

The Consummate Pilot: What makes a Sully?

Jane Gardner Birch plus 6 noted instructors/pilots/industry leaders

We were all mesmerized on 1-15-2009 by the breaking news and pictures of American Airline #1549 making a dramatic controlled landing “onto” the Hudson River near midtown Manhattan. Captain Chesley Sullenberger methodically reacted with exact precision to each element of the crisis that engulfed him. He and his crew oversaw the water evacuation of all 155 passengers. With a less skilled pilot, this could have been a horrific tragedy. **What type of person, background and training produce a pilot with Sully’s level of accomplishment?**

Sentimental Journey asked me, an author, to submit an article for their 2009 program. While writing “They Flew Proud” (my father was a flight instructor in WWII for the Civilian Pilot Training Program and a local airport), I was moved by a universal truth that was written in 2005 by his student who learned to fly in 1945. It’s timeliness to the Miracle on the Hudson was unmistakable. Retired Navy Commander Dick Mackell graciously penned this for the back of my book. His photo aboard an aircraft carrier in ’64 is also in the book. He wrote:

“In April 1945 a dream came true for an excited teenager: a long awaited flight in a Piper J-3 with instructor Gardner Birch. It launched a 20 year career in Naval Aviation from props to jets with over 600 carrier landings on straight and angled decks. There was something special in the guidance and inspiration received from the beginning. Gardner Birch was an unflappable, affable professional. Many years later, during two tours instructing student pilots in the Naval Air Training Command, there were subtle flashbacks to lessons learned from this fine man. Whether it is landing a Piper J-3 on the sod strip at the old Grove City Airport, or a Douglass A-4 Skyhawk Jet onboard an aircraft carrier, the lessons needed for a successful landing are the same. Success begins with the proper start from an accomplished instructor, such a person was Gardner Birch.”

What truths for becoming a consummate aviator did Dick Mackell experience 65 years ago that are still current and timeless? Not being a pilot, I posed the question **What type of person, background and training produce a pilot of Sully’s level of accomplishment?** to six noted, respected aviation instructors/pilots/industry leaders for their best advise and beliefs. May their collective wisdom produce safer flying for all.

Eighty one year old Dick Double was another of my father’s students. Dick still has his pilot’s license, and his own plane and hangar in Long Beach, CA. He likewise, became an instructor, teaching over 2500 students ground school, and 6000 hours of basic and instrument flight, all while working as a professional in the oil industry. Birch and Double partnered in buying a Piper PA 12 in ‘47 for \$2400 when Dick was only 19. Gardner Birch would have never risked \$1200 with anyone who was not highly skilled and very exceptional. Dick feels strongly on one initial quality of a pilot’s pilot. “He (or she) should have a great love for flying at a very young age. It could be being involved with radio controlled aircraft models, joining the Civil Air Patrol, taking an odd job to earn money for flying lessons, spending all his free time at an airport. He’ll earn all the required ratings before age 21. Somehow, he gets the required hours and a job: whether he

needs to work for free or join the military. If the desire is strong enough, he will dig deep and do what is necessary to make it happen.” Someone or something will always challenge your desire to fly: find /create a supportive environment. Not surprisingly, that is precisely the course of action that Dick, from a young age, took to achieve his dream . Not surprising too, that many aviation groups, especially the EAA, have this belief too, and offer free flights and special programs to youth, to encourage and promote an early interest in flying.

