Kyle told the *Rocky Mountain News*, he was sure Jones had to be “crazy or drunk” to fly into the crowd. Kyle whose niece was among the injured, also said he believed every “stunt pilot is crazy” or else he would stay on the ground.<sup>229</sup>

While Jones was implicated for destroying the Flagler Fall Festival, questions mounted about whom else could be liable for the dead and maimed. Since the Lion’s Club and all of Flagler’s businessmen contributed funds to the Festival, some wondered if they were legally responsible for what transpired. One Club official, P. Guard, publicly stated that since all the festival events were free, no contributor was liable because there were no commercial benefits. As a result, he believed when the spectators decided to attend the air show, they assumed responsibility for their own safety. Complicating the issue was no official contract was signed between community leaders and Madsen that could have stipulated his responsibilities and liabilities at the air show.<sup>230</sup>

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<sup>228</sup> "20 Killed, 17 Hurt as Plane Rams into Colorado Crowd," *New York Times*, 16 September 1951,1, 42; Stapp, "17 Injured as Craft Hits Flagler Throng."; Zuckerman, "19 Die as Plane Hits Crowd."

<sup>229</sup> "Flagler Citizens Blame Pilot for Tragedy," *Rocky Mountain News*, 17 September 1951,1; Bernard Kelly, "Souvenir Hunters Swarm over Flagler Death Site," *Denver Post*, 16 September 1951,2AA; Robert Stapp, "Drive to Ban All Air Show Starts," *Denver Post*, 17 September 1951,1.

Beyond considering Flagler an isolated incident, Del Fuhrman, the Executive Secretary for the National Flying Farmers Association (NFFA) announced he would campaign to prohibit “all hazardous flying exhibitions.” Fuhrman and the Oklahoma-based NFFA promoted light utility planes for farm work and connecting isolated farmers to communities. Air shows, he maintained, destroyed all of aviation’s value his organization worked to create. Going beyond a ban on dangerous flying, Fuhrman also wanted limits on the use of surplus military aircraft like the Timm because people only used them to “chill, thrill, and kill people.” He was not only referring to Jones and Madsen but also previous accidents like Bill Odom’s fatal crash during the 1949 National Air Races in Cleveland. He lost control of his modified North American P-51 Mustang fighter and smashed into a suburban home, killing himself as well as Jeanne Laird and her infant son, Gregg, inside.

Only two weeks before the Flagler crash, the *Denver Post* reported a crash at the Minnesota State Fair Grounds where Carl E. Ferris and his 17-year-old wing walker, Kitty Middleton died in a crash in front of 28,000 spectators. Ferris turned off his biplane’s engine for a final dive with Middleton on the upper wing before circling around to salute the crowd. Unfortunately, he never got the plane out of the dive and the duo crashed and burned in full view of the grandstands. For Fuhrman, the problem with these crashes was the public rarely realized the aircraft involved in these incidents were not standard civilian-use aircraft like those the Flying Farmers officials advocated for wide usage. To the public, all aircraft were the same so if trained pilots like Jones, Odom, and Ferris could not fly safely, perhaps no one should fly.

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<sup>230</sup> Stapp, "Drive to Ban All Air Show Starts." Stapp, "Show Backers Not Certain of Liability."

Fuhrman concluded that if the only way aviation could survive was through dangerous flying, “then aviation had better go under.”<sup>231</sup>

Contrasting Fuhrman’s vitriol, *Denver Post* editors put the air show death toll in context by noting almost 400 state residents met “violent deaths” so far in 1951. While agony was fresh for the twenty dead in Flagler, the editors pointed out 229 of those 400 deaths occurred in car crashes while only 61 deaths were attributed to plane crashes in the state. Of those 61, 50 resulted from the crash of a United Airlines flight near Fort Collins on June 30<sup>th</sup> when the plane descended through overcast skies and struck a mountain. While plane crashes garnered more headlines, the Colorado roads were far more deadly in 1951.<sup>232</sup>

As mass funerals were announced for the dead and high school students were excused from class to dig graves, Civil Aviation Authority officials began investigating Jones’ fatal flight at Flagler. The CAA’s regional chief, R. P. Pashall, called Flagler the worst small aircraft tragedy in the nation’s history and indicated there were “obvious violations” of aviation rules forbidding aerobatic stunts near the ground and near spectators. Pashall explained maneuvers below an altitude of 1500 feet required an approved waiver, which Madsen did not acquire, and even then the pilot could not fly below 500 feet. Jones, eyewitnesses claimed, was no more 200 feet above the ground while inverted. Denver’s District Aviation Safety Agent Al Goddard emulated Pashall’s statements when he told *The New York Times* that Jones violated rules concerning the safe distance between crowds and aircraft. For federal aviation officials to make such definitive statements before the official investigation was concluded was extraordinarily

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<sup>231</sup> Stapp, "Drive to Ban All Air Show Starts." "Flying Farmers View Planes with Eye to Urban Utility," *Aviation Week*, 25 August 1947, 38. "Flying Farmers Official Demands Air Show Ban," *Denver Post*, 17 September 1951, 2; "Pilot & Girl Stunter Die in Crash," *Denver Post*, 4 September 1951, 6; Dominick A. Pisano, "Collision Course," *Air & Space*, April/May 1997, 28-35.

<sup>232</sup> "'51 Bloodiest Year in State Death Tolls," *Denver Post*, 16 September 1951, 3A; Donald W. Nyrop, Oswald Ryan, & Joseph P. Adams, *United Airlines Inc. , Fort Collins, Colorado, June 30, 1951* (Washington, DC: Civil Aeronautics Authority, 1951).

unusual. Investigators of civil aviation incidents, news reporters noted, were “notoriously close-mouthed” until all possibilities are explored.<sup>233</sup>

CAA officials scheduled a public hearing on the Flagler Fall Festival tragedy on October 4<sup>th</sup>. They also concurrently implemented a more stringent policy for air show waivers starting September 21<sup>st</sup>. Officials said waivers for operating aircraft below altitude minimums would only be granted when air show organizers and performers proved to federal aviation staff that the flight would “contribute directly to the advancement of, and public confidence in, aviation.” In the same announcement, officials banned mock combat, intentional crashes, and “crazy” flying.<sup>234</sup>

Their decision fell short of what many air show critics wanted, but CAA officials defended their decision by stating they planned a wholesale evaluation of air shows in the United States. CAA Administrator Charles F. Horne also reminded the public that air shows were not inherently dangerous and even claimed it had been twenty years since a performer crashed into spectators. Apparently, he did not consider the deaths at the 1949 National Air Races relevant since the Lairds were not watching the flying. Horne maintained the changes in CAA policy acknowledged that actively ignoring civil air regulations “solely for the sake of thrills” must be reconsidered. However, he also remained focused on the specific events at Flagler by announcing he was studying evidence that Lt. Jones performed stunts not included on his official list of maneuvers. Such data could support his idea that air shows were safe when properly organized and implemented.<sup>235</sup>

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<sup>233</sup> "Aftermath of Fatal Air Show Plane Crash in Colorado."; "Flagler Disaster Worst of Its Kind," *Denver Post*, 17 September 1951,36; Stapp, "Drive to Ban All Air Show Starts."

<sup>234</sup> Donald W. Nyrop, *Civil Aeronautics Board Accident Investigation Report*, 9-11.

<sup>235</sup> "CAA Bans Low Flying at Shows," *Denver Post*, 24 September 1951,3; "Stunt Flying Rules Tightened," *Denver Post*, 22 September 1951,16.

Although the Timm was designed for novice pilots, Jones was no novice. He served in the Air Force as a bomber pilot and previously served as a pilot in the Army Air Force in the Pacific during World War II. Barely a month before the Flagler air show, the California-native transferred to Lowry Air Force Base for a aerial photography school run by Madsen. While Jones may have been trying to help Madsen put on the air show, he did not have the required permission from his commanding officer to fly the now privately owned plane, even on his day off. Further complicating the issue, Jones was trained as a bomber pilot and the first time he flew the comparatively tiny Timm was just the day before the air show.<sup>236</sup>

Concurrent to the federal investigations, more Coloradoans voiced their criticisms of air shows. Beverly Finch wrote to the *Rocky Mountain News* wondering why anyone would risk an air show performance when there were plenty of airplane accidents during routine flying. She wished common sense would prevail and end “killing or mutilating... men, women, and innocent children seeking a thrill.” On the other hand, Howard L. Jacobson criticized *Denver Post* editors’ proposed air show ban for safety reasons as “locking the barn after the horse is stolen.” Jacobson, like Horne, saw value in all flying and suggested a more appropriate solution was to create an independent air safety board to investigate accidents, recommend rule changes, and conduct tests.<sup>237</sup>

On March 3, 1952, CAA officials released the findings of the Flagler investigation panel and they focused blame on Lt. Norman Jones. They determined the primary cause of the tragedy was his lack of flying experience in the Timm and that no one saw him practice the fatal slow

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<sup>236</sup> Donald W. Nyrop, *Civil Aeronautics Board Accident Investigation Report*, 5-9; "Flagler Disaster Worst of Its Kind."; "Plane's Pilot Shifted Here Last August," *Denver Post*, 16 September 1951,2AA; Stapp, "17 Injured as Craft Hits Flagler Throng." "Pilot of Flagler Plane Had Long Army Career," *Rocky Mountain News*, 17 September 1951,5.

<sup>237</sup> Beverly E. Finch, "Unnecessary Chances," *Rocky Mountain News*, 23 September 1951,30; Howard L. Jacobson, "Could Independent Safety Unit Prevent Air Crashes?," *Denver Post*, 25 September 1951,18.

roll in the plane prior to the air show. Based on testimony from sailplane pilot F. W. Ruble, investigators also implicated air show organizer William Madsen because he strongly implied pilots arriving at Flagler late should ignore safety briefing regulations and simply begin their performance. The officials suggested had Jones landed and received the proper briefing, the crash may have been entirely averted. Considering Jones' inexperience, they reasoned, the crash may still have occurred but with less casualties. The panel members found no cause to blame the airport operator or any of the local businessmen who funded the air show. They concluded Administrator Charles Horne's new policy of only allowing air shows when they could "contribute directly to the advancement of, and public confidence in, aviation," was an appropriate response to the issues raised at Flagler.<sup>238</sup>

While the public may have been reassured by the new regulations, contemporary air show pilots considered the Flagler catastrophe the nadir of postwar air shows. Pilots like Duane Cole, who owned a flying circus traversing the nation, claimed many small air shows were cancelled or never organized in the 1950s as a result of the Flagler incident. While government officials certainly tightened regulations and improved enforcement of air show regulations, which prevented civilian casualties at aviation events until 2011, this did not effectively kill the air show in the early 1950s. Major air shows were still organized, like the National Aircraft Show in Dayton, Ohio that occurred in 1953-54 and Detroit hosted the National Aviation Exposition in 1950-52.

Most of the damage from the Flagler Fall Festival remained in Colorado. Before Norman Jones' fatal flight, small air shows could be found in numerous small communities surrounding Denver and Colorado Springs. At Salida, the closest spectators came to death and destruction was in 1951 when stuntman Bill Bridges was hanging from an airplane by a rope ladder

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<sup>238</sup> Donald W. Nyrop, *Civil Aeronautics Board Accident Investigation Report*, 5-11.

attempting to transfer to a speeding car. When the pilot and the driver were unable to match the two vehicles' speeds, Bridges grew tired from hanging onto the ladder. He then commanded the pilot to fly the plane as slowly as possible so he could drop to the earth with minimal risk. He suffered only bruises in his fall.

After Flagler, if community air shows, like Salida, were organized in Colorado in the 1950s, reporters from the *Denver Post* and the *Rocky Mountain News* provided no coverage of these events. Considering the extensive coverage of these small air shows prior to the Flagler Fall Festival, more likely is residents did not organize air shows out of fear of another tragedy. Air shows still existed in the state, but they were organized by military officials at air force bases like Denver's Lowry Air Force Base. However, these were demonstrations of American military air power, not the potential whimsy of a solitary pilot freewheeling through the air.<sup>239</sup>

#### 1956 Winnebago Land International Air Meet & Races

The Flagler Fall Festival and its aftermath were considered by some as a low point for the American air show. However, an air show in Oshkosh, Wisconsin in 1956 suggested the community air show was not dead. While a relatively sparsely populated area compared to New York or Washington, DC, Oshkosh is within a day's drive to major cities like Milwaukee and Chicago. Enhancing Oshkosh's potential for air shows was the Winnebago County Airport, a modern facility built on the shore of Lake Winnebago. As a result, the Airport could easily accommodate large crowds yet pilots also had natural safe zones where they could ditch an out of control aircraft away from spectators. Finally, the airport was operated by Steve Wittman, a

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<sup>239</sup> This was determined by surveying the *Denver Post* and the *Rocky Mountain News* for August, September, and October from 1950-55.

successful air racing pilot since the 1930s, a skilled airport manager, and a member of Experimental Aircraft Association (EAA), which was founded in a Milwaukee suburb in 1953.

It was Wittman who had the idea to organize the 1956 Winnebago Land International Air Meet and Races. Working with Leighton Hough, the president of the First National Bank of Oshkosh and the chairman of Oshkosh Industrial Development Committee, Wittman sought to have Oshkosh, a small city of 41,000, host an air show with the fourth annual Experimental Aircraft Association Fly-In and high-speed air racing. Together Wittman and Hough rallied aviation organizations like the EAA, the Professional Race Pilots Association, and the Antique Aircraft Association, as well as local groups like the municipal government and the Oshkosh Chamber of Commerce to create an air show virtually devoid of military displays yet supported by the local community and garnering national news coverage.<sup>240</sup>

Unlike most privately organized air shows, Wittman and his associates chose not to charge admission. Free admission was standard for military open houses and many other government-organized air shows in the US but most private air show organizers charged admission to offset the many costs including fuel, insurance, performer fees, and advertising. However, considering the variety of local groups and businesses that sponsored the air show, Oshkosh businessmen probably decided the potential to market the city as open to the aviation industry and other advanced industries via large crowds was worth foregoing the admission income. Among the sponsors were the Oshkosh Chamber of Commerce, the Deltax Rug

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<sup>240</sup> "Oshkosh Lure Group Lauded," *Milwaukee Sentinel*, 22 March 1960, 1. *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956*, (Milwaukee, WI: Ken Cook Co. Publishers, 1956), International Air Show and Races, Oshkosh Wisc. - Aug. 3-5, 1956, Box 16. National Aeronautic Association (NAA) Archives, 1918-1976; National Air and Space Museum, Smithsonian Institution. 1.



Company, Miles Kimball Company (an Oshkosh-based catalog company), the Hoffmaster Paper Company, National Manufacturers Bank, and Oshkosh Clearing House Association.<sup>241</sup>

Local boosters may have considered the air show a method to attract a major technical industry to the region and diversify the largely rural economy. Chamber officials wanted air show spectators to consider Oshkosh as a “place to visit, to live, to work, and to do business.” In the air show program, the Chamber of Commerce bragged about the region’s population, the number of churches, and the variety of good transportation methods. They also included information about the industrial base, recreational opportunities, and, of course, the fine airport. Another advertisement extended beyond Oshkosh to highlight the Winnebago region, which included four cities and three villages. The focus for marketing Winnebago was the agricultural bounty and the well-stocked recreational waters throughout the region. The authors considered it worthwhile for readers to know there were almost as many cows (40,000) in the region as there were residents in Oshkosh (43,138).<sup>242</sup>

Organizers also used the air show program to proclaim the current airport assets as well as future developments. Steve Wittman probably wanted these items publicized because he would reap the benefits from a successful air show, both as the airport manager and a race pilot for his airport. In the program, organizers boasted the Winnebago County Airport could use all four of its runways throughout the air show. The future of the airport included extending the east-west runway by 2500 feet and the construction of a new air-conditioned administration

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<sup>241</sup> *Race Sanction Application*, (Washington, DC: National Aeronautic Association, 1956), International Air Show and Races, Oshkosh Wisc. - Aug. 3-5, 1956, Box 16. National Aeronautic Association (NAA) Archives, 1918-1976; National Air and Space Museum, Smithsonian Institution. 1-5. *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956*.

<sup>242</sup> *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956*.

building. Such alterations would make Winnebago one of the finest airports in the region, though they never defined what other airports the region included.<sup>243</sup>

During the air show, visitors could participate in meetings for the Ultralight Association of Canada and view show aircraft registered with the Experimental Aircraft Association (EAA). By registering, plane owners and builders were eligible for prizes like workmanship, hours of operation, and design.

