

EIGHT PUFFS OF SMOKE

by Kate Cumiskey

Mission Time	Event	Elapsed	Time (secs.)	Source
GMT (hr:min:sec)				
16:38:00.846	Eight puffs of smoke (from 0.83 thru 2.500 sec MET)		0.836	E63Camera

--Report of the Presidential Commission on the Space Shuttle Challenger Accident
(In compliance with Executive Order 12546 of February 3, 1986)

Nick Flynn, who wrote about the Abu Ghraib tortures in his memoir *The Ticking is the Bomb*, says what we write is not all lies; not all perspective either. There are facts. We don't always tell the same story, but that doesn't erase that at a certain time in a certain place events did occur.

In December of 1985, my three-year-old son Mikel asked what Grandpa's job was. So, I asked Dad to take us to his office. Mother went with us, and we visited the Cape on a Saturday morning. The last time I'd visited my father's office was the year we moved to Florida. 1966; I was three years old. There'd been five of us, then, and Mother was pregnant with Philip. Dad's office was a desk in a sort of open, three-sided cubicle with pictures of us covering the walls. The desk was utilitarian, gray metal, and even to me it was obvious he didn't spend much time there. The Cape itself was small, as far as buildings go, and new-feeling—raw. Lots of fresh-turned dirt around the new tar and concrete of the parking lots and buildings. The swamp could literally be *felt*; it teemed with life. We went into the firing room, which was impressive: banks of machines, what I'd later know as computers, with people who looked like Dad in front of them; men in dark trousers and white, short-sleeved shirts, skinny ties, pens in their pockets, badges with their photos clipped to those pockets. All looking very, very smart, and very, very busy.

We watched from a room with glass tilted at an angle so we looked down on the room. There were seats in rows behind us, like a stadium, but I didn't sit down. I had to go.

"Jimmy," Mother said, "Where's the bathroom?"

“Uh—”, I was three years old, and notorious for not letting them know I needed to go until it was almost too late. I was already beginning to dance. “I’ll take her.”

He took me by the hand and out of the viewing room to a door that read *Men* and started to go in.

“I’m not going in there.”

“Ummm. Okay.”

He picked me up, carrying me easily on one arm with his other behind my back, legs and mary janes dangling along his belly. He had to take me across the parking lot to another building before we found an acceptable Ladies room. There wasn’t one anywhere near the firing room.

By the time Mikel Jon asked to visit Cape Kennedy, I was twenty-four. Things had definitely changed. I felt a thrill of pride when we pulled up to the North gate on Kennedy Parkway, and Dad said, “Hello, Charlie.”

“Hi, Mr. Davis. Been a while since we saw you down here on a Saturday morning.” He glanced enquiringly into the car.

“I’m bringing my daughter down to see my building. This is my grandson, Mikel Jon, and my wife Anne.” He smiled as he took his badge back.

“Well, good! Have a good time.” He waved us through.

Dad explained that he wanted to show us his new building, first. I’d heard him talk about it, bemoaning the catch-as-catch can way he’d had to house the logistics division he created when he took himself out of design, leaving it to the “Kiddie Corp.” He was proud of the young rocket scientists he’d helped through an internship program with the state University system, and others through the annual career day presentation he made at our local high school. He was always looking to diversify the workforce from the all-white, male crew of the early program.

When Dad realized, years before, how millions of dollars were wasted through the lack of logistics, he started that division. He'd always been a troubleshooter. One of the things he realized was that for every working part on each Shuttle, six spares were made. He reasoned five of those were pure waste. If a part malfunctioned once, it was replaced. If it failed twice, it was redesigned. I'm not sure how popular this position was with the contractors, or how easy to implement, but logistics flourished under Dad. One of our favorite examples of the way his mind worked was this: He reasoned much money could be saved by leaving the external fuel tank unpainted. It was in use for eight minutes after takeoff, after which it left the vehicle to be fished out of the ocean. What was the point in painting it?

As with any new venture—and he'd been at this for several years now, and had quite a staff—there were occasional hitches. He'd needed a building, since logistics now included spare parts for the Shuttles. And, at long last, he had the building. It was in the final stages of refurbishing, and due open in a month.

I was surprised by the size of the thing. It was no VAB—so huge weather systems develop inside—the only building in the world where it actually rains *indoors*. But, this was impressive. We walked through a side door into a warehouse three stories tall, concrete floor echoing our footsteps. The place was empty but for tall racks in rows, shelves customized to the unique needs of the supplies they'd soon house. Three quarters of the building was warehouse, one-quarter offices with windows into this interior, a three-story indoor office building taking up one corner of a huge square space.

We walked over to the door on the lower level of the offices, went in, and took an elevator to the top floor.