“To some a great pilot would be the captain of an airliner cruising along at 30,000 feet, the apparent top of the pilot food chain. To others it may be the modern day fighter jock fearlessly flying a multimillion dollar ubertech missile delivery system. Or perhaps it is the corporate pilot who can effortlessly juggle a glass cockpit and ATC (Air Traffic Control) as he or she delivers their clients to their destination. It might be the crop duster flying low level, dodging wires, while accurately applying the products necessary to farmers, states Damian DelGaizo, With 20,000 hours, and the owner of Andover Flight for 20 years, Damian continues. “To understand what makes a great pilot today, I like to look at what made the great pilots of yesterday. In my opinion the greatest pilots were those who served in WWII, particularly those who landed on the decks of carriers in propeller driven airplanes without any electronic landing aids or the benefit of an ejection seat. When I draw a comparison between those pilots and the modern day pilots that I fly with, I find that today’s pilots possess a much broader knowledge base and are perhaps a bit more sophisticated. But when it comes down to pure flying (stick and rudder skills), there is no comparison. So what is it that made those pilots great? You could say that people were different back then, and I do believe that they were, but so too were the planes that they trained in. They all learned their basic flying skills in tailwheel airplanes many of which were the venerable Piper Cub. I believe that the Cub, and many of similar design, demanded much more from the pilot than today’s modern trainers. I believe when you raise that bar, that the abilities of the student are also raised. It also served as a weeding out process for those mediocre pilots, who in today’s world, are processed through the cookie cutter assembly line flight schools.” Damian specializes in the lost art of tailwheel training which requires those special honed skills and extra talent. It demands that the student learn to fly the simple plane without fancy instrumentation: alone, using senses (eyes, ears, feel, touch, gut-reaction) observation skills and innate judgment. He and the plane are one yet he is in command. “My opinion about pilots who train in tailwheel vs. tricycle-gear planes are based on my observations and comparisons between the pilots who trained me, many were left-overs from the 1930-40 era, and the modern day pilots that I routinely fly with.” I’m glad to report that taildraggers are back in vogue: their endorsement gives one cachet, bragging rights, swagger, and higher proficiency skills. Luminaries Harrison Ford and James Brolin are students of Damian. The bar is raised again, the stick is back!

Brian Robbins is a NAFI Master Flight & Master Ground Instructor who was voted FAA Eastern Region Flight Instructor for 2007. “Thinking about what makes an expert pilot, I believe the first trait is one’s ability to maintain beginners mind. Beginners mind is having an open mind to life experiences and the ability recognize and use these experiences in the future. You may know someone who seems to know all there is to know about aviation. However, if they do not possess beginners mind, then to me they are knowledgeable but not an expert. I have always said when I think I know it all I’ll stop flying because at this point my attitude will not be that which I consider safe to act as pilot in command.”

“I also believe the ability to give fact and be able to back it up plays an important role in flight instruction. The best pilots I know can show you where or how they found the information they give. Unsupported hanger talk can easily become part of the information stream. Take the Piper Tomahawk for example (featured model at this years SJ); a wonderful aircraft that I’ve “heard” has a tendency to over rotate on takeoff. The difference I’ve found is that it has a T tail configuration that is effective with sufficient airspeed. Other aircraft have tail configurations that are effected by the thrust of the propeller at a lower airspeed. Not understanding this, new Tomahawk pilot expect results at the lower airspeed and when it does not respond they increase the control inputs. It’s about this time that the T tail becomes effective and with the extra control input you get the extra response. If the pilot understands the behavior of the T tail, they apply the normal control input and wait for sufficient speed to be reached. In an effort to appear to be an expert, there are those that give incorrect information when in fact they do not know. The true expert is the one who openly says “I don’t know” and will say lets find out.”

“Besides being knowledgeable, the best pilots observe the environment around them. The expert will notice the wind reeking havoc on arriving and departing aircraft then reevaluate a planned flight because these observations didn’t sync with weather reports. Technology is growing in the typical general aviation aircraft and with it comes the fascination of the magic new boxes in the panel. The best pilots know how to use the new technology to improve safety while still observing the surrounding environment on a flight.”

Brian continues, “I have had the pleasure of flying with pilots that can predict the future. They will say this or that is going to happen and it usually does further along on a flight. These pilots will notice a structure that will disturb the prevailing wind at the runway threshold and the otherwise smooth final approach will pass through it while landing. They will advise you to watch for turbulence near the runway on landing. When their prediction becomes reality you think, how did they know that was going to happen? In my early years of flying, I was amazed by these masters of flight. Eventually I realized they shared one thing in common, all were able to apply the abilities I’ve stated above.”

“There is an old saying that a superior pilot is one who uses his superior judgment so as to not have to use his superior skill, ” says Barry Valentine. Barry earned the distinguished flying Cross in the Air Force, he served as acting FAA Administrator in the Clinton years, and was on the Board of Directors for the EAA for 10 years. “What makes a pilot’s pilot? Attitude and judgment. Recognizing that a pilot’s license is simply a license to learn and that all flights, no matter how experienced the pilot is, are proficiency flights on which something is learned and skills are honed. That is the right attitude. But the best of skills must be coupled with judgment. Today’s pilots are taught that flying is an act of risk management. That is where good judgment comes into play. Experience is, of course, important in flying as in virtually all endeavors. In aviation we generally equate experience with hours logged. This can, however, be deceptive. Does 10,000 hours in the logbook mean that the pilot has 10,000 hours of experience.... or 1 hour of experience 10,000 times? Approximately three quarters of all accident contain an element of pilot error...to often the sole element. The right attitude and good judgment coupled with the right experience and skill are all necessary for safe flying.”