Show organizers, many of whom were also EAA members, saw the group as leading the “do-it-yourself” movement for aviation. Since they founded the EAA in 1953, members were a “potent force” for bringing aviation to the attention of average Americans. They considered proof of their cause in EAA’s growth from an initial 150 to over 2200 members nationwide in 1956. They saw further proof of EAA’s growth in the increasing size of the organization’s fly-in. At their first fly-in in 1953, members brought a dozen aircraft to Curtiss-Wright Airport in Milwaukee. By 1956, pilots registered four times that number with 49 planes on display. By registering, owners were eligible for prizes like the Wittman Trophy for the best workmanship on a Wittman Tailwind homebuilt or *Mechanic Illustrated’s* trophy for the best original design in a homebuilt aircraft. Other prizes went for pilot skills, the best homebuilt Stits biplane, oldest plane, and furthest travel distance to arrive in Oshkosh. Allen Rudolph of Woodland, WI won a prize for flying the oldest homebuilt to Oshkosh with his 1923 two-seater powered by a Ford Model A engine.<sup>244</sup>

EAA officials also introduced a new air show feature at Oshkosh that became one of the hallmarks of future EAA air shows: the forum. Forums were an opportunity for homebuilders

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<sup>243</sup> Ibid.

<sup>244</sup> Cole, *This Is EAA*, 16-22. *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956*, 1-2.

and casual visitors to learn about topics like aerodynamics, engines, materials, and aircraft regulations for homebuilding. Some forums were formal talks while others were workshops where participants developed practical aircraft building and maintenance skills. These forums were a major departure from virtually all other air shows because they were not about awing people with complex displays of aerobatics. Rather a good forum edified participants with skills and ideas they could employ long after the air show concluded. For the casual spectator, a flying program showed what planes and pilots could do. The forum helped interested spectators learn how to be part of a future display.<sup>245</sup>

EAA President Paul Poberezny also organized the fly-in so members could learn about new designs and evaluate them. Poberezny and other EAA officials scheduled technical meetings at Oshkosh so members could learn new homebuilding skills and discuss innovations. Civil Aeronautics Authority officials, the FAA's predecessor, provided credibility to EAA by attending the air show to answer any questions visitors might have concerning the legal issues of building and operating experimental aircraft in the United States.

Throughout the weekend, pilots still provided the audience with a "stirring demonstration of ultra-skillful aerobatic and stunt flying" and flybys of antique and homebuilt aircraft. Among the antiques flown at the show was "Woody" Woodward's 1916 Thomas Morse Scout, which was also the oldest plane recorded at Oshkosh for the weekend. The World War I trainer Woodward flew to Oshkosh was a "glamorous and priceless" plane outfitted with a .30 caliber machine gun and capable of a top speed of 90 mph.<sup>246</sup>

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<sup>245</sup> Cole, *This Is EAA*, 48. Lande, *Oshkosh, Gateway to Aviation: 50 Years of EAA Fly-Ins*, 13.

<sup>246</sup> "Spectacular Air Meet Thrills Thousands Here," *Oshkosh Daily Northwestern*, 6 August 1956, 1-2, International Air Show and Races, Oshkosh Wisc. - Aug. 3-5, 1956, Box 16. National Aeronautic Association (NAA) Archives, 1918-1976; National Air and Space Museum, Smithsonian Institution .

Bill Adams flew a more dynamic demonstration in his modified Stearman, a World War II-era biplane trainer with a 450 HP engine instead of the standard 220HP. With Waukesha, WI resident, Norman Shuff, “securely rigged and braced” on Adams’ upper wing. Adams and Shuff opened the air show at Oshkosh with Adams flying “a series of exciting stunts” culminating when Shuff performed a parachute jump at a mere 850 feet. While the duo performed the same program on both Saturday and Sunday, the Sunday show was considerably more dangerous because low clouds reduced visibility to virtually nothing on the field. Adams and Shuff presumably flew relying on their instruments as opposed to visual cues. This would have been an excellent example for spectators to see the combined skills of pilots and instrument makers. However, few probably saw this display because of the low ceiling. During his skydive on Sunday, Shuff landed hard and injured his arm. Requiring medical attention from an Oshkosh police officer was probably not the strongest demonstration of aviation in sub par weather.<sup>247</sup>

Bill Adams also flew a solo program both days in Oshkosh. Adams piloted his Stearman with enough skill to bring the crowd “to their feet on more than one occasion.” His performance was described as a “series of tricky rolls, loops, and ‘hammerhead’ stalls.” The last maneuver required Adams to fly his biplane almost perpendicular to the ground and crowd. The pull of gravity quickly bled speed off of Adams’ plane until it stalled in midair. In order to regain lift and not crash, Adams let the plane nose over towards the ground and waited until the plane regained sufficient airspeed to not stall again when he attempted to redirect the plane away from the earth.<sup>248</sup>

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<sup>247</sup> "Air Show," *Milwaukee Journal*, 21 October 1956,3-5,International Air Show and Races, Oshkosh Wisc. - Aug. 3-5, 1956, Box 16. National Aeronautic Association (NAA) Archives, 1918-1976; National Air and Space Museum, Smithsonian Institution. . "Spectacular Air Meet Thrills Thousands Here," 1-2. *Jane's Fighting Aircraft of World War II*, (London: Studio, 1989), 213, 310.

<sup>248</sup> "Spectacular Air Meet Thrills Thousands Here." 1-2

Airport Manager Steve Wittman increased his air show duties by performing a comedy act where he dressed in a top hat and a long black coat as “Professor Smythe” and demonstrated to the crowd “how not to fly airplane.” Included in these stunts, Wittman flew with his wingtips within inches of the ground. If he miscalculated his altitude or attitude or if the wind gusted at just the right moment, a wing tip could have caught the ground and destructively cartwheeled Wittman and his aircraft, just like Lt. Jones in Flagler. Fortunately, Wittman succeeded and he was lauded as a “master aviator” for his performance. Nowhere was it suggested that he just got lucky.<sup>249</sup>

On Saturday, the civilian air show got a little military flavor when two Wisconsin Air National Guard pilots “zoomed over the field at breath-taking speed” in formation using Northrop F-89 Scorpions. They were slated to repeat their performance on Sunday, but the heavy cloud cover cancelled their flight. Wisconsin Army National Guard pilots were also supposed to display their helicopter flying skills in Oshkosh, but the weather nixed this as well. The loss of the military performances may have been a good for Oshkosh. Military displays dominate air shows and overshadow other events simply because the military aircraft are generally bigger and louder than many civilian aircraft. At Oshkosh, the military displays were already scheduled to be a small portion of the overall program. With the weather canceling these elements, it may have allowed spectators to focus more on the homebuilts, racers, and civilian aircraft that were more accessible to the average person.<sup>250</sup>

Few air shows included air racing because of the increased risk and but Oshkosh organizers included sanctioned air racing in 1956. The reason was fairly obvious since Wittman

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<sup>249</sup> Ibid. *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956*, 1-2.

<sup>250</sup> "Spectacular Air Meet Thrills Thousands Here." 1-2 *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956*.

was possibly the most successful midget plane racer in America with a racing career dating back to the 1930s. Perhaps with the demise of the National Air Races after 1949 and a corresponding reduction in air races across the states, it made sense for Wittman to attempt to give air racing a home at the airport he managed. His chance of success was improved by being in a relatively sparsely populated area abutting the shores of Lake Winnebago.

Art Chester and the Professional Race Pilots Association founded contemporary midget races in the United States in 1946. Companies like Goodyear Tire & Rubber Company and Continental Motor Company contributed a \$25,000 prize for winning pilots. Organizers and participants believed these races helped stimulate “inventions and improvements” on all aircraft. However, organizers also reminded spectators the pilots took “tremendous risks,” both physical and financial. The Oshkosh air show program writers explained midget race plane builders used motors smaller than in automobiles to anchor a basic aircraft structure to be flown for the love of experimenting with design and building. They also singled out midget plane racing as a uniquely “American” sport.<sup>251</sup>

Two business groups paid for advertisements to expound their support of the “Mighty Midgets” racing. One of the groups was the Ohio Street business owners, which connected the airport to downtown Oshkosh. Their full page ad proclaimed anyone who saw one of these small airplanes take to the air would have a “thrill in his heart” as pilot and machine “brave[d] the skies” at over 150 miles per hour. Readers learned the planes were usually “lovingly shaped” and assembled by the very pilot flying the plane. They also compared the competitors to the “pioneers who built this nation” because both groups lived in the present but were always

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<sup>251</sup> *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956.*

looking towards the future. Supporters appeared interested in connecting the events over Oshkosh to the storied past of American rugged individualism.<sup>252</sup>

Simultaneously, organizers gave the races a futuristic bend where the events of the day could lead to a better tomorrow. Ohio Street business owners were potentially seeking to impress out-of-town visitors with the progressive attitudes of this small Wisconsin city. Presumably many visitors were financially stable and interested in aviation. Perhaps with a supportive environment, these visitors might be enticed to become residents and fellow business owners in Oshkosh.<sup>253</sup>

Only seven pilots attempted to qualify for the weekend races, though an eighth man, James Miller, intended to race but he arrived too late to qualify. The local favorite, Wittman, “provided the throng” with the thrill of the weekend when he nosed out William Falck of New York for first place in Wittman Trophy race. However, Wittman’s victory around the pylons was slim as Falck’s top speed of 196.46 mph was less than three-tenths of a mile per hour slower than Wittman. And yes, he won a race named after himself.<sup>254</sup>

On Sunday, the pilots and aircraft builders assembled with their aircraft so visitors could meet the men and their machines. This was a hallmark of many air shows and sought to humanize aviation, so the public could gain insights from aviation’s celebrities. This was not secretive military officials providing only glimpses of aircraft, weaponry, and crewmen. This was a chance for the average spectator to learn more about building and operating homebuilt

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<sup>252</sup> Ibid. Frederick Jackson Turner, *History, Frontier, and Section* (Albuquerque: University of New Mexico Press, 1993), 59-62, 72-84.

<sup>253</sup> *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956.*

<sup>254</sup> *Race Results: International Air Meet and Races, Oshkosh, Wisconsin, Aug. 4-5, 1956*, (1956), International Air Show and Races, Oshkosh Wisc. - Aug. 3-5, 1956, Box 16. National Aeronautic Association (NAA) Archives, 1918-1976; National Air and Space Museum, Smithsonian Institution, 1. "Spectacular Air Meet Thrills Thousands Here." *Race Results: International Air Meet and Races, Oshkosh, Wisconsin, Aug. 4-5, 1956.*

aircraft, regardless of technical skills, political connections, or money. EAA representatives informed spectators that entertainment came not only from talking to the pilots, but also watching the pilots put their planes through performance tests. If they were lucky, an owner might permit other pilots to fly their precious plane and gain firsthand experience flying a homebuilt.<sup>255</sup>

Not only did EAA officials hope to increase the number of people building and flying their own aircraft, they also hoped the air show would inspire young Americans to seek aviation as a career path. However, they did not explain how this would occur. It was as if EAA officials like Poberezny believed simply experiencing the air show would sufficiently awe youth to develop a love of flying in all forms.<sup>256</sup>

The overall success of the air show is difficult to determine. Estimates for attendance ranged from 25,000 to 100,000 people viewing the show. Regardless, those were large numbers considering the Oshkosh population was only 40,000. The grandstands' capacity was only 4,000 people so many people stood on the airport grounds, parked their cars on area roads, and watched from nearby homes and fields. As a result, any number was more of a guess than anything. With the higher numbers, Oshkosh organizers could claim to be one of the most well attended air shows in the country. In 1953, the National Aircraft Show in Dayton was attended by 150,000 people. By comparison, Oshkosh was a more sparsely populated area with less industry or infrastructure to accommodate auto or air traffic.

After the air show, organizers thanked Oshkosh citizens living near the airport for their “wonderful patience” and “fine spirit” throughout the air show. They recognized airport residents

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<sup>255</sup> *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956.*

<sup>256</sup> *Winnebago Land International Air Meet and Races: Souvenir Program*, (Oshkosh, WI: Winnebago Land Air Race Corporation, 1957), D9 International Air Meet and Races, Oshkosh, WI 8/9-11/57. National Aeronautic Association (NAA) Archives, 1918-1976; National Air and Space Museum, Smithsonian Institution.



dealt with traffic, crowds, noise and danger not normally present at the usually sleepy airport. Daily commercial air traffic at Oshkosh was so light that North Central Airlines' flight operations were easily incorporated into the air show schedule. On Saturday afternoon, the air show needed to pause only twice for North Central operations.<sup>257</sup>

If Oshkosh really did attract 100,000 people, it suggests people really did want to see aviation for the common man in the 1950s. It could also mean Wisconsin was an usually fertile ground for aviation enthusiasm. Air show coverage usually noted participants' hometowns and many hailed from somewhere within the state. Locally, enough people attended the air show for organizers to another Winnebago Land air show in 1957.

While New York City, Flagler, Colorado, and Oshkosh, Wisconsin were three vastly different communities, leaders in all three areas believed the way to celebrate their locality was through an air show. New York City officials saw the air show at New York International Airport could commemorate the massive new airport, honor the fiftieth anniversary of the city's political consolidation, and market the city as the best place in the world to do business. While one can sense their desperate need to boost tax revenues as the World War II economic boom ended, officials portrayed the primary goal as ensuring the city's future as a world capital. In many ways municipal officials were correct. Over the decades, it not only became John F. Kennedy International Airport, but it evolved into one of the major entry points for international travelers and freight.<sup>258</sup>

Where New York residents can look fondly back at the 1948 air show, Flagler residents still mourn those lost in September 1951 at the Flagler Fall Festival. In a town park, near

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<sup>257</sup> *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956.*

<sup>258</sup> Joshua Stoff, *John F. Kennedy International Airport*, Images of Aviation (Portsmouth, NH: Arcadia Publishing, 2009), 7-8. Sullivan, *International Airport: The Story of Kennedy Airport and U.S. Commercial Aviation.*

playground equipment, the Flagler Lions Club erected a memorial to the air show dead. A tall metal cross sits atop a brown granite wall holding a plaque listing all those killed at the air show, including a notation mentioning Lt. Norman Jones was the pilot. New rules put in place after Flagler helped keep spectators safe at American air shows for nearly sixty years. After Flagler, no spectator was killed at a domestic air event until September 16, 2011 when Jimmy Leeward crashed into the grandstands while competing at the Reno Air Races, killing himself and ten spectators.<sup>259</sup>

Compared to Flagler and New York, the Winnebago International Air Meet and Races was the first of many successful air shows in Oshkosh. A reporter for the *Oshkosh Daily Northwestern* called the air show the “biggest aeronautical event ever held in this section of the nation.” With some 50 aircraft and no accidents beyond Norman Shuff’s bruised arm, the Oshkosh event was probably the largest and safest air show staged in the Upper Midwest. Organizers then repeated the air show and races in 1957. These air shows probably laid the foundation for EAA officials permanently moving their annual fly-in convention to Oshkosh in 1970 after outgrowing a site in Rockford, IL. Now, Oshkosh hosts one of the largest air shows in the world with over 10,000 aircraft and over a million visitors during its weeklong schedule each summer.<sup>260</sup>

In all three locations, organizers used the air show to tell a specific story about the host community. Some stories were intended to be thoroughly triumphant, like Oshkosh’s story of aviation enthusiasm. Flagler’s story was supposed to be about a successful harvest but the deadly crash changed it to community grief. The next chapter examines the stories organizers and participants crafted to attempt to teach their version of American history to spectators.

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<sup>259</sup> "Colorado Air Show Crash Killed 20 in 1951," *Denver Post*, 16 September 2011.

<sup>260</sup> "Spectacular Air Meet Thrills Thousands Here," 1-2.

## CHAPTER 5

### AIRBORNE HISTORY

Many Americans know Charles Lindbergh as the man who first conquered the Atlantic Ocean by flying solo from New York to Paris in 1927. Many probably know him better as the victim of one the most famous crimes of the twentieth century when his 20-month-old son, Charles Jr., was kidnapped and found dead in 1932. Between these hallmark events, Lindbergh flew a celebratory tour of the United States in the *Spirit of St. Louis* to promote the development of local airports and an airways system to connect America. From July through October 1927, Lindbergh traversed America, landing at 82 cities and dropping promotional packages over many more. In just a few months, an estimated 30-50 million Americans glimpsed the most famous airplane and pilot in the world.<sup>261</sup>

For the fiftieth anniversary of Lindbergh's historic transatlantic flight, the Experimental Aircraft Association (EAA), led by Paul Poberezny, built a replica of the *Spirit of St. Louis* and organized a reprisal of Lindbergh's national tour. Poberezny's first goal for the tour was to honor Lindbergh's "spirit of individual initiative, dedication, and strength." After that, Poberezny wanted to illustrate to Americans how much aviation changed over the preceding half century. Finally, he sought to use aviation's storied past to improve the public's negative view of aviation in the 1970s, including noise and environmental pollution. Overall, Poberezny attempted to demonstrate aviation was still the "best and safest method of transportation" available.<sup>262</sup>

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<sup>261</sup> Dominck A. Pisano, "The Spirit of St. Louis - Fact and Symbol: Misinterpreting a Historical Cultural Artifact," *Reconsidering a Century of Flight*, ed. Roger D. Launius and Janet R. Daly Bedarek (Chapel Hill, NC: The University of North Carolina Press, 2003) 252-4. "Aeronautics Promotion Began with Lindbergh," *Los Angeles Times*, 15 April 1976,D12.