Upstairs, we moved along the carpeted corridor, and Dad took us through a large room partitioned with movable gray fabric walls, head high, sound-absorbing; and modern desks that hung on the walls for support. On the exterior walls were typical offices, and from the way Dad was at home—fun loving, storytelling, trying to get a word in edgewise at the dinner table, and the way he was at the launches everything a “we” —*We did it, there she goes, fly bird fly*—I was unprepared for my father having a corner office in an ultramodern building he designed, with fine views of the VAB, both launch pads, and the shuttle runway. His room was empty but there was deep satisfaction in his voice as he stood in the sunlight by the window, turned to us, hands folded in front of him and said, “Well, Katie, you wanted to see my office. Here it is.”

He talked about the cubicles designed for maximum openness and minimum noise, with extra-thick walls for sound absorption. How the racks in the warehouse were on a support system along the walls which could be adjusted easily. The lighting, all the windows.

Hurricane strength and resistance, even though in known history no storm had directly hit the Cape. (The deciding reason the facility was put there was that the natives, Timicuan and Calusa, always went out onto the Cape when the pressure dropped, storm coming.)

And of course, just like last time we visited Dad's office, I had to go. "One of the things I'm proudest of," he said, "Is the ladies' restroom. Designed it myself."

He took me to a large, modern ladies' room, showed me in. It was spacious, well-lit, with the building colors of grays and muted orange and at least ten stalls, all worked in a way where the toilets inside could not be seen through the doorways that led into each stall. And, no doors!

After I met Dad outside he said, "What do you think?"

"Dad, the bathroom is super, but I thought the building was finished. There are no doors!"

"That's on purpose. That's the beauty of it. You flip that little occupied sign, and you don't need a door. No one can see in. Saves in all kinds of ways; repairs, time. Don't you think it's great?"

"The building is wonderful. Everything is perfect, except for that one thing. Women need stall doors. I mean it. Take my word for it."

He was dubious. (I heard, later, I'd been right. The females to work in that building refused to move in until the restroom stalls had doors.)

We finished our day at the visitor's center. The visitor's center at KSC is the unsung hero of Central Florida amusement parks. Forty miles from the Rat Palace and surrounding fantasy lands, it is a generous helping of science and fun priced far more towards its educational aims than monetary goals. The exhibits change as information is learned by the space community, as satellite images and film and technology are brought to the public. There is an IMAX theater, hands-on experiments for children, and at least one real, live astronaut. There's a well shaded, space-age playground, reasonably priced food including space rations, and best of all, the Rocket Garden.

The Rocket Garden looks like God decided to sort through the box of toys of modern man, tossing a Titan on its tail here, a Saturn V—boosters and all— carelessly on its side, there. There are lunar landers and Martian rovers and an Apollo capsule you can walk up a ramp and right through. It was the perfect place for us to finish our day.

Dad seemed particularly taken with the capsule, and I could tell it was bringing back to mind the days when he was flying by the seat of his pants, drawing with the edge of his badge, racing night and day to beat the Russians to the Moon. He strolled up the ramp, leaned over, leaned in. I looked over his shoulder.

“Oh, my God.”

Dad sagged, caught himself on the railing of the ramp, gasped for breath.

I worried that we’d over done it, that he might be having chest pains. Over the past few years he’d suffered two heart attacks, one minor, one very major, and I thought perhaps he was having problems.

“Daddy, are you okay?”

“It’s just too real. I see them there—”

I glanced in the capsule, the tiny aluminum shiny space, to see three space suits tilted back in the seats.

“I see my friends. They burned up in there. Nothing we could do. We just had to sit there, listen to them burn. It was horrible. No one could do anything, of course they tried, but it took ninety seconds to remove that door, and it wouldn’t have made any difference if it took ten. Pure oxygen in there. I’ll never forget their screams. No one, who was in that control room, ever will. But we learned. We learned. I’s the one who designed the hatch. And when I designed the new one, I made sure they could open it from the inside. It wouldn’t have mattered, they couldn’t’ve got out anyway.” Then he contradicted himself. He was in a cold sweat, and I helped him walk slowly down the ramp.

“But, it was my fault. We all felt at fault. Remember this, Katie, every flight is a test flight. It always has been, with space, and it always will be. Lately, we seem to have forgotten that.

And that's dangerous. Every flight, every one, is a test flight. And every astronaut's life is on the line."

Those were the words I was thinking of when I stood outside, shivering with my students, the clear cold day of the Challenger launch the following month. I was thinking of my father—I pictured him precisely in the spot he was standing, where he'd told me he'd stand with his superiors for the next Shuttle launch. I pictured the astronauts moving slowly, smiling, high-fiving the crew through the White Room my father designed for them. And when my eyes told my head, then my heart, what I was seeing, it was my father's heart I was thinking of.