“I started flying at age 14 as a cadet in the Civil Air Patrol and pursued this passion ever since. Now with 32 years of aviation experience, Ivan Klugman is an international Boeing 767 captain with a major airline. “I soloed at age sixteen and had my CFI at age eighteen. I flew the popular trainers of the time the; Cessna 150, Piper 140 and my first complex airplane the Piper Arrow. I instructed every day of my flying career in one way or another. I use my instructing skills to mentor my first officers so that when they move to the left seat they have the skills necessary to do a professional job. If I had to give you one quality that makes a superior pilot it’s the willingness to learn. I still learn something every time I fly. You can learn from every one you fly with whether it’s a student on a demo flight or the senior captain at an airline. I took a young man on a demo flight. After takeoff we entered the practice area and I gave him the controls for the first time. A few moments later he panicked and pushed the yoke full forward, locking his elbows. I looked over at him and for some reason I reached over, put my hand on his shoulder and said it’s OK, I have the aircraft. He released the controls and I took the aircraft back and landed us safely at the airport. I tried to comfort him the best I could however I never saw him again. I did learn something from him; how to deal with a panicked student. In today’s flight operations the big push is towards CRM (crew resource management) and if you really look at it, it’s nothing more than a willingness to learn from others and effective instructing ability.”

Roger Lee, King Aviation Chief Pilot and Instructor, takes willingness to learn, one step further, reinforcing it with precision practice. “When I was training for my commercial license, they placed a heavy emphasis on engine-out emergency procedures. What are you going to do if the engine or engines fail? Though in multi-engine aircraft it is highly unlikely both engines would fail, we trained for that as well: on my commercial check ride, I had 5 engine outs, and made off-field landings for 4 of them on sod fields in NJ. This training came in handy years later. I was asked to give a man a ride in a plane my boss was planning to sell. Pre-flying the aircraft, I discover some contamination of the fuel, but discarded that and determined the aircraft was safe for flight, my passenger was a certified mechanic and had just given the plane its annual inspection. We took off and things went well for 3 flying hours. Then I experienced what NTSB would describe as “uncommanded thrust reduction”. The plane was losing power-I hadn’t touched the throttle-we were down to less than 1000 RPMs. This is where my training kicked in: I was trained and teach the ABCs for just this emergency. First, you realize that you ARE landing. A: Airspeed: every plane has a best glide speed which will give the longest time aloft, and the greatest radius for landing possibilities. B: Best place to land. I saw a cow pasture within gliding range. C is for emergency checklist, but we were below 2000 feet, I had no time. I had to avoid a cow on the approach, but since I’m talking to you today, you can assume I made a safe landing. When I tell this story, I always think, if it was going to happen to anyone, I am probably the best it could happen to, because I have been training people for this situation all the time. I am sure Captain Sully did the same thing (ABCs) as soon as he heard the impact (geese strike), or saw both engines fail. I saw him describe that he immediately pitched for glide, and looked for a place to land (co-pilot Skiles takes the checklist actions).” And with those ABCs, both made a perfect landing. Going back to training in the 1940s, Dick Double relates, “ABCs as such were not taught, however we did do a lot more on emergency landings-----actually down to the fence posts in the field. Checklists were unheard of. Air speed is probably the most important item in aircraft today. Also, don’t drop the airplane to fly the RADIO---DON”T quit flying the airplane--

-as long as you fly the plane you are still in business.”

Aviation is an art and a science: a human and a plane. Airplanes have made dramatic advances in the last sixty plus years. Have piloting abilities progressed to that extent? From reading the thoughts/ideas of our contributors, the human equation was highly advanced even years ago when instructing in a basic cloth-covered, minimal instrument taildragger was the standard way. My father and other Civilian Pilot Training Program instructors taught 435,000 students to fly with these methods. Sully Sullenberger’s first, and most admired instructor, was also an ex-CPTP instructor: Sully learned his skills from a “stick-and-rudder” man, L. T. Cook Jr. He states in his new book, ***Highest Duty: My Search for What Really Matters***, “Mr. Cook's lessons were a part of what guided me on that five-minute flight (onto the Hudson River in January 2009). He was the consummate stick-and-rudder man, and that day over New York was certainly a stick-and-rudder day.”

Can we advance forward in flight training by using some of the timeless standard ways, values, and ideas of the past?

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