

RISE

How do you begin the impossible?

They say the journey of a thousand miles begins with the first step, but the first step is rarely obvious. Imagine standing at the base of Everest, hands on your hips, peering with craned neck up into the clouds. You know you must begin somewhere, but starting up the mountain now would be fatal.

You have choices to make. Mentors to seek. Research to conduct. Gear to buy. Skills to acquire. Strength to build. The choices multiply in a combinatorial explosion. The immensity and open-endedness of the challenge is overwhelming. The fear of a wrong move paralyzes you.

Who are you to dare this?

And yet you need to do something.

So you do your best.

You pick that first step.

And you begin.

I cringe when I recall my first steps.

We needed a team, so I emailed everyone in my network who had relevant knowledge or skills. I set up a project management site, sent out invites, and watched enthusiastic volunteers pour in. We quickly hit 50 members. I sent daily updates, assigned research tasks, and drove discussions.

The first week was exhilarating. The second week, message traffic fell by half. By the third week, I was mostly talking to myself. I shut down the site and started over with the handful of active contributors.

I knew little about drones so emailed everybody I could find with relevant experience: college students who made the news with a burrito-delivering drone, a San Francisco startup that promised drone delivery of prescription medications, a YouTuber who designed custom planes out of Dollar Tree foam board. I barraged them with questions.

In retrospect, my ignorance was appalling. I told them I wanted an aircraft capable of delivering 50 pounds. I gradually learned that goal was outrageous. Later, we pared our goal down to five pounds, then two. Even that pushed the state of the art. My emails must have sounded amateurish, which they were.

But I got replies. And slowly, I learned.

I bought a radio-controlled plane and an autopilot.

I never expected we would build our own drones; we would need to find a partner organization for that. However, I believed in getting one's hands dirty. When you fully immerse yourself in a new domain, see things with your own eyes, and hold technology in your own hands, you gain insights you never would otherwise.

I felt sick with dread the first time I sent that plane into the air. Amazingly, the plane stayed airborne. With each orbit around the field, my confidence grew. Eventually I got cocky and tried a loop. The subsequent crash sheared the motor off the mount.

I waited a week for replacement parts. I learned about glue.

The next time I flew, I busted all my propellers. I waited another week for replacements.

When the autopilot and accessories arrived, I learned hard lessons about connectors. Nothing fit together. An angry night of

googling revealed that the RC world used a gazillion mutually incompatible connectors. I ordered wire cutters, more connectors, and a new soldering iron.

Months passed this way. I spent two maddening nights troubleshooting the ground control station, only to discover that key features weren't implemented yet. I had baud rate problems. A defective GPS unit. Prop spinners the wrong diameter. Weight and CG problems. Wingtip stalls. Stripped servos. Most fly days ended in a rapid crash and a week or two of repairs or waiting for parts.

It was absolute hell.

Any worthwhile endeavor awakens a malevolent force that Steven Pressfield calls Resistance.⁶ It is as certain as death and taxes. Resistance will thwart your ambitions, shatter your dreams, break your spirit, and leave you to slink off into addiction or tired mediocrity—unless you fight. Overcoming Resistance is the great battle of any creative person's life.

From the day I started the Syria Airlift Project, I warred against Resistance. I struggled to build a team. Few people believed in the project. The engineering was insanely difficult. Each step forward gave us five more problems to solve. Every setback sent me into an emotional tailspin.

I refused to give up.

At the end of my worst days, I pulled my dog-eared copies of Pressfield's books off the shelf and reread his passages about battling Resistance. I journaled. I translated every failure into a list of lessons learned. I reminded myself that every failure provided an opportunity to learn.

My wife Wendy and I lived and breathed Syria. Wendy also spoke Arabic and had a passion for the region after our years in Jordan. We had Syrian friends. When we watched our three small children sleep, we thought back to that horrific photo of the bread

line in Yarmouk. Children were dying this very night in Aleppo and Hama and Homs. Sieges continued to unfold throughout Syria and would only get worse.

I was in a position to do something.

That was enough motivation to keep fighting.

When you stand your ground before Resistance, the universe responds with a countervailing force that Pressfield calls Assistance.

I met Daniel at the local RC flying park. He was a quirky loner who spent lazy days chain smoking beside his truck. Every half hour or so he would rise from his camp chair, grind his cigarette butt into the grass, and launch an RC plane. Five or ten exhilarating minutes would follow, and then he would put the dead battery on the charger, settle back into his chair, and light up again. Daniel took an interest in my work and gave me small pointers. His presence and simple friendship infused me with strength.

Assistance arrived again a month later when I stalled my thousand-dollar fixed-wing drone over a tree line. It vanished into the canopy with a sickening crunch. Daniel whistled grimly. I spent hours trudging through snarled underbrush, listening to the periodic heartbeat of the drone somewhere above. I couldn't spot it amidst the impossibly thick foliage.

This was a devastating setback. I had already poured a personal fortune into the work. I couldn't afford to replace this drone.

My friend Zach, a hunter and experienced tree climber, learned that I needed help. He made three separate trips out to the field with tree-climbing gear, bamboo poles, and duct tape, climbing to potentially fatal heights until he found and recovered the drone.