<sup>262</sup> Mike Heuer, "Headquarters Comment," *Sport Aviation*, February 1977, 11. Jack Cox, "Project Spirit: EAA's Lindbergh Commemorative Tour," *Sport Aviation*, February 1977, 31-3; Paul Poberezny, "The Homebuilder's Corner," *Sport Aviation*, May 1977, 2, 84.

To succeed, EAA members built an externally perfect replica of Lindbergh's airplane. Among their few alterations, the builders added a second wicker seat to the cockpit so local VIPs could ride in the plane throughout the tour. They also altered the cowling panels to improve visibility for the pilots while airborne, since the original *Spirit of St. Louis* did not have a forward windscreen and Lindbergh could only look out the plane's side windows. The replica builders made a removable cowling panel so pilots could see out the front of the airplane in flight but still create authentic images of the plane on the ground.<sup>263</sup>

Poberezny unofficially began the tour in St. Louis on May 20, 1977, the fiftieth anniversary of Lindbergh's transatlantic flight. From Spirit of St. Louis Airport, just west of the city, Poberezny simulated Lindbergh's 1927 takeoff from Roosevelt Field in New York, as captured by newsreels of the day. He even faithfully aborted multiple takeoffs, as Lindbergh did before finally getting airborne at 7:52am.<sup>264</sup>

Since real estate developers transformed Roosevelt Field into a shopping mall in 1951, LaGuardia Airport, in Brooklyn, NY, hosted the official start on June 15. At the opening ceremony, speakers like Airport Manager Tim Pierce, New York Mayor Abraham Beam, St. Louis Mayor James F. Conway, and Poberezny all spoke of aviation's advances since 1927. They described the development of supersonic transports like the Concorde, the regularization of transatlantic commercial flights, and the development of air traffic control systems. All the speakers linked aviation's growth directly to Lindbergh's solo flight. After the speeches, Poberezny climbed into the replica airplane, taxied to the runway and took off. After making two

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<sup>263</sup> Jack Cox, "The Lindbergh Commemorative Tour Progress Report," *Sport Aviation*, May 1977, 12-16. Michael Hirsley, "Lindy Was Lucky He Got Airborne," *Chicago Tribune*, 28 April 1977, 1.

<sup>264</sup> Jack Cox, "The Lindbergh Commemorative Tour Progress Report, Part III," *Sport Aviation*, July 1977, 41-9.

passes down LaGuardia's runways for photographers, he flew on to his second stop, in Hartford, CT, where he met Lindbergh's widow, Anne Morrow Lindbergh.<sup>265</sup>

This was the model for the next five months and 150 stops. Eight EAA pilots, including Poberezny, landed near Lindbergh's original landing fields, important locations in Lindbergh's life, and politically relevant locations. Orators linked aviation's history to a contemporary issue, while spectators viewed the *Spirit of St. Louis* replica and talked to EAA members about the tour. In some locations, like Wichita, KS the only spectators found were stray dogs. In others, like Colorado Springs, CO an estimated 10,000 people visited the airplane. Throughout the tour, Poberezny estimated some four million people attended the events.

Poberezny and other EAA officials considered their 1977 national tour a massive success because it exposed millions to EAA and its mission of developing aviation for the average American. They also claimed to EAA members that the tour reintroduced the public to the small, local airports dotting the country. Finally, Poberezny interpreted the tour as proof the EAA was the leading promoter of aviation in the United States because the tour embodied the history, present, and future of aviation.

However, ten times the number of Americans saw the *Spirit of St. Louis* in 1927 than the replica in 1977. Those 1927 Americans did so when there were 100 million fewer Americans, roads were less developed, and many times Lindbergh landed in a farmer's field, a beach, or some other improvised runway because airports did not exist in many communities. Proportionally, Lindbergh was far more effective a proselytizer of aviation in 1927 than Poberezny in 1977.<sup>266</sup>

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<sup>265</sup> Paul Poberezny, "Homebuilder's Corner," *Sport Aviation*, August 1977, 2. Jack Cox, "The Lindbergh Commemorative Tour Progress Report, Part IV," *Sport Aviation*, August 1977, 59-65.

An airplane flying out of the clouds to awe a local or national audience is not always organized to promote contemporary aviation. Since at least 1919, individuals and groups, like Poberezny and the Experiment Aircraft Association, organized air shows or individual performances to teach audiences about aviation's history and explain how the depicted event(s) affected the nation. This usually involved the restoration of aging and antique aircraft or the construction of replicas for aerial operations. Compared to contemporary military or corporate demonstrations, creators of historical air show performances focused far less on the technical capabilities of the aircraft and more on their patriotic and historical exploits. Since a majority of these demonstrations involve former military aircraft, creators of these performances generally portrayed an uncomplicated version of historical events that favored American actions over those of the relevant enemies. In re-enactments of aerial combat, the American airplane seemed to never lose against German, Japanese, or Communist pilots, even when commonly accepted historical records suggested otherwise.

In *A Better Past Through Technology: World War II as Cultural Heritage*, Kent Wayland dates the warbird movement (as historic military aircraft owners and operators describe themselves) to the mid-1960s when wealthy men increasingly bought World War II military aircraft for preservation purposes. This not only raised the prices of aircraft beyond the means of even upper middle class Americans, but it also led to competition among warbird operators for the most "authentic" aircraft. When specific aircraft could not be directly linked to major historical events, Wayland argues operators even invented historical relevance for their individual aircraft to rationalize their preservation efforts.<sup>267</sup>

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<sup>266</sup> David H. Scott, "Experimental Aircraft," *Aviation Week & Space Technology*, 23 January 1978, 74. Cox, "The Lindbergh Commemorative Tour Progress Report, Part III."; Poberezny, "Homebuilder's Corner."

Wayland consistently argues warbird operators, like CAF colonels (as members were called), created air show performances to “spread their specific form of nationalism.” At air shows, he found CAF colonels “draw on popular narratives about the ‘Good War’ to imagine an ideal nation, which they then perform through battle re-enactments and aerial demonstrations.” Their most famous air show program was called *Tora! Tora! Tora!*, a re-enactment of the Japanese attack on Pearl Harbor. In a ten-minute performance, Japanese warplane replicas “bombed” the airfield with coordinated explosions, air raid sirens, and American counterattacks. Throughout, the narrator claimed to present “just the facts,” yet he stated the Japanese attack on the United States was “unprovoked,” but their attack also destroyed America “complacency” and sowed the seeds of future American victory.<sup>268</sup>

Air shows were not the first instance where entertainment was repurposed for education. Janet Davis’ work in *The Circus Age: Culture and Society Under the American Big Top*, provides an example of a similar organization traveling around the country attempting to sell and educate audiences with titillation. Davis argues circus workers advertised sideshows, exhibit tents, and skits as “educational” because these acts theoretically taught the audience about the larger world. However, these acts showcased foreigners as an uncivilized other, people with medical maladies as freaks, and re-enacted moments in American history with a pro-American bias. Davis found American battles re-enacted for education and entertainment dating back to a 1798 circus performance of Benedict Arnold’s treason at West Point. More tradition battle re-enactments included Buffalo Bill Cody’s taming of the American West and subduing actual

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<sup>267</sup> Kent Allen Wayland, “A Better Past through Technology: World War II Warplanes as Cultural Heritage” (University of Virginia, 2006), 15-23, 44. C. R. Chandler, “World War II as Southern Entertainment: The Confederate Air Force and Warfare Re-Enactment Ritual,” in *Ritual and Ceremonies in Popular Culture*, ed. Ray B. Browne (Bowling Green, OH: Bowling Green University Popular Press, 1980).

<sup>268</sup> Wayland, “A Better Past through Technology: World War II Warplanes as Cultural Heritage,” 139-148-181.

Native American warriors for audiences across American and Europe. Regardless of the subject and time period, Davis found historical portrayals at circuses unfailingly depicted the American actions as correct and the opposition as an alien, flawed other.<sup>269</sup>

More broadly, historic air show performances are related to the history of pageants. In American Historical Pageantry, David Glassberg argues pageants were popular entertainment where local citizens and itinerant performers created American history programs devoid of conflict and reinforced the accepted norms of the day. Glassberg also found most audiences at historical pageants claimed they did not normally attend historical programs. The characteristics he defined for pageants are also found among air show organizers and performers. At the air shows, performers relived famous aeronautical events like the bombing of Pearl Harbor and gave audiences a history lesson lacking the contextualized political and economic arguments academic historians utilized to explain why the Japanese attacked the United States.<sup>270</sup>

Similarly, in No Direction Home: The American Family and the Fear of National Decline, 1968-1980, Natasha Zaretsky investigated how reenactments served to teach specific versions of American history for the nation's bicentennial. She found civic leaders attempted to stanch the fear of national decline by using the nation's bicentennial in 1976 to exhibit a positive image of America. Federal officials recognized that they could not simply recall the America of 1776 because Native Americans argued the new nation took their land and blacks saw national independence as a reaffirmation of their bondage in slavery. Organizers decided to instead focus on the ethnic and cultural diversity found in domestic daily life to demonstrate a proud national past. Across the country, local Bicentennial groups organized historic reenactments of household

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<sup>269</sup> Janet M. Davis, *The Circus Age: Culture and Society under the American Big Top* (Chapel Hill, NC: The University of North Carolina Press, 2002), 192-226.

<sup>270</sup> David Glassberg, *American Historical Pageantry: The Uses of Tradition in the Early Twentieth Century* (Chapel Hill, NC: The University of North Carolina Press, 1990), 2-153.



tasks like butter churning, cooking, and making soap. Even feminists supported such programs as they argued the early nation was a “golden age” for women since the late 18<sup>th</sup> century American economy was a cottage economy of self-sufficiency and domestic goods. These reenactments “lent credence to the enduring belief that domestic self-sufficiency was a pre-requisite for national strength.” This demonstrates how program developers consciously crafted their displays to be minimally controversial. While they sought to educate, they focused on reaching the broadest possible audience without inspiring vocal criticism. At air shows, this suggests historic displays are notable not only for what presenters include, but for what they leave out.<sup>271</sup>

When considering the historic presentations at air shows, one must also recognize that concepts like history and memory are not necessarily interchangeable. In the early 1900s, Maurice Halbwachs theorized collective memory relied on the collaborative memories of an event’s witnesses for a society to recall events of the recent past. As these witnesses’ died, their stories slowly faded from the collective memory of the event. Comparatively, history, according to Halbwachs, begins to exist when the participants, witnesses, and affected population of an event or era no longer influence the collective memory of that society, which allows academics to study events without the burden of personal experience. To him, scholars preserve the facts of events or eras, yet at the same time their work seemingly places events beyond the contemporary world.<sup>272</sup>

Warbirds and historic presentations at air shows do not neatly fit within the realm of collective memory or historical memory. Aviation’s origins are still recent enough that many living people were personally affected by the aircraft and events depicted at air shows or they

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<sup>271</sup> Natasha Zaretsky, *No Direction Home: The American Family and the Fear of National Decline, 1968-80*, (Chapel Hill: University of North Carolina Press, 2007), 143-70.

<sup>272</sup> Maurice Halbwachs, *On Collective Memory*, (New York: Harper & Row, 1980), 51-86.

had relatives, friends, or neighbors involved with the events on display. Many historians have written extensively on all aspects of aviation history with professional objectivity that seems to defy the memories of participants and their relatives. The role of the atomic bomb drop at the end of World War II is one of those iconic debates. Many historians link the bomb's usage to increasingly deadly warfare, the geopolitical conflicts between the U.S. and the Soviet Union, and some question if it was necessary to use the atomic bomb to end the war. Conversely, many veterans and their families oppose these views and simply view the bomb as a lifesaver. The different interpretations have led some veterans to accuse historians of attempting to smear the bomb and make it evil.

### Old Rhinebeck Aerodrome

Eleven miles north of President Franklin Roosevelt's Hyde Park home in New York, a grass field has hosted an airborne window on early aviation every summer weekend since 1959. Cole Palen, a World War II veteran, founded the Old Rhinebeck Aerodrome (ORA) to preserve and "portray the most colorful years of aviation," from 1903 through the 1930s. By the 1970s, he developed ORA into a two-hour air show with two-dozen airplanes, multiple display hangars, historic vehicles, and a fashion show. The program he developed, and still in existence in 2012 almost twenty years after his death, provided spectators with a nostalgic view of the era and demonstrated how dramatically aviation technology advanced in a short period of time. However, the showmanship necessary to draw the crowds necessary for financial solvency muddled the ORA show with risks to irreplaceable aircraft and equipment and contradictions in the stories Palen and his supporters told.<sup>273</sup>

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<sup>273</sup> Jim Leggett, "WWI Matinee," *American Aircraft Modeler*, June 1970, 16-9, 88. Rudy Arnold, "One-Man Air Force," *True Magazine*, June 1960, 46-9; E. Gordon Bainbridge, *The Old Rhinebeck Aerodrome*

Despite a fifty-year history, the program at Old Rhinebeck Aerodrome remained remarkably static. Magazine articles from the 1960s and 1970s are virtually identical to a program I observed in 2009. The pilots changed and aircraft were retired or rebuilt, but the script, scenes, and goals remained.

The atmosphere of Old Rhinebeck Aerodrome was unique among air shows because it was not a modern airport with a control tower, concrete runways and ramps, lighting, and all natural features removed. To enter the Aerodrome, visitors walked across a covered bridge spanning a small stream, which served as a portal from the present to the past. Beyond the bridge, the field was peppered with a half dozen hangars and ramshackle buildings housing aircraft, vintage vehicles, and miscellaneous signs and materials from the preceding decades. Faux signs hung on hangars depicted early aviation companies like Curtiss, Ryan Aircraft, Bleriot, and A. V. Roe. Nothing on the buildings or elsewhere at ORA explained to the visitor why the buildings had these signs. At best, inexperienced, but attentive, visitors could solve the mystery if they noticed the aircraft on display were manufactured by the names on the buildings. At first glance, however, it would be completely unknowable to non-aviation enthusiasts. Other signage recreated period advertisements like a green and red ad for Lucky Strike cigarettes painted on the side of a hangar.

Past the buildings, visitors saw a dozen airplanes lined up along a split rail fence extending hundreds of feet along the runway. ORA pilots would soon fly many of these planes as part of the air show. Next to each airplane, staff erected hand-painted signs listing the plane's name, maker, engine, and described notable aspects of the plane related to aviation history. At

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(Hicksville, NY: Exposition Press, 1977), 37-8; Bill Thomas, "Those Magnificent Men and Their Flying Machines," *Gateway: Mohawk Airlines Magazine*, September-October 1971, 4-5, 14.

the end of the display line, staff displayed a World War I Renault light tank, painted in orange, green, and purple camouflage.<sup>274</sup>

Beyond the tank was an undulating 1200-foot grass runway surrounded by trees. From benches made of wood planks laid over cinder blocks, spectators saw most of the runway, but part of the runway disappeared down a hill and behind the trees. On the opposite side of the runway, visitors could see four facades that looked like young children built and painted them. The names on the facades included “Der Sausage Werks,” “Fifi’s,” “Hotel Paree,” and “Der Bad Boyz.” Once again, for a new visitor to Old Rhinebeck Aerodrome, no sign or brochure explained why these poorly constructed edifices existed or why they were inaccessible to the public.<sup>275</sup>

Although ORA staff and volunteers maintained they preserved the aircraft to teach the general public about the culture of aviation in the early twentieth century, accuracy was not a priority, unlike the Commemorative Air Force restorers. In 1965, when ORA’s popularity was burgeoning, *Flying Magazine* journalist James Gilbert reported Palen worked very hard to maintain his aging aircraft, some with their original fabric, in flying condition so he could earn a living from his flying. However, Gilbert found this resulted in “crude and amateurish” restoration work on these rare aircraft. In 2009, ORA’s Director of Air Shows Tom Daley explained he worked at Rhinebeck for eleven years before a visitor pointed out an airplane with a few minor historical mistakes. Such inconsistencies did not concern Daley because so few visitors were knowledgeable enough to notice such mistakes. Most of the audience, according to Daley, were women and children awed by the sight of the planes and the fact they flew at all. As

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<sup>274</sup> “[Old Rhinebeck Aerodrome Performance],” (Rhinebeck, NY: Old Rhinebeck Aerodrome, 2009).

<sup>275</sup> Bainbridge, *The Old Rhinebeck Aerodrome*, 51. Leggett, “WWI Matinee.”; Wally Smith, “Old Rhinebeck Aerodrome,” *Antique Airplane Association News*, 1965, 5,11.

result, maintaining operations was more important to Daley than accuracy. All historic aircraft operators must debate these operational and accuracy costs when deciding how to maintain their aircraft.<sup>276</sup>

More important than the minutiae of aircraft restoration was how ORA performers used the aircraft during the air show. From the beginning, Palen and his cohorts refused to make warfare the air show's focus while still demonstrating how aviation worked, evolved, and changed the world. In 1975, journalist Norbert Slepian described the Old Rhinebeck Aerodrome air show as a battle between the "forces of sacred aviation and slapstick theater" and "a living museum with all the dignity of a panty raid." At the same time, Palen saw the program as part of a heroic narrative because flying was "one man and his machine, and you held your destiny in your own hands." In an era when the Concorde regularly flew across the Atlantic like magic to the average person, the aircraft at Rhinebeck could be made perfectly understandable.<sup>277</sup>

Portions of the air show, like the demonstration of the museum's 1913 Caudron G.III, fulfilled the educational mission of Old Rhinebeck Aerodrome. The French plane was a World War I trainer and bomber powered by a LeRhône Gnome rotary engine. The wood and fabric biplane looked like few other aircraft of the period because designers René and Gaston Caudron enclosed the crew area, creating a small fuselage, but then did not extend it the length of the aircraft frame to unify the engine and cockpit with the tail. The result was the twin tail booms seemed disconnected from the engine, cockpit and wings as only a few thin sticks of wood filled the space between them.

