Why Mars?

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I've just sat down at a computer, removed my electronic key badge and my cell phone, taken a call from my wife a thousand miles away whom I dropped off at O'Hare airport this morning, and settled into this essay.

Had I went to the observation deck of the airport, I would have seen an airplane leaving every few minutes, each plane with between two and four jet engines, each engine with twenty-five thousand parts. If I sit long enough to drink a cup of coffee, I will have witnessed an ongoing spectacle as complex and expensive as the moon landings.

And this is nothing special.

My father was a production test pilot during the 1950's. Of the roughly 1800 B-47 bombers assembled, he flew in 800 of them over four years. This six-engine stratojet was the prototype of all commercial jet airliners today. At the time, they also blew up for no reason, landed with entire wings on fire, pulled outside loops because of crossed control lines, and required their crews to withstand pressure blowout training each year. This training involved reducing pressure to that of the sky at thirty thousand feet, and then removing one's oxygen mask until nearly unconscious. Still in his mid-twenties, my father left his job after four years because most of his friends were dead.

The concept of the commercial airliner we take for granted today was pure science fiction then, not because of technology, but because of reliability. My father thought the jet airliner to be absolutely impossible given the risks at the time. Flying like this demanded steel nerves.

Now it simply demands a photo ID and a major credit card.

Much is made of the idea that the shuttle is unsafe, experimental, and requires a lifelong career goal, perfect vision, and a Mensa card to even consider riding into space. The situation was not that different in 1950 with the multi-engine swept wing jet. Today I can't look out a window at my house without seeing six contrails at any given time, day or night, rounding the VOR navigation beacon a mile south of my window. Even now, over one hundred people have flown in space on the shuttle.

But even NASA seems timid about the next flight level. They wish to build a station at low earth orbit, and another close to the moon, before touching the surface again. While the International Space Station is a valid world-class research laboratory in its early construction, other such bases would require structures and supply chains to sustain them that dramatically outweigh their advantages.

NASA needs to get over it.

If you want to go to the moon, you do so. You do not pass go, collect two hundred dollars, or otherwise waste effort at the pit stop.

If you want to build a 500-ton space station, you do not launch a 100-ton shuttle, with a 20-ton cargo capacity, forty-one times. You launch 100 tons on the shuttle launch platform five times and leave the space plane home. Similarly, if you want to go to the moon, you don't first build a space station near the moon to switch crews. You either switch crews in orbit as we did in the Apollo era, or you land the whole thing on the moon. You do not waste effort on way stations. But NASA can't break its orbital funk.

To go to Mars, you invest the same money and energy in going beyond earth orbit as you currently do to visit the space station. I've visited the space station, or at least parts of it, at Huntsville, Alabama where it was checked out. I took pictures through the observation deck glass of the Destiny module. It was very impressive, but it wasn't Mars.

You need to give yourself, thirty or forty years from now, a routine that today seems like pure breathless science fiction. The first paragraph of this essay would have been perfectly at home in a Ray Bradbury story from the 1960's had it been better written. Yet you found it boring and routine because in 2003 IT IS EXACTLY SO.

Much is made of risk and cost, but look at any major hub airport and count the cost and complexities of the aircraft alone. Describe a major airport to a risk management statistician and they will think you insane. Yet there they are running like watches. You see it constantly in every contrail that crosses the blue.

We are not to be kept in a holding pattern. Humans are designed to grow and explore. We must find new places as our ancestors have done. Many, either via ship or the Bering land bridge, dared to cross a vast distance for a better life away from the familiar. Many crossed because it was the only way to continue living.

Look at what my father's era took for granted that astonished the mind of his father plowing with horses. Look at us with the electronics hanging from our belts and in our pockets, while we read files sent by chips that read magnetic signals from the hard drives using methods originally designed to pick up the radio signals from the Viking mars probes.

What do you want your children to do to astonish you in your old age? Will we give them more of the same, or will we let them grow? Will they have a chance to touch new worlds as we have touched the skies?

Do children still climb trees like in any bygone day? Do we with our fears and safety seats turned backwards still let our wee ones reach out among branches? I know it costs so to raise a child, in love and time and blood. But will children who never know the grass of their own backyards ever live on the moon or mars? Is a world where we only reach for the familiar flesh of others really safer than one where we use our hands to check for nicks in propellers?

At age 45, NASA needs to climb out the child safety seat and take the wheel. We need to put away childish things and strive again, and let someone else be childlike with wonder. Like children, for example. They need to dream, we need to do. If children do not see us model the human desire of exploration, why should they explore books or visions of distance beyond the crib? Will children who do not see challenges overcome really solve the problems that their generations will need to solve? Will they not want their children to take for granted two moons in a red sky and canyons the length of the United States? Will they not want their relatives back on earth to take for granted technologies invented for Mars yet incredibly practical in day-to-day living?

If we remain in a holding pattern for another ten years, someone my age could sit with his grandchildren watching the very same shuttles launch as he had seen at age eleven. They could grow up in a world where no one who had walked on the moon had not since died of old age.

Who could they ask what it was like to touch the moon above them? No one would know anymore. How could they hope to know if we before them have forgotten? Would they touch that we had not? In short, what is there to live for that hasn't been done? Stagnation is the enemy of the future.

Nations die this way. Many already have. It doesn't take a rocket scientist to see why.