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# Autobiography of DANIEL J. TRACY

Modeler since 1951      Age: 53 (1999)      AMA Number: 614

Written & Submitted by EFS (3/97)

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## Career:

- Produced museum-quality models for The National Air and Space Museum
- Built a 1/16" scale model of the Curtiss R3C-1 racer for Dr. Paul Garber at the age of

11

- Flew competition – Control Line speed, FAI Free Flight, Nordic F1A, Wakefield
- A Technical Fellow of the Boeing Company; employed by Boeing for 32 years
- Built scale model of Avro 504K for the Smithsonian traveling exhibit, On Miniature Wings

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*In 1999, the Smithsonian Institution created a traveling exhibit on model aviation, called On Miniature Wings. It traveled the entire country, giving the average citizen the history of model aviation and its importance in the development of many skills and concepts derived thereof. It chronicled the biography of a number of famous modelers that made all of this possible.*

*This is a sample of the text that was used by the Smithsonian in that exhibit. This was submitted by Gail Spillsbury, the editor in charge who put this exhibit together.*

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## Daniel J. Tracy: My Modeling Story

*Building flying and scale models involves two different mindsets, and most people find the approach that suits them best. The flying models are scientifically immediate and probably have more relevance to a scientific career. Display models, or scale models of real airplanes, involve history. Young people who study and build scale models train their observation skills, especially with regard to aviation history.*

*- Daniel J. Tracy*

My father Charles was the most influential person in my early model aviation career. He had what he called the "pipeline," where youngsters including myself started out very young in aviation and often ended up with a career in the field. My father was elected to the Academy of Model Aeronautics (AMA) Hall of Fame and you can be sure that I was his favorite pipeline success.

I was born in Bellevue, Ohio in 1945, and first became conscious of model airplanes at the age of three. Growing up, I participated in all types of model aviation activities, including building scale and flying models. At age 10, I won the Weatherhead Trophy at The National Model Plane Exhibit in Cleveland, Ohio, and continued to win that trophy for many years. My scale model activities attracted the attention of museum curators and soon I was building and selling models to museums – eventually throughout the United States. My most notable customer was the Smithsonian Institution's National Air Museum (later the National Air and Space Museum) in Washington, D.C. Over the years Paul E. Garber, the museum's curator, became a close friend of mine. My first project for Garber was to build a 1/16" scale model of the Curtiss R3 C- I Pulitzer Racer. I was 11-years-old at the time. Today, 30 of my models are in the Smithsonian

collection.

I flew Control Line speed and scale models throughout high school and college. I started flying Federation Aeronautique Internationale (FAI) Free Flight competitions in 1958, and in 1959, at age 13, flew in the eastern U.S. Finals where I placed 3rd in the Nordic FAI gliding event. At that same time, I followed in my father's footsteps and flew the Wakefield event, begun by Charles Wakefield in the 1920s. This is the one of the most difficult endurance events and the oldest in aviation history; it has always captivated me.

In 1967, I graduated from The Catholic University of America, with a bachelor's degree in aeronautical engineering. The Boeing Company hired me two months before graduation. My mind was filled with the history, lore and privilege of flight. As a graduation gift, my father took me to the 1967 Paris Air Show, which I remember as being a culminating moment in my life. Currently I am a Technical Fellow of The Boeing Company, where I have been employed for 32 years. As a configuration design engineer, I have participated in many notable aircraft and spacecraft projects.

The benefits of building model airplanes are many and not always obvious to young people starting out. A great deal of subtle education takes place that is both painless and fun. Modeling involves control of an artistic medium, which can be immensely satisfying. If the model flies, there's an additional bonus because something you've created now appears to be alive.

Building flying and scale models involves two different mindsets, and most people find the approach that suits them best. Flying models are scientifically immediate and probably have more relevance to a scientific career. Display models, or scale models, of real airplanes involve history.

Young people who study and build scale models train their observation skills, especially with regard to aviation history, and this talent can lend itself to certain wonderful careers.

My personal inspiration has been building flying models, especially FAI competition models. I consider this activity a scientifically stimulating hobby and sport. It has all kinds of benefits, including being healthful. Model flying takes place outdoors in open spaces with people of the same interest. The competitions are extremely difficult and only experts participate.

Building the Avro 504K scale model for the Smithsonian (currently in the On Miniature Wings exhibition) involved two special features, the history of the plane and the rigors of design and construction. The Avro 504K was used in World War I to train fighter pilots. After the war, pilots bought them and converted them to business planes. These war machines became the first business aircraft in history. To build an Avro 504K for the Smithsonian, I had to do research. The plane's color scheme posed a particular problem to solve. When approaching such a project, modelers also deal with strict criteria such as dimension, scale, durability and the model's outer surface. The overall success of a project is gauged according to the accuracy of such features.

Building an FIB Wakefield model is completely different. The model must fit set specifications in order to compete, including platform-projected area of wing and horizontal tail, the minimum weight allowed and the flight scenario under which the plane will operate. Although the plane's design has historic relevance – since its construction relates to what other model builders have achieved over the past 70 years – its construction involves greater creative engineering than a museum-class masterpiece. Museum models require a lot of knowledge of materials and their stability. Their object is to remain completely static; whereas a flying model is exactly opposite – it's supposed to stay dynamic and fly for a long time. Working on one kind of model polishes a builder's skills for working on the other kind. For example, becoming an expert propeller carver for museum models helped me perfect operational propellers for Wakefield models.

Throughout history people have been enamored with models, perhaps because we ourselves long to feel larger than life. We like to make small intricate things we can hold in our hands and control. My father once said, "Plane building helps you use mind and hands in a pastime that's fun. It teaches you how a real plane flies and other scientific things. It brings you into friendly rivalry with modelists your age in contests and exhibits. It's one of the country's great hobbies."

*Daniel J. Tracy*

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