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<sup>276</sup> Robert Verbsky, by Tom Daley, July 4, *Notes from Personal Conversation*. Rhinebeck, NY; James Gilbert, "The Lost World of Old Rhinebeck," *Flying*, March 1965, 46-9.

<sup>277</sup> Bainbridge, *The Old Rhinebeck Aerodrome*, 37-8. 37-8 Robert Verbsky, by Hugh Schoelzel, June 27, *Notes from Personal Conversation*. Rhinebeck, NY. Dick Russell, "Rhinebeck Aerodrome: Unbelievable," *Agrosy Magazine*, September 1975, 37-41, 50. Arnold, "One-Man Air Force."

Four ORA crewmen clad in trousers, vests, and newsy caps pushed the Caudron to the center of field and pivoted it so the nose pointed at the crowd. One man remained at each wingtip, serving at the only brakes once the other two men primed and started the engine. While they worked, the narrator explained to the crowd how heavy, underpowered engines constantly troubled early aviators. The introduction of chrome-nickel steel in 1908 allowed engine designers to create lighter engines, but they quickly overheated. By making the entire engine rotate while in use, the narrator explained, engines could remain light and cool. The LeRhône on the G.III, the crowd learned, spun around at 150MPH, flinging its castor oil lubricant out of the engine as it operated.<sup>278</sup>

With the history and science lesson concluded, the crowd could fully appreciate the difficult flying conditions for both aviators in the early 1900s and the men before them. The audience watched the men pull the propeller around so the pistons drew castor oil into the engine. It also provided them the opportunity to watch the engine turn slowly in its housing. The pilot then repeatedly flipped a switch to ignite the engine. The engine slowly sputtered to life and the crewmen at each wingtip held the straining airplane from taxiing into the crowd. After the plane idled for a minute, the narrator announced the pilot would taxi down to one end of grass field and then fly the length of the runway. Because the engine was almost a century old, the pilot would land at the other end of the runway, simply proving the Caudron was capable of flight. The ground crew walked alongside the pilot and plane as it rolled down the field to its starting point, providing a measure of safety in case something went awry.

When the plane was in position, the human brakes released the G.III and the pilot accelerated across the rolling grass. After only a few hundred feet, the crowd watched as the four

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<sup>278</sup> "Caudron G-4", National Air and Space Museum  
<http://airandspace.si.edu/collections/artifact.cfm?id=A19190008000> (accessed 5 December 2012).

wheels broke from the earth and the plane flew a few feet above the ground. In less than a minute, the pilot had the plane back on the ground at the opposite end of the field and the ground crew was once again restraining the plane. As the plane was secured, the announcer asked everyone to breathe deeply and smell the acrid castor oil lingering in the air. He reminded everyone this would be the aroma wafting through most every airfield in the world through World War I.

Another homage to aviation's barnstorming years was ORA's Flying Farmer comedy skit. Many different pilots performed this skit at countless air shows across time and geography. The only consistent element was the pilots disguised themselves as someone who was presumed to not know how to fly. Lincoln Beachey was possibly the earliest performer of the comedy flight in August 1911 when he flew through the streets of Chicago dressed as a woman named "Clarice Lavasuer." Oshkosh pilot and air show organizer Steve Wittman flew a similar act when he demonstrated "how not to fly a plane" as "Professor Smythe" at the 1956 Winnebago Land International Air Meet and Races in Oshkosh, WI. One of the most famous "professor" pilots was Dick Schramm, who tragically died while performing the act at the 1969 Reading Air Show in Reading, PA. While flying a hammerhead stall in a Piper Cub, the control stick broke off the airplane and Schramm was unable to regain control before crashing.<sup>279</sup>

For most of Old Rhinebeck Aerodrome's history, Stan Segalla performed the Flying Farmer act as a rube farmer who lived near the airfield and allowed ORA pilots to use his fields for emergency landings. The narrator usually began with a ruse and explained the Piper Cub demonstration was about to begin, since a stuck tail wheel was repaired. In addition to the performance, he explained the pilot was going to fly the farmer back to his property because he

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<sup>279</sup> Marrero, *Lincoln Beachey: The Man Who Owned the Sky*, 66-7. "Spectacular Air Meet Thrills Thousands Here," 1-2. *Winnebago Land International Air Meet and Races, Winnebago County Airport, 8/3-5/1956*.

needed to get home to his wife. In the performance, the “local farmer” wore a battered straw hat, denim jacket and jeans, and a red bandana around his neck. Segalla (or whomever was the Flying Farmer for the show), promptly walked over to the small yellow plane and yanked the wing, shaking the entire plane violently.

With the Farmer and the Cub pilot in the plane, the narrator told the pilot to get the Cub airborne. As the pilot taxied the plane, it suddenly turned in tight circles. The pilot stopped the plane and climbed out, leaving the motor running and the Farmer inside the cabin. The narrator explained the interruption as the tail wheel sticking again. As the pilot attempted to repair the wheel, an observant spectator saw the Farmer fiddling with the controls in Cub.

The Cub, with only the Farmer in the cockpit, began to taxi causing the narrator to shout to the Farmer to stop while the pilot and crewmen chased the plane on foot. The Farmer straightened out the plane and accelerated down the grass runway. The Cub then gained altitude, but stayed low to the ground as the tail swung wildly to the left and right. The narrator called for ground crew to scramble an ambulance, as he believed the Farmer could not coax the Cub over the trees at the end of the runway. Seemingly at the last second, the Farmer put the small yellow plane into a steep climb and cleared the tree line while the narrator scolded the original pilot for leaving the Farmer in the plane alone.

After a failed attempt at landing the Cub, the Farmer performed a loop resulting in enthusiastic applause from the crowd. The narrator rebuked the crowd because the Farmer “doesn’t know how to do that” and he should not be encouraged. After a few more loops, the narrator wondered if the Farmer was unconscious or if the control stick was lodged in the Farmer’s seat belt.



After a few more similarly harrowing maneuvers, the narrator realized the plane's propeller was halting. Instead of the engine running, the crowd heard the Farmer screaming as the plane flew past them. When the Cub disappeared behind the trees, the narrator told the crowd to "just listen for the crash." However, the Farmer reappeared above the trees and dipped the silent plane down low along the runway with the wings heavily banked. Once one wheel hit the grass, the narrator wished aloud for the Farmer to get both wheels on the runway. Finally, the Farmer landed the silent plane and halted it in front of the crowd. The narrator pronounced to the audience they witnessed the "precision flying of none other than Stan Segalla." The plane, he continued, was a stock Piper Cub with no modifications so all the madcap flying was "pure pilot skills."<sup>280</sup>

The Flying Farmer act at Old Rhinebeck served as both an homage to past aerobatic pilots and to showcase the Piper Cub. However, only history and aviation enthusiasts who knew the long history of flying comedy acts would be aware of the homage aspect. While the uninformed spectator quickly realized the narrator's horror was feigned, the ruse also trivialized the seriousness of flying by creating the impression a crash was imminent multiple times in a ten-minute skit. Most air show pilots, like Bob Hoover in the Aero Commander, sought to demonstrate the safety of flying by showing the serious business of precision flying. At ORA, the same maneuvers of loops and dead stick landings (landing with the engine intentionally off) were performed to lampoon safe and sane flying. Considering the negative publicity resulting from fatal crashes, like those at Flagler and Transpo, it was foolhardy to intentionally create an air show demonstration suggesting an imminent crash. Crashes cast long shadows in the air

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<sup>280</sup> Burton Bernstein, "Profiles: Aerobat," *New Yorker* 60, no. 21 (1984). Bainbridge, *The Old Rhinebeck Aerodrome*, 107. "Stan Segalla: The Flying Farmer," (Rhinebeck, NY: Old Rhinebeck Aerodrome, 2008).

show's history, treating such serious issues flippantly only endangered ORA's message about preserving aviation history and the wonder of early aviation.

The combination of comedy and flying was typical for the aircraft demonstrated at Old Rhinebeck Aerodrome because it served to stitch the series of lessons together. The most famous of the ORA skits was their World War I themed program including flights of English, French, and German fighter planes. The program provided a hook to bring visitors to Rhinebeck and financially maintain the organization. However, the comedy could also obscure the history and science lessons organizers claimed as their focal point.

At the beginning of the World War I air show, the narrator told the crowd they would witness the wedding of Sir Percy Goodfellow and Trudy Truelove. However, he then cautioned they should watch for the evil Black Baron of Rhinebeck who also wanted to marry Truelove and was willing to take the fight to the skies to win her from Goodfellow. Soon after, the Black Baron and his henchmen sped onto the field in an automobile, caught Goodfellow and Truelove, and kidnapped the bride.

ORA pilots intermittently paused the story to demonstrate early airplanes like a Curtiss Pusher predating 1914 and the previously mentioned Caudron D.III. When they returned to the story by introducing a new character, Pierre Loop-de-Loop, to help find Truelove in his SPAD VII, a World War I French biplane fighter. As Loop-de-Loop taxied down the runway, the narrator informed the audience that SPAD was an acronym for the plane's manufacturer, *Société Pour L'Aviation et ses Dérivés*. Refocused on the story, the narrator explained he did not know Truelove's location but another damsel, Fifi, was captive in one of the shops on the opposite side of the field. While the audience gazed at the childish facades across the field, the narrator completed the SPAD's history and discussed how, during the war, troops in the trenches could

easily distinguish a SPAD flying overhead because of its rectangular wings compared to other aircraft. Loop-de-Loop then dropped flowers to Fifi but the Black Baron appeared and stole the bouquet. In response, Loop-de-Loop declared it was his duty to bomb the Baron. He promptly flew over the lingerie shop and dropped a package behind the façade. An explosion erupted from the structure and a geyser of ladies underwear burst from the building and blanketed the ground.

The climactic act was an aerial duel between the Black Baron and Percy Goodfellow. Percy flew the French SPAD while the Baron flew a Fokker DR.1, the German triplane Baron Manfred von Richthofen made famous as the Red Baron. As the battle for Trudy Truelove began, the narrator lectured the audience how most of Richthofen's eighty aerial victories were not in the Fokker but in an Albatross D.III biplane. He noted replica a D.III was on display on the grounds. He also called attention to the struts between the wings on the Fokker and claimed they were unnecessary. The narrator explained the designer, Anthony Fokker, braced the wings internally, just like modern wings. Fokker installed the placebo struts because World War I-era pilots did not trust a wing without external bracing.

The two pilots circled and maneuvered around each other in the air as the narrator provided more aircraft histories. For the finale, the Black Baron and Goodfellow positioned their aircraft on opposite ends of the runway and turned towards each other, flying a head-on pass. As the planes passed each other, the narrator exclaimed he heard gunfire, even though no sounds were heard beyond the engines. Black smoke spewed from the Fokker and both pilots landed their aircraft as the narrator suggested the battle might not be over. Goodfellow finally reunited with Trudy Truelove while the Black Baron angrily stalked the field. Pierre Loop-de-Loop then swooped out from the trees in the SPAD and dropped a bomb on the Baron. The ordinance

exploded in a huge plume of black smoke and threw the “evil” pilot to the ground, thus ending the air show.<sup>281</sup>

Overall, the Old Rhinebeck Aerodrome staff regularly achieved their goal of exposing the general public to the history and science of early aviation without primarily focusing on war. However, the comedy they employed, like the Flying Farmer and the Black Baron skits, relied on a performance style reviled during the very era ORA reflected before World War II. As a result, Old Rhinebeck Aerodrome air shows supported Wayland’s argument that flying historic aircraft “indulges the pilot’s ego” while they needed the air show revenue to fund operations.<sup>282</sup>

### The 50<sup>th</sup> Anniversary of World War II in Oshkosh

The performers at Old Rhinebeck Aerodrome flew to revisit a perceived “simpler” time in aviation, a time when pilots and designers were still solving the basic mysteries of flight. Even when flying World War I military aircraft, the pilots wanted to evoke the fun and whimsy of flying. Many other pilots who flew former military airplanes claimed to consider their flying an homage to the heroism and sacrifice of combat.

In the late 1940s, the U.S. Navy’s Blue Angels performed mock battles with a Navy airplane painted to look like a World War II Japanese fighter. Three Blue Angels and the “Japanese” pilot executed combat maneuvers until the Japanese plane appeared seriously damaged. The pilot signified damage by using the faux fighter’s smoke machine to belch black

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<sup>281</sup> Bainbridge, *The Old Rhinebeck Aerodrome*, 103. Mike Vines, *Wind in the Wires* (Osceola, WI: Motorbooks International, 1995), 42. Mike Vines, *Return to Rhinebeck: Flying Vintage Planes* (Shrewsbury, England: Airlife Publishing, Ltd., 1998), 44-6. Robert B. Jackson, *Waves, Wheels, and Wings: Museums of Transportation* (New York: Henry Z. Walck, Inc., 1974), 52-6. Harvey Arden, "Rhinebeck's Ricketty Rendezvous," *National Geographic*, October 1970, 578-87; Edward Brown, "Old Aerodrome Offers a Taste of Barnstorming," *New York Times*, 1979, XX9; Maguire Ellen, "Where Old Wings Go to Fly," *New York Times*, 2005, F9; Russell, "Rhinebeck Aerodrome: Unbelievable."; Norbert Slepian, "The Lure of Old Rhinebeck," *Flying*, September 1975, 98-102; Thomas, "Those Magnificent Men and Their Flying Machines."

<sup>282</sup> Wayland, "A Better Past through Technology: World War II Warplanes as Cultural Heritage," 133. O'Neil, *Barnstormers and Speed Kings*, 22-64.

smoke from the plane's exhaust pipes. The plane would then stagger towards the ground until it appeared the pilot bailed out of the plane. The "pilot-less" airplane disappeared behind some trees, or other obstacle, and was followed by a tremendous fireball erupting from the area. In reality, the pilot threw a dummy out of the plane and, once the crowd could not see the plane, an air show worker detonated preset explosives. Naval officials discontinued the performance in 1952 when the Blue Angels began flying jet aircraft because the act was no longer believable with the grossly mismatched combatants. The fact the Japanese were now American allies was apparently an afterthought.<sup>283</sup>

World War II re-enactments like the Blue Angels' ebbed in the 1950s as the Cold War and new jet technology preoccupied Americans. However, the older aircraft, battles, and combatants became more popular as World War II's fiftieth anniversary approached in the 1990s. Experimental Aircraft Association officials used their annual air show and convention as a venue to honor World War II. Although the "soul" of EAA was considered to be homebuilt aircraft, the organization evolved to include a warbird division hosting dozens of mass-produced, retired military aircraft each year.<sup>284</sup>

Since the Oshkosh air show was an annual event, EAA officials used each year between 1990 and 1995 to honor the major corresponding events of the war that occurred fifty years prior. In 1990, EAA officials even honored World War II events not involving the United States, like the Battle of Britain. On the ground and in the air, Royal Air Force fighters like the Supermarine

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<sup>283</sup> Wilcox, *First Blue: The Story of World War II Ace Butch Voris and the Creation of the Blue Angels*, 200. Armstrong, *From POW to Blue Angel: The Story of Commander Dusty Rhodes*, 173-236.

<sup>284</sup> Matt Devine, "A Spectrum of Aircraft," *Milwaukee Journal*, 27 May 1990, 1.

Spitfire and the deHavilland Mosquito, and the Luftwaffe's Messerschmitt Me-109 fighters were the stars of the air show.<sup>285</sup>

Oshkosh was unique among air shows because, in addition to flying performances and ground exhibits, officials scheduled lectures, forums, and workshops throughout the event. In 1990, the Royal Air Force Museum and Jaguar Cars executives sponsored an exhibit to explain the Battle of Britain's context in the war and included speakers like Battle veteran William Walker. Jaguar Senior Vice-President Michael H. Dale explained company leaders sponsored the program because, during World War II, the British converted the Jaguar facility to produce Supermarine Spitfires. Ultimately, Jaguar employees built over half of the 20,000 Spitfires constructed during the war. EAA Vice-President Tom Poberezny stated commemorating the Battle at Oshkosh served to bring the aircraft and people who fought in the "world's quest for freedom" together.<sup>286</sup>

Walker told a "rapt crowd" how he had a mere ten hours of flight experience in the Spitfire when Luftwaffe pilots began attacking England in July 1940. He recalled his first combat experience occurred while still in flight training when he and two other pilots spotted a German Dornier bomber flying alone. Walker said he found the trigger on his control stick, aimed for the enemy, and shot down the German plane. When he landed, Walker reported his first aerial victory to his flight officer. Upon hearing Walker's tale, a nearby maintenance man told Walker he could not have shot down the German plane because his guns were not loaded for the training mission.