This act of selfless generosity overwhelmed me.

I had rarely been reduced to such dependency. Letting go, and entrusting myself to others, felt dangerous and exhilarating.

Shortly after that crash, I graduated from SAASS and moved to California. SAASS had chosen me for the rare privilege of earning an Air Force-sponsored PhD, with a commitment to eventually join SAASS faculty. I planned to spend two months of leave with family in Napa before beginning my studies at Stanford. That meant two months to surge on the Syria Airlift Project.

The disasters continued.

My first week in Napa, I visited the local RC airfield. Two friendly pilots came over to say hello. The first flight went well, although I landed hard. On my second takeoff my plane lurched abruptly to the left, straight at my new friends, its ten-inch propeller whirling at several thousand RPM. They dove for their lives.

I discovered afterwards that the first hard landing had cocked the motor mount askew. I apologized profusely but their mistrust was palpable. I was too humiliated to go back.

I began flying at a local park instead. Every morning at 5:30 am I lugged my gear up a hillside to a picnic table overlooking acres of vineyards. Nothing worked right. Every flight was erratic. Strange bugs occurred. My GPS would not acquire a lock. I worried about fire. Joggers watched me suspiciously, and a woman complained that I scared her dog.

I was learning, but too slowly.

I finally moved to Stanford.

Here was one of the greatest concentrations of technical talent in the United States. Here I would find brilliant, big thinkers who wanted to change the world. Here, finally, I could build a team.

The best place to fly was Lake Lagunita, the dry lakebed planted in the middle of campus where Stanford's drone club operated. I couldn't have asked for a better site. It was huge and

only five minutes from my new home.

I visited at my first opportunity.

I preflighted my plane, armed the motor, and threw the plane into the air.

The ground station immediately blared a warning: FENCE BREACH.

I felt a horrible sense of vertigo. The plane had entered an automatic failsafe mode and ignored my frantic efforts to take over. It shot towards the horizon, becoming fainter and smaller until it disappeared entirely. The vertigo turned to dread.

I had just experienced what drone pilots call a “flyaway.” Later, I learned that a combination of three separate software bugs in the ground station software caused the malfunction. I had not flown this particular plane since SAASS, and it erroneously thought it was still supposed to be in Alabama. When it found itself airborne in California, it activated a geofence failsafe and embarked on a cross-country flight home.

The plane was spinning a heavy ten-inch prop at thousands of RPM through hilly terrain where hikers roamed. A strike could be fatal. Trembling, I drove to the foothills. I hiked for hours, lugging around the ground station laptop and an antenna, listening for an electronic heartbeat. Nothing. My best estimate is that the plane flew approximately 20 miles over the densest part of Silicon Valley at roughly 500 feet, passing between two major airports, before its batteries died and it glided to a crash landing. My name and phone number were taped inside.

I sat trembling on the sofa most of the evening, waiting for the police to knock on the door. Wendy and I made contingency plans in case I went to jail.

The knock never came.

After two or three days, I began to breathe again.

“You don’t have enough experience,” Wendy told me. “You’re

going to hurt somebody. You need a partner.”

I promised not to fly again until I found one.

I met Brandon through the Stanford drone club. He was an experienced RC pilot languishing several years into a Mechanical Engineering PhD program. His grueling PhD experience had damaged his self-confidence, and he was questioning both his abilities and his life trajectory. The Syria Airlift Project infused him with purpose.

We began to fly together each weekend.

After more than five months of struggling, I was no longer alone.

Assistance had arrived again.

A team was born.

In October, I pitched the Syria Airlift Project at an innovation competition. I was a nervous wreck going in, but once I took the stage, blazing self-confidence took over. We won the competition, garnering \$3,000. The third-place finalist donated his own cash prize. After months of spending my own money, the prize money gave us a lifeline.

An even bigger prize came a few days later, in the form of a phone call from Jessie Mooberry, an exuberant Quaker pacifist who spoke at the conference. She wanted to volunteer. Within days, she scheduled meetings with humanitarian organizations in D.C. and New York. Over the next few months, Jessie stood up a nonprofit called Uplift Aeronautics to run the Syria Airlift Project. Uplift became our new identity.

Word spread. Our project appeared before a UN panel on humanitarian drones. The media reached out. Uplift appeared in everything from the Washington Post to the leading magazines for technical hobbyists.

A colleague at Air Force Headquarters briefed the project to the Chief of Staff, the highest ranking general in the U.S. Air Force. This was a critical development; I had always viewed our project as an Air Force contribution that the U.S. could employ in humanitarian crises. We only organized as a nonprofit out of necessity, but for the paradigm to survive, it would *have* to transition into the Air Force. The Chief apparently loved the work but no help ever came of the meeting.

Our team grew. We attracted a top-notch law student who helped tackle the complex legal issues in play, as well as a Syrian engineer studying in the U.S. Other Stanford students began to help.

Our vision was no longer just a dream. We had a team, a little funding, and growing external support. The Syria Airlift Project actually stood a chance.

EATING GLASS



*The Inner Journey
Through Failure and Renewal*

MARK D. JACOBSEN



CONTINUAL ASCENT

Learn more and sign up for my newsletter at
www.markdjacobsen.com