Many years later, I spent each evening of spring break at my parents' house on the littoral island I grew up on, asking my father questions about his life, his journey from buckboard to spaceship. I asked about the Challenger explosion. He hesitated, then he told me; when Challenger blew up it did not blow up completely. The astronauts did, in fact, know something was wrong. They were told to abort. The astronauts did what they were told, aborted their mission in the air above my home and my father's home at the insistence of men on the ground below. Some of these men, including my father—who was standing in that certain spot with certain other men—did tell others not to order the launch. One man in particular made the choice to launch. This man was not a rocket scientist or a meteorologist, but an actor and a politician. However, I've never heard a rocket scientist say there is any point in perseverating on that. Many people did see the explosion although relatively few, compared, knew about the abortion. That does not change this; a button was pushed, separation achieved. At this point in relating facts at his kitchen table my father did carefully—it could be said he was being careful when looked me in the eye, lowered his voice and lost the lyric of his native Mississippi, pronouncing each word with an engineer's precision—it could be said he said carefully, *it was probably best not to let the families of the dead know the rest*. He did not see the point. He knew I wrote poems but neither of us knew I would write facts about him—he died before that occurred. To me. I believe it wouldn't have surprised my father if I met and spoke with family members of those who died in the Challenger.

It took weeks to recover the pieces of the Shuttle which did achieve separation and although not all the bodies were intact there were in fact bodies—he said *bodies*, not a *body*, but *bodies* found strapped in seats in the Shuttle on the ocean floor where the people who inhabited those bodies died. They suffocated, did not drown, did not come apart in air and die of what my husband and other paramedics call, “trauma incompatible with life,” but

died of lack of air on the ocean floor within sight of the shore where my father taught me to navigate by the stars.

When I think about facts, I think about those people strapped into their seats on the ocean floor; waiting or not waiting, awake or asleep. We can imagine them: we can imagine that they could not fall that far and be conscious. I don't see how they could. I think about what they knew, before becoming astronauts. After. What they knew right before separation was achieved, and after. I think about what my father taught me about how brave those people, every one, were. How we as a nation seem to have forgotten what astronauts really *are*, and the large, enlarging mission they own. Words like *Noble, Honor, Mission* sometimes seem lost to us; Americans. We turn our backs, turn our minds from the bravest among us, and get bogged in crippling, deadly politics; in our own armchair opinions. How little we know. And when I think about facts I think about those who are privileged to be witnesses to history, like Nick Flynn who had the daunting task of telling the truth about torture in a time when we turn from truth, muddying it. Witnesses, too, like my father, privileged to live a life of wonder and awe and honor.

My father taught me that if you know who and where you are and can visualize a point in space and time, you can get there. This is not—or is not provable—fact, but what he believed and said to me. I believe he believed that. *Look at me*, he would say. *Sitting in Mrs. Shettles kitchen after school while Mack read Buck Rogers comic books in Mississippi, where my grandmother still got her water from a springhouse and my chores were churning butter and rendering fat at hog killing time. I pictured putting people on the Moon and did that. It's one of the things*, he said, *that makes me a happy man. You are another.*

That the Challenger disaster occurred does not change, but perspective of course is important. Things do and did occur, things continue to occur in spite of our witness to them or lack thereof, in spite of or because of our participation. Or lack of it. There is torture, or lack of it; there is witness, or lack of it. Choices are made, events occur, more choices are made. This does happen.

The sky above Florida was colder than the ground. The temperature on the ocean floor off the coast was warmer than both. The white and yellow and red explosion created trails which didn't look like fireworks but like the spreading contents of a ripped up pillow, like cotton shredded and bursting out of clear, bright, blue January sky above green grass; where I stood with black and brown and white sixth grade behaviorally disordered—labeled 'behaviorally disordered'—students in Deland, Florida. We were looking up. We were all waiting for what would happen next.

For weeks after the Challenger explosion, in the evenings I'd watch the local news to see the interior of my father's building, now laid out in a grid of orange tape, twisted hunks of metal across the floor where neat racks should have been. Logistics never occupied that building while he was alive—it was taken over for the recovery effort and the brass liked it so well, they took over the offices for Headquarters. One of the Kiddie Corp, Mike Renfro—now chief of logistics at KSC—emailed me recently to let me know: “Your Dad’s building now houses logistics.”

He'd get a kick out of that.

Kate Cumiskey is a writer who lives in coastal Central Florida. She's the author of several books, including *Yonder* (poetry), *Ana* (fiction, forthcoming), *Surfers' Rules: The Mike Martin Story* (forthcoming, biography) from Silent e Publishing; and *Surfing in New Smyrna Beach* and *University of Central Florida Through Time*, both nonfiction. The daughter of a lead designer for NASA, this piece is an excerpt from her memoir, *Ded Reckoning: Navigating with my Father's Compass*. Her educational blog runs at Cumiskeyeducationgroup.wordpress.com