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<sup>285</sup> "Fly-In Schedule," *Milwaukee Journal*, 27 July 1990, A11.

<sup>286</sup> *1990 Oshkosh*, (Oshkosh, WI: Experimental Aircraft Association, 1990), National Air and Space Museum Technical Files J1-1990-650-01 1990 Oshkosh, WI, International Convention and Sport Aviation Exhibition, Documents, 108.

After that humbling experience, Walker situated his experiences within the Battle of Britain, concluding with explaining how long the odds of British victory were in 1940. When the Luftwaffe began attacking England, Walker said, the Germans had almost quintuple the aircraft compared to the British inventory. Furthermore, the Me-109 was more nimble and more heavily armed than British fighters. Despite these advantages, Walker reminisced how the British eventually overcame the German onslaught.<sup>287</sup>

Every afternoon the Fly-In included an air show with demonstrations of new general aviation products, modern aerobatics and warbird flybys. On July 29 and August 1, officials extended the warbird performances during the air show and called it a “Warbird Spectacular” to enhance the World War II programming. The warbird flights were the simplest air show flights, generally consisting of single planes or formation flights in level flight with basic banking to keep the planes in front of the crowds. During these passes, narrators discussed the design and combat history of the plane in flight and notable pilots who flew the type. The pilots and air show staff occasionally punctuated the flights with timed pyrotechnics to mimic bombs or gunfire related to the aircraft’s history.<sup>288</sup>

Even these basic flights were not without risks. During the 1993 warbird air show, Elmer Ward crashed in his Grumman F8F Bearcat shortly after taking off from Wittman Airport. When Ward hit the marshland just south of the airport, the plane cartwheeled until it ran out of momentum. Officials restarted the air show soon after the early afternoon crash.<sup>289</sup>

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<sup>287</sup> Ralph Barker, *The RAF at War* (Alexandria, VA: Time-Life Books, 1981), 47-73. Matt Devine, "A Few Green Pilots Battled for Britain," *Milwaukee Journal*, 30 July 1990, A4.

<sup>288</sup> *1990 Oshkosh*, 79-87.

<sup>289</sup> Brief of Accident CHI93fa296, (Washington, DC: National Transportation Safety Board, 1994), CHI93FA296; "EAA Pilot's Condition Fair after Crash ", *Milwaukee Journal*, 2 August 1993, B5.

Despite 1991 being the fiftieth anniversary of Pearl Harbor, officials relegated World War II to a minor role at Oshkosh because the 1991 Persian Gulf War provided an opportunity for new veterans, military heroes, and combat aircraft to be on display. This was unusual because EAA officials did not normally focus on military aircraft since the organization advocated “do-it-yourself” aviation and the military was very corporate by comparison. In addition to standard military aircraft like the Fairchild-Republic A-10 Thunderbolt II, McDonnell-Douglas F-15 Eagle, General Dynamics F-16 Fighting Falcon, Grumman F-14 Tomcat, and Lockheed C-130 Hercules, military officials also detailed a Patriot missile battery to Oshkosh because the weapon became famous during the war for defending Israel from Iraqi SCUD missiles. Air Force Lt. Gen Charles A. Horner also attended the EAA Fly-In to discuss how he “orchestrated” the aviation components of the war. Tom Poberezny announced he hoped Horner would not only illuminate the role of aviation in defeating the Iraqis but also the future role of aviation in national defense.<sup>290</sup>

After the Persian Gulf War focus, EAA officials still ignored Pearl Harbor in favor of recognizing the American Volunteer Group, better known as the Flying Tigers. The unit was officially outside the American military and its pilots flew Curtiss P-40 Warhawks in China against the Japanese. In addition to four flyable P-40s, EAA staff scheduled three pilots, a nurse, an armorer, and a radio operator to speak during the Fly-In.<sup>291</sup>

In 1992, with Gulf War hysteria over, Fly-In officials focused on the “lesser known chapters of World War II.” The star attraction was Gen. Chuck Yeager participating in a reunion

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<sup>290</sup> *Gateway to Aviation '91*, (Oshkosh, WI: Experimental Aircraft Association, 1991), National Air and Space Museum Technical Files J1-1991-650-01 1991 Oshkosh, WI, International Convention and Sport Aviation Exhibition, Documents, 24-8.

<sup>291</sup> *Ibid.*, 24-5. Meg Jones, "Three Pilots Tell Their Tiger Tales," *Milwaukee Journal Sentinel*, 26 July 2001, 2B; Ronald V. Regan, "American Volunteer Group: Claire L. Chennault and the Flying Tigers", Weider History Group <http://www.historynet.com/american-volunteer-group-claire-l-chennault-and-the-flying-tigers.htm> (accessed 5 December 2012).



of combat aces from the 357<sup>th</sup> Fighter Group. The unit was credited with 700 aerial victories during World War II. Yeager, most famous for being the first pilot to break the sound barrier in 1947, even sat in a restored North American P-51, painted to look like one of his planes, which he called "Glamorous Glennis III" after his wife. During a forum, Yeager recalled war experiences including when he shot down five aircraft in a single day.<sup>292</sup>

A continuous presence in the EAA's Warbird section was the organization's Boeing B-17G Flying Fortress. EAA staff used the flyable plane, called "Aluminum Overcast," so visitors could experience some of the discomforts World War II bomber crews endured during missions. For a fee, up to ten people rode in the B-17G and heard the roar of the plane's four piston engines, each producing 1200 horsepower, in the plane's unpressurized, uninsulated fuselage. Passengers were allowed almost full access to the plane, exploring the navigator station, the bomb bay, and the waist gunner position. Only the tail gunner position was closed to the public due to the very narrow crawl space needed to access it. The nose was the most popular position for passengers because the Plexiglas windscreen provided fantastic views of the Wisconsin landscape. Visitors told EAA staff they felt fortunate to have any contact with the famous bomber and to even marginally comprehend some of the sounds, smells, and sights of World War II, obviously without the risk of enemy attack.<sup>293</sup>

In addition to the risk of plane crashes and aging veterans, World War II events were also a politically controversial issue in the 1990s. In 1994, Oshkosh visitors and veterans debated the National Air and Space Museum's controversial strategic bombing exhibit that included the restored *Enola Gay*, the B-29 used to drop the atomic bomb on Hiroshima in 1945. Museum staff

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<sup>292</sup> "Speaker Forums Offer Universe of Air Lore, Advice," *Milwaukee Journal*, 31 July 1992,A6. Tim Cuprisin, "Heroes Abound, but EAA Fans See Only Yeager," *Milwaukee Journal*, 1 August 1992,A20; Richard P. Hallion, *Designers and Test Pilots* (Alexandria, VA: Time-Life Books, 1981), 118-23.

<sup>293</sup> "True Plane Enthusiasts Seek This Piece of History," *Milwaukee Journal*, 18 July 1994,B4.

attempted to contextualize the aircraft in a larger history of strategic bombing. Veterans and other critics accused Smithsonian officials of choosing political correctness over historical accuracy while also portraying the Japanese as victims and Americans as racists during the war. *Enola Gay* pilot Col. Paul Tibbetts called the exhibit a pack of lies while Smithsonian curator Tom Crouch wrote to Museum Director Martin Harwit he did not think exhibit designers could make veteran's feel good about their wartime experiences and simultaneously open a conversation about the consequences of bombing.<sup>294</sup>

Less controversially, EAA officials scheduled a forum with pilots from the famed Marine Corp unit known as the Jolly Rogers in 1994. The Marines flew in the Pacific Theater during World War II and were credited with 300 aerial victories in Chance-Vought F4U Corsairs, known for their distinctive gull wings. To honor the unit, that even had a television show called *Baa Baa Black Sheep* from 1976-78, EAA officials scheduled a dozen pilots to fly Corsairs to Oshkosh and to participate in special flybys on two different air show days.<sup>295</sup>

Bill Landreth and Dan Cunningham were among the 14 Jolly Roger veterans at Oshkosh and they spoke at a forum about their combat experiences. They recalled the history of the unit, which began combat in November 1943 when they battled Japanese pilots flying Mitsubishi Zeros for air superiority over New Guinea and the Solomon Islands. In the first month, the unit

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<sup>294</sup> Edward T. Linenthal & Tom Engelhardt, *History Wars: The Enola Gay and Other Battles for the American Past* (New York: Henry Holt and Company, LLC, 1996), 140-70. Eugene L. Meyer, "A Historic Conflict," Milwaukee Journal, 25 July 1994,D6.

<sup>295</sup> *Gateway to Aviation '94*, (Oshkosh, WI: Experimental Aircraft Association, 1994),National Air and Space Museum Technical Files J1-1994-550-01 1994 Oshkosh, WI, International Convention and Sport Aviation Exhibition, Documents, 52-4.

shot down 45 Japanese pilots. Cunningham also told the audience of a February 1944 mission where he shot down four enemy planes during a single mission.<sup>296</sup>

Landreth recalled a less triumphant story of spending the last six months of the war as a Japanese prisoner of war. He claimed he did not dwell on his incarceration often but he reminded the audience there were war crimes trials in Japan similar to the Nuremburg trials. Landreth said he knew some of the men who guarded him were hanged for their actions during the war, but he would not elaborate on his experiences. He concluded by expressing surprise at the fiftieth anniversary of the war because it felt like the battles were “only a few weekends ago.” The only proof of time, according to Landreth, was many of his comrades were still interested in flying though none did.<sup>297</sup>

In 1994, EAA officials also scheduled the first warbird “Jet Days.” EAA Vice-President Tom Poberezny explained he recognized people were interested in more than just World War II military aircraft. Poberezny called the jet warbirds a growth area for private ownership of military aircraft since most World War II era planes capable of restoration were already preserved. Jets, he recognized, were more expensive to purchase compared to propeller planes but they also had a lower cost of maintenance due to fewer moving parts. In 1994, pilots flew only two dozen jet warbirds to Oshkosh compared to 300-400 World War II planes. However, EAA Director of Aircraft Operations Chuck Parnell cautioned spectators the technological difference between jets and piston airplanes could not be fully demonstrated at Wittman Airport

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<sup>296</sup> Larry Lowe, "Corsairfest," *Air & Space Smithsonian* (2003). Phil Scott, "Reviews & Previews: Prodigal Son", Smithsonian Institution <http://www.airspacemag.com/history-of-flight/Reviews-and-Previews-Prodigal-Son.html> (accessed 5 December 2012).

<sup>297</sup> Tim Cuprisin, "For 'Country,' Fly-in Is a Time to Swap War Stories," *Milwaukee Journal*, 29 July 1994,A6.

because of safety concerns with the volume of aircraft and people on site. Parnell suggested the noise alone of a jet taking off was a show in itself.<sup>298</sup>

For 1995, EAA staff organized a “Tribute to Valor” to recognize the fiftieth anniversary of the war’s end. Among the notable attendees were Gen. Chuck Yeager, the surviving members of the B-17 *Memphis Belle* (the first crew to complete 25 bomber missions), and the surviving Doolittle Raiders (the 1942 Tokyo bombing mission to boost America morale after Pearl Harbor). EAA Vice-President Tom Poberezny explained the programming allowed some veterans to see their aircraft for the first time since the war while providing an arena for younger Americans to build personal connections with relatives who were in the War.<sup>299</sup>

The *Enola Gay* controversy continued to reverberate in 1995, as EAA officials scheduled the only flyable Boeing B-29 Superfortress, owned by the Confederate Air Force, to be at the Fly-In. World War II veteran Lloyd R. Houghdahl, a crew chief on B-29s from 1942-45, admonished the public that many veterans believed dropping the atomic bomb forced the Japanese to sue for peace and saved millions of American lives. With the fiftieth anniversary of the Hiroshima and Nagasaki bombings just days away, former B-17 navigator Ed Higgins recalled he was in training to transition from the European Theater to the Pacific when he learned the atomic bombs were dropped. He did distinguish the meaning of the atomic bombs for Japanese and Americans. Higgins appreciated the bombs represented death to the Japanese, but for him, they meant life because he no longer feared he might get rammed by a kamikaze fighter pilot or the possible carnage of invading the Japanese islands.<sup>300</sup>

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<sup>298</sup> Tim Cuprisin, "Ready for Takeoff," *Milwaukee Journal*, 27 July 1994, A1, A12. *Gateway to Aviation* '94, 58-9.

<sup>299</sup> Meg Jones, "Fly-In Draws 830,000," *Milwaukee Journal Sentinel*, 3 August 1995, 5B.

<sup>300</sup> Meg Jones, "To These Veterans, Atomic Bomb Was a Lifesaver," *Milwaukee Journal Sentinel*, 2 August 1995, 5B; "Veterans Gather," *Milwaukee Journal Sentinel*, 2 August 1995, 1A.

As part of the final salute to World War II veterans, EAA officials used the 1995 Fly-In to honor the “heroism and contributions” of all service personnel. To accomplish this, they erected a “Tribute to Valor” tent to house forums and for the public to meet Allied aces and other notable aviators, including Chuck Yeager and his flight leader Clarence ‘Bud’ Anderson. Veterans who came to Oshkosh could also register at the tent and then check the registry to see if comrades were also attending the show. Officials also scheduled over a hundred World War II-era warbirds to be displayed at Oshkosh. Tom Poberezny hoped to make the Tribute to Valor the largest reunion of planes and personnel since the war’s end.<sup>301</sup>

Despite EAA officials heavy promotion that the EAA Fly-Ins from 1990-95 were meant to honor World War II aircraft and veterans, writers rarely included the programming in their air show summations in the organization’s magazine, *Sport Aviation*. Of all the years, EAA staff only published information about the American Volunteer Group reunion in 1991 and the Jolly Roger reunion in 1994. For both of these, the only information provided was how many planes and pilots participated in the programming. Comparatively, Jack Cox, who wrote many of the Fly-In articles for *Sport Aviation*, detailed spectators awed by the Lockheed F-117 Nighthawk seeming to break all the rules for wing structure in 1990 and how, in 1994, nine thousand people attended a program honoring the 25<sup>th</sup> anniversary of the moon landing with all three Apollo 11 astronauts in attendance.

It almost appeared EAA officials felt obligated to create programs honoring World War II for its fiftieth anniversary, but it was not their priority. Numerous times, officials marketed “extended” warbird air shows during the Fly-In, but no accounts seem to survive even though reporters regularly recounted the details of crashes and other accidents. One would expect EAA

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<sup>301</sup> Peter Lert, “Oshkosh Honors the Victory,” *Air Progress*, November 1995, 8-11, 58-9.

officials would do everything possible to illustrate the positives of aviation, like its role in World War II, to counter negative images created by contemporary mechanical and human failure.<sup>302</sup>

### 2003 Centennial of Flight in Dayton

Just as EAA staff saw honoring World War II as air show fodder, Dayton boosters saw the hundredth anniversary of the Wrights' first flight as their opportunity to put Dayton back on the national map both as a city and as an air show destination. To do this, organizers expanded the air show and created a temporary aviation amusement park stretching across the city in July 2003.

City boosters began planning the 2003 extravaganza in 1989 and, within a few years, they began calling their organization "Inventing Flight" (IF). For them, the goal was to revive the city by giving the nation a reason to visit the Midwestern city to honor one hundred years of powered flight. Inventing Flight officials tried to use the Centennial of Flight to resolve two perceived problems. First, they believed not enough people, locally or nationally, knew the Wright Brothers worked primarily in Dayton, not Kitty Hawk where the first flights occurred. Second, like many community boosters, they tried to show Dayton was not an economically dead city.<sup>303</sup>

Organizers courted corporate sponsors by explaining they would honor anyone "whose courageous acts of daring and imagination continue to inspire.... tomorrow's technology pioneers." The pitch continued with the suggestion visitors would understand a company financially supporting Inventing Flight valued "imagination, spirit, genius, and the boundless

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<sup>302</sup> Jack Cox, "EAA Oshkosh '90," *Sport Aviation*, September 1990, 5-8; "EAA Oshkosh '91," *Sport Aviation*, September 1991, 7-9; "Gateway to Aviation," *Sport Aviation*, March 1993, 25. "Oshkosh Rebounds... And How!," *Sport Aviation*, September 1994, 5-7.

<sup>303</sup> David Scott Frech, "Opening Night Spectacle: A Dramaturgical Analysis of the Enactment of 'Inventing Flight: The Centennial Celebration'" (University of Denver, 2005), 132-4, 181, 194-5.

feeling inherent in moments of exhilaration.” Bound together, IF officials argued their programs used the past to inspire present and future consumers and inventors of America.

To entice more corporate financial support, IF marketers informed potential sponsors they had the opportunity to reach 50.6 million people or approximately one-fifth the U.S. population in 2003. Marketers claimed that many people lived within 90 minutes of travel time to Dayton, which they equated to upwards of 300 miles if visitors flew to the Inventing Flight celebration. Citing no sources, marketers also told potential sponsors IF audiences would be well-educated families who wanted to tell their friends, neighbors, and co-workers they participated in “this historic – and unusual occasion.” With the air show, IF would also draw one of the “most loyal audiences in the world” who wanted more than an air show but *the* flying event of the century.<sup>304</sup>

In her welcome letter, published in the air show program, Dayton Mayor Rhine L. McLin aimed to accomplish both goals in a single stroke. She wrote Dayton was the “city that taught the world to fly,” which made it the best host for a centennial air show. With aircraft ranging from a working Wright Flyer replica to the Thunderbirds, Blue Angels, and the Royal Canadian Air Force Snowbirds, she argued the “evolution [of flight] will pass before your eyes.” Yet McLin also took the opportunity to remind readers that Dayton was not stuck in the past and remained “a center for aviation, defense and other high-tech industries.” While Dayton used the air show to acknowledge some of its roots, McLin wanted to spectators to know the city remained economically vibrant.<sup>305</sup>

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<sup>304</sup> *Inventing Flight*, Ohio Bicentennial Commission, Signature Events Files, 1999-2003, Columbus, OH, 1-29.

<sup>305</sup> Sol Smith, *Celebrating 100 Years of Powered Flight: Vectren Dayton 2003 Air Show* (Dayton, OH: United States Air and Trade Show, 2003), Patty Wagstaff Papers, Accession Number 2005-0053, National Air and Space Museum, Smithsonian Institution. Box 33, 4-6.

For audiences who wanted to see a theatrical aviation history, IF organizers planned an array of performances for every age and time of day. These included an opening ceremonies created by the same people who planned the 2002 Olympics Opening Ceremonies. Other events involved nightly laser light shows telling the story of aviation through a “symphony of images” and a parade with floats depicting the “essence of flight.” IF organizers also planned a “streetmosphere” at every Inventing Flight location with first person interpreters. With performers representing the Wright Brothers and other notable Daytonians as well as aviation celebrities of all periods like Leonardo DaVinci and Charles Lindbergh. These actors populated scenes with the aircraft appropriate for his or her story, whether it was DaVinci’s stillborn ornithopter or the Wrights’ Flyers. The key for the skilled performers was to provide visitors with one-on-one interactions with history.

Finally, organizers recognized the city’s landscape no longer reflected the Dayton of the Wrights’ lifetime. The most egregious problem was the Wright Brothers’ home was no longer in Dayton because the family sold it to Henry Ford in 1936 for his Historic Greenfield Village in Dearborn, Michigan. What was an honor in the 1930s became a gaping community hole in the 1990s. Exacerbating the issue was the home’s former site in the Wright-Dunbar neighborhood on the city’s west side. Named for former residents, the Wright Brothers and poet Paul Laurence Dunbar, the neighborhood was a vibrant social and economic center in the early 1900s but was harmed in the 1950s and 1960s by the construction of Interstate 75 and race riots in 1966. By the 1990s, Wright-Dunbar was primarily vacant buildings and lots.<sup>306</sup>

“Wings” was part of Inventing Flight officials attempt to use the air show to alter Dayton’s landscape. This was a dramatic departure from most air shows that existed only for a

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<sup>306</sup> “Wright-Dunbar Village”, National Park Service  
<http://www.nps.gov/daav/historyculture/wrightdunbarvillage.htm> (accessed 4 December 2012).



weekend and then survived only in the photographs and memories of spectators. IF executives planned for the event to leave a lasting architectural impact on Dayton by creating physical structures able to tell the history of aviation and Dayton through edifice and art. One of the most prominent physical legacies was a sculpture at Deeds Point, a park in downtown Dayton near one of the first military airfields. The sculpture, called “Wings,” depicted a “high tech aircraft” juxtaposed with a Wright-type airplane nearby. Suspended from the sculpture was a “kinetic mobile” reflecting sunlight. The entire structure was encircled by a commemorative walkway where individuals and corporations bought engraved bricks to acknowledge flight made the “world a smaller place.”<sup>307</sup>

IF officials attempted to use the Centennial of Flight to rebuild and attract new people to the Wright-Dunbar by investing in the neighborhood landmarks. They were blessed by the existence of the Wright’s fourth, and final, Bicycle Shop and Dunbar’s home within just a few blocks from each other. Still missing, of course, was the Wright family home, which was originally a block from the surviving bicycle shop. To replace the missing family home, officials erected a simulated home on the lot. At the site, the floor plan was simulated in concrete and a corner of the front porch was reconstructed.

Organizers further brought the Wrights’ history back to the neighborhood by spearheading the creation of the Dayton Aviation Heritage Park, administered by the National Park Service (NPS). Just days before the Centennial of Flight started, Park Service officials opened a new visitor center adjacent to the Wright Cycle Shop. Inside, visitors found a biography of the Wright Brothers covering their youth, printing business, bicycle shops, and the

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<sup>307</sup> *Inventing Flight*, 1-29.

development of the airplane. Park Rangers also contextualized the exhibits by linking the Wrights to other Dayton inventors and innovators.<sup>308</sup>

To create a “sense of place” for visitors to Centennial of Flight events, costumed actors portrayed the Wrights, Dunbar, close associates, and the general public of early 1900s Dayton. Surrounding the Wrights’ Bicycle Shop, IF officials renovated streets and nearby shops, populating them with the actors to recreate the “vital, active commercial district” as it appeared in 1903. While the structures were renovated, few real businesses moved into the area as a result of the Centennial of Flight.<sup>309</sup>

Beyond the new NPS site, IF staff organized historical re-enactments of the Wright Brothers honing their flying skills at Huffman Prairie, a pasture a local banker loaned to the Brothers. Now incorporated into the Air Force’s Wright-Patterson Air Force Base, officials scheduled daily flights of replica aircraft and improvised meetings as actors portrayed the Wrights, their engine builder Charlie Taylor, flight students, and local residents curious about flight. To demonstrate the problems the Wrights confronted to prove to the world they could fly, an actor even portrayed a skeptical reporter interviewing the Wrights about their work. At the end of the interview, the reporter concluded he saw “nothing newsworthy” at the field.

Including the Wright Bicycle Shop and Huffman Prairie, IF staff redeveloped four different Dayton historic sites. They spent approximately \$4.6 million to plan, build, and execute programming intended to attract almost two million visitors during the Centennial of Flight celebration’s the seventeen days. *Dayton Daily News* reporters commended Inventing Flight

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<sup>308</sup> Jim DeBrosse, "Dayton Gearing up to Greet Influx of Visitors," *Dayton Daily News*, 1 July 2003, A1, A4; Anthony F. Sculimbrene, "The Living Heritage Program: The Centennial Celebration, 2003, 2001," Ohio Bicentennial Commission, Signature Events Files, 1999-2003, Columbus, OH.

<sup>309</sup> "Available Properties/Map", Wright Dunbar, Inc. <http://www.wright-dunbar.org/business-district/available-propertiesmap/> (accessed 4 December 2012).

officials for trying to revive the Wright-Dunbar neighborhood and lobbying for the new National Park Service site. They also reported many people saw “history came alive at the four sites.

However, only an estimated 50,000 visited at least one of the four sites during the event.<sup>310</sup>

In addition to living history programming, officials erected four thematic pavilions at the Centennial of Flight called the LexisNexis Innovation & Inspiration Pavilion, the EAA Ford Motor Co. Countdown to Kitty Hawk Pavilion, the Lockheed Martin Corp. Exploration Pavilion, and the BankOne Imagination Pavilion. The LexisNexis Pavilion, for example, focused on communication technology and the history of NASA. There, NASA researchers exhibited future aerospace vehicles, moon rocks, mock-ups of the proposed International Space Station, and a faux air traffic control tower. The BankOne Pavilion served to teach U.S Air Force history, focusing on the Tuskegee Airmen, the Flying Tigers, and the Women Air Service Pilots and a history of the bank.<sup>311</sup>

When visitors entered the Birth of Aviation Pavilion, their first sight was a replica Wright Brothers’ 1905 Flyer built by Utah State University engineering students using space age, lightweight materials. Beyond the modern Flyer was 20,000 square feet of exhibits and more full size replicas to serve as a “walk down memory lane.” Many smaller items were also replicas of Wright artifacts depicting items like the toys that inspired the Wrights as children. Much of the

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<sup>310</sup> Sculimbrene, "The Living Heritage Program: The Centennial Celebration, 2003," 1-11. Ask Me About... Inventing Flight, Dayton 2003: A Guide to the Most Exciting Celebration in Dayton's History, "2003," Ohio Bicentennial Commission, Signature Events Files, 1999-2003, Dayton, OH. Jim DeBrosse, "Celebration Central Struggles to Meet Its Expectation," *Dayton Daily News*, 13 July 2003,A1, A13. Mara Lee, "Festivities Wow Crowds," *Dayton Daily News*, 13 July 2003,A1, A14; Signature Event Report for the Ohio Bicentennial Commission, Inventing Flight, Dayton, Oh, "2003," Ohio Bicentennial Commission, Signature Events Files, 1999-2003, Dayton, OH.

<sup>311</sup> James Cummings, "Bankone Pavilion Shows Off Air Force Timeline," *Dayton Daily News*, 9 July 2003,2; James Cummings, "LexisNexis Site Provides Look at NASA," *Dayton Daily News*, 10 July 2003,2; Laura Dempsey, "Celebration Central a Hub of Activity," *Dayton Daily News*, 4 July 2003,2; "Pavilions Readied at Celebration Central," *Dayton Daily News*, 3 July 2003,2; Joanne Huist & Tom Beyerlein Smith, "Inventing Flight 'Putting Ohio on Map'," *Dayton Daily News*, 4 July 2003,A1, A4.

display material was created by the staff at the Wright Brothers Aeroplane Company (WBAC), led by Nick Engle.<sup>312</sup>

Many guests encountered Engle himself in the pavilion as he portrayed Prof. Simon Newcomb, a nineteenth century scientist who claimed as late October 1903 that controlled, powered flight was impossible given the current knowledge and available materials. The Newcomb character served as a guide through the Pavilion, introducing and explaining all the items on display. At the center of the structure was a copy of the Wright's hangar at Huffman Prairie. Instead of aircraft, it housed a small theater for skits about the history of aviation and photographs of early flight.

Around the perimeter of the structure were more replicas of Wright aircraft they designed between 1900 and 1911. The replicas illustrated the various obstacles the Wright Brothers overcame to design, build, and sell powered flight to the world. WBAC staff worked chronologically, starting with the Wright's 1900 and 1901 gliders. They explained these aircraft looked very similar to the wings and tail of their 1903 Flyer, though the 1901 glider had twice the wing surface as the 1900 version. "Dr. Newcomb" then lectured viewers the Wrights were the first to measure the forces acting on the wings while in flight. From these tests, they found their wings lacked enough lift to carry a man aloft and they were not controllable. Newcomb showed Wright another innovation, the wind tunnel where they created models of wings and studied their aerodynamics. The Brothers used their new knowledge, he explained, in their 1902 glider, which successfully carried a pilot and was controlled via wing warping.

WBAC staff used other replicas to complete the timeline up to the Wrights delivering their first airplane the U.S. Army Signal Corps in 1909, a Model "B" Flyer.<sup>313</sup> As guests exited

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<sup>312</sup> Timothy R. Gaffney, "An Early Start," *Dayton Daily News*, 14 June 2003, D1.

the Pavilion, they could see two Wright Brothers “relics” on display. One was the only aircraft part known to be signed by Orville Wright, a propeller, while the other item was a piece of cloth from the 1903 Flyer preserved by the Wright family.<sup>314</sup> Compared to programming at Old Rhinebeck Aerodrome or the EAA Fly-In, the Dayton officials created a thorough exhibition of Wright history at the Centennial of Flight. This demonstrated a serious effort to correct the perceived historical wrongs the Wrights and Dayton suffered in aviation history.

Air Show Chairman Don Kinlin supported the pavilions and told spectators they were lucky to attend the centennial air show in Dayton because it would be remembered for years in the future. He considered the Birth of Aviation Pavilion to be the centerpiece of the air show since it housed the origins of aviation from the Wrights’ kites through their major aircraft. Kinlin also argued it was the perfect introduction to all the eras of flight on display throughout the show grounds.<sup>315</sup>

Not everyone enjoyed the pavilions as Eric Norman complained, in a letter to the *Dayton Daily News*. He wrote the pavilions seemed to be just giant advertisements for the sponsoring companies and were not serious exhibits. Exacerbating the situation, he singled out the BankOne Pavilion as a “mega-recruiting station masquerading as an exhibit.”<sup>316</sup>

Despite planning a mammoth and unique event to draw millions of spectators, Inventing Flight organizers and vendors found the intended crowds did not materialize. Prior to the event,

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<sup>313</sup> DeBrosse, "Dayton Gearing up to Greet Influx of Visitors."; Timothy R. Gaffney, "Spectacular Air Show, Exhibit Define How Far We've Come in the Last Century," *Dayton Daily News*, 1 July 2003, E1, E5. *100 Years of Powered Flight: Vectren Dayton 2003 Air Show*, (Dayton, OH: USATS), DVD.

<sup>314</sup> 100 Years of Powered Flight: Vectren Dayton 2003 Air Show; Timothy R. Gaffney, "Flights of Fantasy," *Dayton Daily News*, 19 July 2003, 1.

<sup>315</sup> Smith, *Celebrating 100 Years of Powered Flight: Vectren Dayton 2003 Air Show*, 4-6.

<sup>316</sup> Cummings, "BankOne Pavilion Shows Off Air Force Timeline."; Eric Norman, "'Exhibits' Were Just Big Ads," *Dayton Daily News*, 14 July 2003, A7.

organizers told vendors to plan to serve 20,000 visitors per day at Celebration Central but, on Friday, July 4<sup>th</sup>, only 1200-1500 attended the program. After a holiday weekend of similarly horrendous attendance, organizers slashed admission prices in half starting Monday, July 7 to encourage more visitation. The following day, organizers made even more dramatic alterations to make programming more family friendly by admitting children under 15 for free and cutting adult fees in half at night. Frustrated vendors publicly complained organizers included too many free events in the schedule for many people to want to visit fee-based programming. By Tuesday, three vendors left due to lack of business and organizers dropped prices one final time. The vendors' criticism was vindicated when it was announced that some 200,000 people participated in some Centennial of Flight programming from July 4-July 7. Officials at the United States Air Force Museum and National Park Service sites, both with free admission, reported record crowds at the same time the vendors suffered anemic sales.<sup>317</sup>

By the end of the week, officials reported attendance increased at Inventing Flight sites but the actual numbers still did not meet projections. Officials refused to alter prices for the remainder of the Centennial of Flight and pinned their financial recovery on the four-day Vectren Dayton Air Show featuring three major military jet teams; the Navy's Blue Angels, the Air Force's Thunderbirds, and the Royal Canadian Air Force Snowbirds. At the air show, organizers, performers, and announcers attempted to re-create the breadth of aviation's history during each day of the air shows days. This history ranged from a 1909 Bleriot monoplane to the S-2 Viking used to transport President George W. Bush to the USS Abraham Lincoln to declare the end of combat operations in Iraq on May 1, 2003.

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<sup>317</sup> Jim DeBrosse, "Flight Festival Prices Cut Again, Vendors Pull Out," *Dayton Daily News*, 8 July 2003, A1, A4; Dale Dempsey, "Flight Fest Fees Adjusted," *Dayton Daily News*, 7 July 2003, A1, A4; Cathy Mong, "Attendance Off, Prices Slashed," *Dayton Daily News*, 6 July 2003, A1, A7.

Although at least four Wright replicas were built specifically for the Centennial of Flight, the Wright Flyer flown at the Vectren Dayton Air Show dated to 1975. Local enthusiasts decided to build and exhibit a replica of the 1909 Wright B Flyer, the first plane the Wrights sold to the military to “promote Dayton’s aviation heritage. With financial support from the Dayton Area Chamber of Commerce, they first displayed the working replica at the 1982 Dayton Air Show. Since then, a team of pilots regularly flew the new Flyer at air shows while the individuals could buy a short ride at the Dayton-Wright Airport, just south of Dayton.

During a performance, the pilots flew the plane past the crowd in straight and level flight. Announcer Danny Clisham educated the crowd that, unlike modern planes, the Flyer was so rudimentary the pilots took off, flew, and landed all at the same speed of approximately sixty miles per hour. Anything more complicated was unnecessary because it was startling to see it fly at all, especially when the public compared the fragile looking plane to modern military aircraft or tumbling, twirling aerobatic planes.<sup>318</sup>

Members of the Wright B Flyer, Inc., the nonprofit organized to create and maintain the replica, decided to build the 1909 design because it was one of the safest Wright designs and was a mass produced airplane by the standards of the era. However, the replica builders made numerous design changes while constructing the aircraft. Most of the changes were visible to even a novice spectator but also improved the plane’s reliability. To make the plane safer, they added a counterweight in the nose of the plane to compensate for the unwieldy tail. The builders also installed a modern instrument panel to help monitor flight operations. They then dispensed with piano wire for control lines because purpose-built aircraft cables were readily available. For

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<sup>318</sup> *15th Annual Dayton Air and Trade Show*, (Dayton, OH: Dayton Air and Trade Show, 1989),Patty Wagstaff Papers, Accession Number 2005-0053, National Air and Space Museum, Smithsonian Institution. Box 25, 24-5. Sol Smith, ed. *Dayton Means Air Show* (Dayton, OH: Cox Ohio Publishing, 1996),Patty Wagstaff Papers, Accession Number 2005-0053, National Air and Space Museum, Smithsonian Institution. Box 28, 12. 100 Years of Powered Flight: Vectren Dayton 2003 Air Show.

power, they disposed of the Wright's 35 horsepower engine and installed a modern Lycoming 225 horsepower engine.<sup>319</sup>

Surprisingly, the replica builders decided to install ailerons to control the roll of the airplane instead of the wing warping system the Wright Brothers developed for the first powered flight. The Wrights designed all their airplanes with wing warping, where the entire wing was twisted to control the plane's roll. In 1909, ailerons were a European innovation imported to America by touring European pilots and New York airplane builder Glenn Curtiss. The Wrights considered ailerons as an infringement on their patent for controlling airplanes. They became very unpopular when they charged royalties to anyone flying a non-Wright airplane in the United States and used the courts to quash the flights of pilots who would not pay them.

During the replica demonstration at the air show, narrator Danny Clisham carefully explained the obstacles the Wrights overcame to create the first airplane and told the story of Wilbur Wright developing wing warping when handling a bicycle inner tube box. While he also announced the pilot did not control the replica with wing warping rather with ailerons, at no time did Clisham or Wright B Flyer, Inc. members explain how controversial ailerons were in 1909. As the demonstration concluded, Danny Clisham suggested spectators interested in learning more about the Wright's accomplishments could visit the Wright B Flyer, Inc.'s facility at the nearby Dayton-Wright Brothers Airport, including a ride on the pseudo-historic airplane.<sup>320</sup>

This not only failed to teach one of early aviation's major issues but also insulted the Wright Brothers by downplaying their decisions and not explaining the surrounding technical

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<sup>319</sup> Smith, ed. *Dayton Means Air Show*, 12.

<sup>320</sup> C. R. Roseberry, *Glenn Curtiss: Pioneer of Flight* (Garden City, NY: Doubleday & Company, Inc., 1972), 114-6. Seth Shulman, *Unlocking the Sky: Glenn Hammond Curtiss and the Race to Invent the Airplane* (New York: HarperCollins Publishers, 2002), 171-87, 210-12. Crouch, *The Bishop's Boys: A Life of Wilbur and Orville Wright*, 456-67.



and historical debates. By leaving out the legal conflicts between the Wrights and other early pilots over the control systems, the Wright B Flyer, Inc. members and the air show announcers actually insult the Wright Brothers. The inclusion of ailerons on the replica without explaining the conflicts between the Wrights and other early aviators potentially created the perception among non-experts that the Brothers saw ailerons as a useful innovation on their design. In the 1910s, Henry Ford viewed the Wright Brothers' patent battles as damaging the new technology and putting America at a technological disadvantage to Europeans able to develop airplanes with aileron control.<sup>321</sup>

Beyond the Wright Flyer replica, pilots flew over two dozen historic aircraft during the Centennial of Flight air show. Planes ranged from World War I aircraft, like the Fokker D.VII, through 1950s jet fighters, like the North American F-100 Super Sabre and the British deHavilland Vampire. Air Operations Director Justin Sykes publicized many of these aircraft by stating they would not normally be at the Vectren Dayton Air Show, but the centennial gave Dayton the cultural weight to lure the aircraft to the city. He reminded air show visitors that although they were acclimated to aviation as a part of daily life in 2003, they needed to remember it used to be a unique experience to see even a single airborne vehicle. Only with the mass production of World War II did aviation become commonplace.<sup>322</sup>

Among the other historical displays at the air show of a demonstration with World War II warbirds used for air racing. Air races occurred every September over the desert outside Reno, Nevada, but Clisham told spectators the "year we are visiting" was 1949 since one of the planes was the Goodyear F-2G Super Corsair flown in the 1949 Thompson Trophy in Cleveland. The F-

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<sup>321</sup> Shulman, *Unlocking the Sky: Glenn Hammond Curtiss and the Race to Invent the Airplane*, 143. Roseberry, *Glenn Curtiss: Pioneer of Flight*, 342.

<sup>322</sup> Smith, *Celebrating 100 Years of Powered Flight: Vectren Dayton 2003 Air Show*, 1, 27-9.

2G was originally designed as a special low-altitude version of the famed World War II fighter. However, in August 1945, naval officials found too many design problems to continue development when the Grumman F8F Bearcat had similar capabilities and was ready for mass production. When they did not want the Super Corsairs, they sold the five test models and race pilot Cook Cleland bought three of them. He personally flew one of the Super Corsairs to win the 1949 Tinnerman Race and place third in the Thompson Race. Pilot and aircraft restorer Bob Odegard flew Cleland's F-2G in the same red and white paint scheme at Dayton in 2003.<sup>323</sup>

Another air race pilot in Dayton was Jimmy Leeward who flew a heavily modified P-51 Mustang and described the history of post-World War II air racing to air show attendees. He recalled the races were extraordinarily popular after the war because it was an opportunity for civilians to see the high performance aircraft in action. A series of tragedies, he continued, including Odom's fatal flight, overshadowed Cleland's success and culminated in the discontinuation of most civilian air racing after 1949 due to the risks to the general population when racing over populated areas. Race supporters, Leeward explained, found redemption in the Nevada desert because its desolation made racing much safer when equipment failed. Most risk was now borne by the pilot alone rather than people on the ground.<sup>324</sup>

The "race" at the air show included the F-2G, Leeward's P-51, a British Hawker Sea Fury fighter, and two North American AT-6 Texan fighter trainers. In the early laps, Gene McNeely and Mary Dilda, both flying the AT-6s, led the more powerful fighters. Smoke then erupted from McNeely's T-6 and Clisham theatrically shouted into his microphone, "Trouble!"

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<sup>323</sup> Edward Walsh, "Cook Cleland: Airborne and Spitting Fire," *Cleveland Magazine*, August 1986, A3-A7, In Crawford Family Papers. Western Reserve Historical Society, MS 4856, Folder 58.

<sup>324</sup> On September 16, 2011, Jimmy Leeward was flying the same P-51 he flew in Dayton when he crashed on the final lap of the Reno Air Races. A piece of the tail broke off and the plane plummeted in the grandstands, killed eleven and injuring 69. Smith, *Celebrating 100 Years of Powered Flight: Vectren Dayton 2003 Air Show*. 49. Pisano, "Collision Course."

as the other pilots passed the “stricken” plane. On the final lap of the scripted race, Leeward, in his P-51, streaked passed Odegaard’s Corsair to win the race.

The Dayton race was completely scripted because speeds of air racing at Reno were completely unsafe in populated areas. The area surrounding the Dayton International Airport was residential homes and small strip malls. If a racing plane was rocketing around the airport at 500 miles per hour and something went wrong, the plane and pilot could easily crash into nearby homes and businesses, mirroring the 1949 Cleveland Air Races or even the 1953 National Aircraft Show when two helicopters crashed on a Dayton playground. Not only was the outcome scripted, but so was Gene McNeely’s smoking plane. Organizers took advantage of the smoke system he installed in the T-6 for his aerobatic displays because the smoke helped crowds track his movement better. McNeely’s “crippled plane” was really just more theatrics. While mechanical failure was part of all flying and air racing, pretend problems did not help honor the past hundred years of aviation development.

Over 150,000 people attended the air show making it the most well attended Dayton air show since the 1954 National Aircraft Show. When the Centennial of Flight ended on July 20, the air show alone accounted for one-fifth of all visitation despite sixteen other show sites during the seventeen-day festival. However, little of the air show was truly historic other than its scale.<sup>325</sup>

Many Dayton residents wrote to the *Dayton Daily News* commending and criticizing the Centennial of Flight programming. On July 8, 2003, editors published seven anonymous comments on the early stages of the show. Only two were entirely positive as the contributors

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<sup>325</sup> “Ask Me About...,” *Inventing Flight, Dayton 2003: A Guide to the Most Exciting Celebration in Dayton's History*, 21-31; Jim DeBrosse, "Things Looking up at Deed Point," *Dayton Daily News*, 11 July 2003,2; Timothy R. Gaffney, "Supersized Air Show Expands Its Horizons," *Dayton Daily News*, 13 July 2003,2. *Signature Event Report for the Ohio Bicentennial Commission, Inventing Flight, Dayton, OH*, 1-4.

complimented organizers for creating a memorable opening ceremony with former astronauts Neil Armstrong and John Glenn. Conversely, one writer believed it was shameful for city leaders to capitalize on the Wright Brothers after “ignoring their achievements” for decades.<sup>326</sup>

Throughout the seventeen-day celebration, published comments skewed more to the negative than positive. Numerous critics argued the Centennial of Flight events were unnecessary and too expensive for family participation. One writer even suggested “Inventing Flight” should be renamed “Inventing Flop.” Dean Nietman agreed with the anonymous author when he wrote he was excited for IF but found the programs to be a “poorly organized circus” offensive to the Wrights.<sup>327</sup>

Sandra Wheeler was in the minority when she expressed general happiness with the air show and events. Yet even she but was not completely satisfied because most people were simply spectators. Wheeler wished organizers did more to get people to experience flight during Inventing Flight.<sup>328</sup>

Amongst all the criticism, *Dayton Daily News* reporter Eddie Roth defended Inventing Flight staff while admitting they made mistakes. He emphasized to readers the Wright Brothers faced many more doubters in 1903 when they created the first airplane than IF staff confronted in 2003. Overall, Roth believed IF staff’s efforts would have a lasting, positive impact on Dayton and the public’s understanding of aviation history.

Ellen Belcher also defended organizers, contending it would have been worse if Dayton officials planned no programming honoring the Wrights and the Centennial of Flight. Like Sandra Wheeler, she criticized organizers for not having more participation in flight programs

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<sup>326</sup> "Speak Up: Brief Comments," *Dayton Daily News*, 8 July 2003, A7. 7/8

<sup>327</sup> "Miami Valley Voices," *Dayton Daily News*, 9 July 2003, A7. "Speak Up: Brief Comments." "Miami Valley Voices."

<sup>328</sup> "Miami Valley Voices," A7.

and for constantly changing announced programs, which made events confusing to the public. In the end, Belcher believed IF organizers honestly tried to honor the Wright's legacy.<sup>329</sup>

While the air show announcers tried to link many air show performances to the Wright Brothers and their accomplishments, the 2003 Vectren Dayton Air Show was really just an expanded air show with a focus on contemporary military aircraft and civilian aerobatic fliers. The perception within the air show industry was the centennial of powered flight required a much larger presence than normal. This benefited regular spectators because some more unusual aircraft were in Dayton in 2003 as well as the three major North American military demonstration teams.<sup>330</sup>

Financially, Inventing Flight was not a success. From 1989 through 2003, organizers spent \$34 million to implement the July 2003 event. Approximately three-quarters were public dollars but staff intended IF to repay these investments through admission fees, vendor fees, and similar charges. When the expected audiences failed to materialize, organizers drastically cut prices just to entice people through the gates. By the end of 2003, executives reduced their original loss of \$4.7 million by \$2.1 million through debt forgiveness from vendors and other creditors. When the organization dissolved in November 2004, Inventing Flight still owed \$123,000 to creditors.<sup>331</sup>

During fourteen years of development, two visions drove organizers and supporters of Inventing Flight. First, was the fantastic success of air shows like the EAA's annual program in Oshkosh. When organizers saw over a million people descending on the small Wisconsin city

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<sup>329</sup> Ellen Belcher, "Wright Brothers Would Have Understood," *Dayton Daily News*, 27 July 2003, B6; Eddie Roth, "Flight Rite Incomplete without Failure," *Dayton Daily News*, 13 July 2003, B6.

<sup>330</sup> *100 Years of Powered Flight: Vectren Dayton 2003 Air Show*.

<sup>331</sup> Nancy Stringer, *Return of Organization Exempt from Income Tax, Form 9902003*, 1-21. Nancy Stringer, *Return of Organization Exempt from Income Tax, Form 9902004*, 1-17.

every year to revel in aviation, they hoped the same would occur if they were offered a similar opportunity in the cradle of aviation. Second, they were driven by the memory of the fiftieth anniversary of powered flight when Dayton hosted the 1953 National Aircraft Show and the city was an international stage for military aviation.

But the America of 1953 and the America of 2003 were very different environments. What the 2003 organizers saw as challenges to overcome in order to re-create 1953 were serious cultural and economic shifts. First and foremost, 1953 marked the end of the Korean War and the growing Cold War between the US and the USSR. For these reasons alone, aviation was considered a critical component of the nation's daily defense from utter annihilation. Furthermore, aviation in 1953 still had an aura of positive power from its role during World War II while the 1950s also marked a major expansion of commercial aviation. By comparison, in 2003, commercial aviation was hurting from the 2001 terrorist attacks where hijackers flew airliners into the World Trade Center and the Pentagon and killed over 3000 people. Furthermore, military aviation programs were being reduced or eliminated with the end of the Cold War and the related bloated military budgets. While the Air Force was still vital to wars in Iraq and Afghanistan, neither were arenas where classic air power could be utilized and thus showcased in an air show.

Locally, Dayton also changed dramatically over the fifty years. In 1953, it was a regional economic powerhouse with diverse technology firms including National Cash Register and ACDelco. By 2003, Dayton was like many "Rust Belt" cities where corporations moved south or overseas to reduce costs or they shutdown entirely due to foreign competition. The city center was blighted and the surviving industries were health care, banking, and tourism. In this

scenario, boosters hoped Inventing Flight was the grand opening of Dayton as a tourist destination. Instead it was the beginning, middle, and end.<sup>332</sup>

In 2009, I visited Dayton to see the air show and perform some of this research. Based on the newspaper reports of Dayton in 2003, I believe little changed in the intervening six years. When I visited the National Park Service's visitor center and walked the neighborhood where the Wright home once stood, I also saw the decaying carcasses of homes and buildings the event was supposed to revitalize. When inside the center, I looked out windows on empty streets, devoid of people and businesses. I was also surprised to regularly encounter people ambivalent about the air show. The only people who seemed enthusiastic about the air show were those intimately connected to it. Not just the Park Service staff or the guests and employees at the United States Air Force Museum, but also the archivists at Wright State University who understood that their bread and butter was aviation and its impact on Dayton.

Historical programming at air shows was extremely complicated as organizers juggled the desire for authenticity against the contemporary interests of organizers and spectators. At Rhinebeck, Oshkosh, and Dayton, organizers employed aviation's history to entertain, generate revenue, tell a selective history, and promote other goals. In Rhinebeck and Dayton, staff created scripted, theatrical programs to situate early aircraft in the world they originally populated. EAA staff, by comparison, not only displayed World War II aircraft, but their pilots and ground crews as well. For all three, it was the physical airplane that took precedence, which explained why replicas were so vital for Old Rhinebeck Aerodrome and Inventing Flight when original aircraft did not exist. Similarly, preserved World War II aircraft restorers painted planes to represent the planes of famous or successful combat pilots, regardless of the plane's operational history.

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<sup>332</sup> Frech, "Opening Night Spectacle: A Dramaturgical Analysis of the Enactment of 'Inventing Flight: The Centennial Celebration,'" 131-54.

Compared to most of the air show interests previously discussed, historic aviation portrayals exemplify the air show organizer's conflict of using entertainment to educate the public. Unlike contemporary military and civilian air shows, these performers risked irreplaceable aircraft to persuade spectators of their views. Staff at the Old Rhinebeck Aerodrome combined history with slapstick comedy, thus obscuring the risks and lessons of early aviation to spectators. In the 1990s, the Experimental Aircraft Association heavily promoted their World War II commemorations and then focused on Persian Gulf War aircraft and other contemporary aircraft instead. Finally, *Inventing Flight* was rare to have so many people publicly criticize what they saw as the organizers' exploitation of the Wright Brothers for financial gain.

While these air shows were primarily oriented toward history and historic aircraft, similar performances occurred as part of traditional air shows most every weekend across the country. Whether in Dayton or Detroit or Denver, air show spectators saw historic aircraft fetishized with a heroic, oversimplified, pro-American version of history. The men and women who worked to preserve and maintain historic aircraft should be commended for their meticulous effort to keep these aging planes aloft. However, they also performed a disservice to the history they sought to commemorate through their one-sided portrayals.



## CHAPTER 6

### CONCLUSION

As the 2012 air show season began, *The Onion*, a satirical newspaper, captured the complicated public image of air shows in an article titled “The Tree of Liberty Must Be Refreshed with the Blood of Air Show Pilots.” The anonymous author related how air show participants and spectators proclaimed the air shows fueled their patriotism and democracy. The author continued that patriotism always required some sacrifice, which apparently included pilots losing control of their aircraft and crashing to their deaths. True Americans, the author satirized, then “must also watch, and re-watch, these gestures of selfless patriotism on YouTube.” This writer grasped many air show critics still did not believe spectators attended air shows for patriotism but to fulfill their bloodlust.<sup>333</sup>

Since the Centennial of Flight celebration in 2003, Dayton officials scaled down the annual air show and the other aviation related events. Since 2003, the most notable event for Dayton’s aviation heritage was, unfortunately, a fatal accident. At the 2007 Vectren Dayton Air Show, Jim LeRoy performed a series of snap rolls in his black and yellow biplane called “Bulldog.” However, he did not recover from the rolls with enough altitude to avoid the ground and crashed at 200 mph. The plane, with Leroy in it, slid down the runway and burst into flames in front of tens of thousands of spectators.<sup>334</sup>

LeRoy’s death was the first fatality during a Dayton air show since Major John L. Armstrong died during the 1954 National Aircraft Show while trying to match his own speed record in a North American F-86 Sabre. Essentially bookending the post-World War II air show

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<sup>333</sup> "The Tree of Liberty Must Be Refreshed with the Blood of Air Show Pilots", [www.theonion.com/articles/the-tree-of-liberty-must-be-refreshed-with-the-blo,27615/](http://www.theonion.com/articles/the-tree-of-liberty-must-be-refreshed-with-the-blo,27615/) (accessed 19 March 2012).

<sup>334</sup> Edward F. Malinowski, *Factual Report Aviation*, 2008. CHI07LA237.

landscape, their deaths and the intervening history illustrated the ongoing goals and risks of air shows across the United States. Regardless of an air show's location, participants worked to maintain a tenuous balance between safety and thrills in the hope the positive stories of aviation could outweigh the accidents. LeRoy understood this point when he wrote on his website, "People want to see low, wild, and seemingly out of control, but at the same time they want discipline, precision, and complete control." Almost a hundred years removed from the Wright Brothers' own air show performances, the debate continued about if air shows could sell aviation to the public.<sup>335</sup>

In this respect, all air shows were just as much about pageantry as they were about aircraft. Regardless of the specific goals of organizers and performers or the aircraft on display, every movement, every word spoken or printed, and every image created was purposely created to influence spectators. Critics often compared air shows to auto racing due to a perception that audiences only attended the programs because they hoped to see carnage when pilots or equipment failed.<sup>336</sup> The problem is auto executives used motorsports to facilitate the development of new automotive products and increase auto sales. One of the old NASCAR mantras was "Win on Sunday, Sell on Monday," because sales noticeable increased for the makers of race winning cars. Conversely, if anything was sold at an American air show, it was the philosophy that society was enhanced by a robust domestic aerospace industry.<sup>337</sup>

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<sup>335</sup> Greenlees, *Dayton Air Show: A Photographic Celebration*, 10, 94. Jim LeRoy, "Bulldog Airshows: Performance" <http://www.bulldogairshows.com/v2/airshow.html> (accessed 3 September 2012).

<sup>336</sup> Between 1990-2001, 29 spectators and 231 drivers were killed at auto races in the US and Canada. During the same period, 42 pilots and no spectators were killed at air shows in the two countries. Barker, *Zero Margin Error: Airshow Display Flying Analysed*, 22-3.

<sup>337</sup> Jim Froneberger, "Get Smart," *World Air Show News*, 2009, 12. Ben A. Shackleford, "Masculinity, the Auto Racing Fraternity, and the Technological Sublime: The Pit Stop as a Celebration of Social Roles," in *Boys and Their Toys?: Masculinity, Technology, and Class in America*, ed. Roger Horowitz (New York: Routledge, 2001).

Since World War II, the various organizers of Dayton's air shows embraced the idea that an air show could improve public support for aviation. The result of Dayton's diversity of organizers, including military officials, corporate executives, municipal politicians, community boosters, and aviation enthusiasts, was the primary themes of Dayton's air shows changed from military to corporate to historical and local. By comparison, most air shows with such a long history usually had a single primary theme that organizers accommodated to the technology and politics of the moment. With all these changes, different Dayton air shows served as an excellent example of specific themes.

In the first theme, military and other government officials used the air show to recruit and maintain service personnel, to demonstrate the state of military capabilities, and to lobby for future military needs. In 1953 and 1954, Dayton hosted the National Aircraft Show (NAS) to serve as an international stage for military officials and military contractors to exhibit the latest, unclassified aircraft and operations employed by the United States government. Officials hoped that by televising NAS, it could fulfill all the military's publicity needs for an entire year. After two years of focusing on a single air show to sell aviation to the American public, government officials decided television was not yet in enough homes for all Americans to "attend" NAS. They responded by returning the actual hardware to the air in communities across the nation to make their arguments about American power and fiscal responsibility.

Overall, air shows served the military's needs. According to a 1999 Officer Training School survey, Air Force officials found attending a Thunderbird performance was the most cited influence for joining the branch. Military officials from Rhode Island to California still organized air shows on military bases to meet their recruitment, retention, and public relations

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Douglas Brinkley, *Wheels for the World: Henry Ford, His Company, and a Century of Progress* (New York: Penguin Books, 2003), 567-8, 624-6.

needs. When civilians organized air shows, military officials usually scheduled pilots to demonstrate or exhibit aircraft for the public.<sup>338</sup>

While military air shows continued, officials changed them according to the financial and political winds. On May 18, 2012, the day before the opening of the Joint Services Open House at Andrews Air Force Base, Air Force spokesperson, Capt. Christian Hodge, announced the annual air show would shift to a biennial schedule starting in 2014 to save \$2.1 million a year at Andrews AFB. The change was necessary to help reduce the overall military budget by approximately \$300 billion. Hodge explained many bases across the country would transition to the biennial schedule for similar savings. Retired Navy Warrant Officer Mike Devona criticized these changes because he believed annual air shows were necessary to maintain the community's "sense of pride" in the military. Only time will demonstrate if other platforms like television, video games, and the Internet can replace the publicity lost from annual, local air shows.<sup>339</sup>

In the second theme, aerospace industry executives and officials employed air shows to publicize and sell civil and corporate aviation domestically. These air shows most closely resembled the air shows of the Wright Brothers and their contemporaries because the designers and manufacturers of aviation products attempted to demonstrate to spectators how aviation affected or could affect their lives. In both the pioneer days of aviation and the second half of the twentieth century, corporate aviation demonstrations involved performing for thousands of spectators despite very few having the interest, need, or financial means to purchase the exhibited products.

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<sup>338</sup> Bruce Alan Ashcroft, "Why We Wanted Wings: American Aviation and Representations of the Air Force in the Years before World War II" (Dissertation, University of Texas at Austin, 2003), 253.

<sup>339</sup> Hamil R. Harris, "Andrews Air Show to Be Held Every Other Year," *Washington Post*, 18 May 2012. Craig Whitlock, "Pentagon Budget Set to Shrink Next Year," *Washington Post*, 26 January 2012.

In Dayton, air show supporters spent the late 1980s through 1996, attempting to convert a successful local air show into an international corporate air show capable of competing with the massive biennial air shows in Paris, France and Farnborough, England. They failed because organizers misunderstood what aerospace business personnel wanted in an air show. Organizers thought a domestic air show would lead to a healthier domestic aerospace industry because officials would not have to transport equipment and sales teams to Europe and Asia to make large sales. However, it was these foreign markets where competition was strongest and required direct American attention to increase business. Even at Transpo '72, numerous American executives did not want a domestic air show because it could serve as a foothold for foreign companies in the United States.

The final flaw for both Dayton and Transpo was organizers were unable to balance the interests of exhibitors and the general public. Most exhibitors at corporate air shows needed to maximize their time with potential customers. However, at both locations, exhibitors found large crowds inhibited their ability to identify viable buyers. This further reduced the value of corporate investments at the air shows and executives' enthusiasm for the development of additional domestic air shows. The established markets found at Paris, though more expensive than Dayton or Transpo, were a more reliable return on a company's publicity dollars.

As of 2013, there was no comparable commercial air show competitor to the Paris Air Show in the United States. Instead there were a variety of niche shows throughout the United States while the major air shows remained in Europe and Asia, except for Canada's Abbotsford Air Show. Domestically, EAA's AirVenture in Oshkosh, WI remained one of the largest public air shows in the world and served as a marketplace for personal and corporate aircraft. For purely business aviation, the National Business Aviation Association held an annual convention

including aircraft displays and demonstrations useful to business travelers. For customers focused on helicopters, the Helicopter Association International sanctioned the annual Heli-Expo. There are also smaller, regional air shows and fly-ins like the Sun n' Fun International Fly-In & Expo in Lackland, FL, which organizers patterned on Oshkosh's all inclusive format but on a smaller scale. The GE air show in 1946 fits in this category of corporate air show because executives used the program to demonstrate their growing investment in aviation products.

Despite this apparent unevenness for corporate air shows, there are many more programs across North American that could and should be evaluated to create a more complete picture of these air shows. These are diverse programs where business aviation products are sometimes the focal point of the entire operation, like the GE air show, and others, like AirVenture and Transpo, where it is a segment of a much, much larger program.

In the third theme, the air show was a venue for a community to build better relationships amongst residents. Most of the time, organizers sought media coverage to proclaim to those beyond the geographic confines that the air show hosts were technologically adept and a vibrant region for tourism and investment. Organizers still courted military, corporate, and historic aircraft owners and operators to create the most interesting and dynamic air show possible for their available budget. Here, organizers might only pay lip service to the goals of these performers just to create the show they envisioned. In the air, these programs most closely resembled the air shows that critics discounted as frivolous and dangerous entertainment. In these cases, the critics misunderstood audiences, because spectators were not interested in an air show publicizing aviation's merits.

In the 1980s, the Dayton Air Show was a community air show serving to unite Air Force officials with locally based industry officials to revel in the aircraft and equipment their weekday collaborations produced. These were the most successful of Dayton's air shows because they were well attended and financially solvent. Furthermore, they met the needs of an aviation minded community by providing relevant entertainment without burdening business representatives with the requirement to complete sales at the air show or military officials with the need to prove the value of military spending to others.

Communities, large and small, hosted air shows each year in the United States. In 2005, New York State officials organized an air show over the south shore of Long Island to honor the 75<sup>th</sup> anniversary of Jones Beach State Park. The program, held over the Memorial Day weekend, attracted over 400,000 spectators and broke attendance records for the Park. Originally planned as a one-time event, officials responded to popular demands and they have since organized the air show annually each Memorial Day weekend. Baltimore City officials followed suit in 2012 when they incorporated an air show into their celebration for the 200<sup>th</sup> anniversary of the War of 1812. In an entirely different exhibition of community pride, air show organizers in Salinas, California used their local air show to raise money for local charities. Organizers claim ticket sales and sponsorships resulting in over \$8 million in charitable donations between 1983-2003.<sup>340</sup>

However, the tragedy at the Flagler Fall Festival in 1951 vividly illustrated how an air show could bond a community together in all the wrong ways. The community leaders of Flagler, Colorado intended the air show to help the residents celebrate another successful harvest. Instead it was the deadliest air show crash in American history. The crash still resonated

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<sup>340</sup> "Busy Weekend at Local Beaches." Verbsky, "2005 Jones Beach Air Show Collection." "Free Star-Spangled Air Show", <http://starspangled200.com/air-show#.UET6p6TybSg> (accessed 3 September 2012). John B. Cudahy, "President's Message," *Air Shows*, Fourth Quarter 2003, 2.

among the community sixty years later when spectators died at the National Air Races in Reno, the first time spectators died since Flagler. The town serves as an unfortunate reminder that all air shows carry considerable risk for performers and audience members alike.<sup>341</sup>

The risks are ever increasing for the fourth air show theme where organizers and pilots used antique aircraft as the principle characters in their public lessons on the history of aviation. At air shows nationwide, spectators watched pilots fly aircraft dating to at least 1909 while narrators announced their technical and operational histories. These performances were problematic for two reasons. First, the information presented rarely situated aircraft and events in the larger historical events related to the aircraft. Since much of the history presented at air shows related to warfare, the facts were usually biased towards whitewashing all American actions in war as necessary to save the lives of Americans.

In 2003, local organizers reinvented the Dayton air show once again by trying to expand it beyond the airport for the centennial of powered flight. This ranked among the few innovations in air show programming in the last sixty years because organizers tried to get people to think about aviation beyond the actual act of flying. However, with the exception of the skeptical reporter at Huffman Prairie, they presented the history as if the local invention was preordained to remake the world. While contextualizing how aviation affected the non-airborne world, organizers failed to contextualize aviation history by including all its warts, like the Wrights' patent conflicts.

The second issue was the risk posed by flying aircraft over fifty years old and no replacements parts have been manufactured for almost as long. While the public relished seeing historic aircraft of all eras on display, both in the air and on the ground, everyone must address that these irreplaceable aircraft will wear out.

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<sup>341</sup> "Colorado Air Show Crash Killed 20 in 1951."



Of the five fatal accidents in 2011, four involved airplanes over fifty years old and two of them were clearly the result of equipment failure while in flight. Aircraft operators, insurers, government aviation officials, and the public must to decide when original aircraft should be permanently retired from the skies. Despite the risks, many enthusiasts believed flying aging aircraft was the only proper way to honor aviation's role in American and world history. Others consider such actions to be reckless and a threat to future generations understanding the evolution of powered flight.<sup>342</sup>

Regardless of when and how historic aircraft are grounded, every era of aviation history will continue to be contested at the air show. Like a Hollywood movie or a scholarly work, historic aircraft owners chose which facts and myths to focus on during their displays. Sadly, for the past fifty years, most promulgated an American myth where all enemies were vanquished through individual valor in the air supported by an enthusiastic home front. Facts detracting from this righteous American hegemony were either minimized or outright ignored, while critics were largely drowned out by the patriotic fervor of operators and audiences alike.

This project remained focused on air shows in the United States simply to create boundaries for examining records. The question then arises if the issues of public safety, industry marketing, and military public relations are universal to aviation throughout the world or unique to America. The presence of other nations at American air shows, like the Brazilians and Soviets in Dayton, and the Royal Air Force Red Arrows at Transpo '72, suggests international military officials perceived the same potential outcomes at air shows as Americans. However, the published history of most air shows or air show performers were primarily glossy photo albums with text consisting of attendance statistics and notable aircraft performances.

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<sup>342</sup> Sauer, *Factual Report Aviation*. Sorensen, *Preliminary Report Aviation*. Sorensen, *Factual Aviation Report*. Piagens, *Preliminary Report Aviation*. Monville, *Preliminary Report Aviation*.

To fully break Roger Launius' "fetish of the artifact" for air shows, scholars must continue to delve into the air show community. Numerous people have written about the Experimental Aircraft Association's annual air show in Oshkosh, Wisconsin. However, these authors focus on the chronological development of EAA's program from being a component of other air shows in the 1950s, like the Winnebago International Air Show and Races to the behemoth it evolved into without really examining the relationship of the EAA to the larger world. People within aviation circles readily link the name "Oshkosh" to air shows, while non-aviation aficionados normally are shocked that the similarly named children's clothing company, Oshkosh B'Gosh, reflects a real place. This begs the question, does the largest air show matter if many Americans have never heard of it?<sup>343</sup>

Questioning the broader impact of Oshkosh leads to even larger questions for air shows overall. For all the effort industry, military, and local officials put into staging an air show, how much of their message does the public actually absorb and accept? As was apparent during the Centennial of Flight in 2003, numerous Daytonians found the programming to be an insult to the memory of the Wright Brothers or too blatant a commercial for contemporary military products. Beyond these anecdotes, no one has extensively evaluated the public's response to the air show messages. The staff at the International Council of Air Shows commissioned audience studies but these primarily investigated the demographics of who attended air shows, rather than why they attended and what they found memorable. While this study demonstrated air show organizers sought to educate as well as entertain, both the industry and scholars will benefit from understanding the effectiveness of these communication methods after a century of

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<sup>343</sup> Launius, *Innovation and the Development of Flight*. Downie, *The Oshkosh Fly-In*. Jill Rutan Hoffman, *Oshkosh Memories: Reflections on the World's Greatest Fly-In* (New York: Writer's Club Press, 2000). Cole, *This Is EAA*. Lande, Oshkosh, *Gateway to Aviation: 50 Years of EAA Fly-Ins*. Nigel Moll, *EAA Oshkosh: The World's Biggest Aviation Event* (London: Osprey Publishing, Ltd., 1985).

implementation. The Wright Brothers and the barnstormers introduced Americans to aviation through the air show, but it is unknown if post World War II air shows effectively continued the education process.<sup>344</sup>

Air shows in America remain an ambiguous form of edutainment. Organizers of all types honestly claimed to hold air shows because they served to inform spectators about the state of the American military and aerospace technology, while also teaching the history of aviation. Millions of Americans attended air shows every year, while enthusiasts traveled thousands of miles to see unique air shows, like EAA's AirVenture or Old Rhinebeck Aerodrome. However, many millions more remained ambivalent towards air shows or they were only aware of them when the media sensationalized a crash thousands of miles away.

It is unknown if air shows will remain on the periphery of mainstream popular culture. Future events could catapult air shows back to relevance like in the early 1900s or lead to the wholesale elimination of air shows for financial, environmental, or safety reasons. It all depends on how air shows organizers and performers attempt to engage with their audiences.

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<sup>344</sup> "Air Show Facts".

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