

# Super Blunder

By Mike Rainone



In this technologically driven world, a society either leads, strives for the lead, or gets left in the dust.

In another of a line of “preaching to the choir” discussions I would like to talk about our declining technological edge in the United States. Specifically, I would like to discuss perhaps the greatest techno/political screw-up of the last 50 years. First, let me say that I am NOT a Congress beater. I’m pretty sure that among the “tough guy” set, and most engineers fall into that set, there are many that hate Congress, for a variety of reasons. As a congressional aide once told me; everybody hates Congress, but they love their own congressperson! However, Congress in 1993 made, in my opinion, the most colossal technical blunder ever committed by a governing body in this country. With that piece of hyperbole, let me explain.

In 1993, Congress killed the Superconducting Super Collider (SSC) which was to be built about 60 miles to the west of where I sit (I am writing this from about 20 miles north of Palestine, TX), in and around Corsicana and Ennis, TX. The contractors had completed the main building and 15 or so miles of the 64 mile tunnel that was to run under the desiccated Texas countryside. What began as a modest, \$4.4 billion effort in 1987, however, became a \$12 billion project by 1993, and our visionary Congress decided that we couldn’t afford it. President Clinton tried to save the project, but some of the Democrats and most of the Republicans ganged together to pull the plug.

What was the SSC and why is it important, you ask? The SSC was to be the focal point of the effort to pull the Grand Unified Theory or GUT or Theory of Everything, together to explain how the four fundamental forces, weak nuclear, strong nuclear, electromagnetic, and gravity, fit into a “unified” theory. To solve the puzzle, the high priests of physics said they needed to accelerate particles to near light speed and smash them together to simulate the conditions of the first microseconds of the “Big Bang.” To do that would require a really big, really powerful accelerator; hence the SSC. Fermilab, in Batavia, IL, wasn’t big enough, CERN on the Swiss/French border wasn’t big enough at the time, but the SSC would, like everything in Texas, be big enough, of course.

Such a powerful accelerator would have been big enough not only to get to the energy levels needed, it also would have been big enough to attract the finest minds in particle physics from all over the world. Central Texas in the USA would have become the center of that pinnacle science on the planet. It was a statement, a line in the sand that said that we, in the U.S., will lead in this and every other technological pursuit, regardless of the pain. Just like we led the race to the Moon, just like we led with Skylab, just like we used to lead in so many other ways.

Fast forward to today, and it is CERN taking the lead, with their Large Hadron Collider or LHC, coming online sometime in October, and the center of this seemingly esoteric, no application, part of science has shifted to Europe, along with the finest minds on the planet.

So what, you say? Who cares about particle physics? What possible applications could come out of such folly? Why should my taxpayer dollar be used for such irrelevant nonsense? The answer is pretty simple: In this technologically driven world, a society either leads, strives for the lead, or gets left in the dust.

It doesn’t take a particle physicist to realize that our nation is behaving like

a dinosaur; slow and lumbering, past its prime, and unaware that on its current path it is doomed to extinction. Like the dinosaur, we have not adapted to the realities of the “post asteroid” world. Our “asteroid” appeared in the form of an awakening world — especially China, India and the Pacific Rim — and we seem to be too brain dead as a society to recognize that what is going on right now is a total paradigm shift. Once the center of technology, the U.S. is relinquishing that role; and as a society we seem unaware of what got us there, or what we’ve lost.


What got us there and kept this nation ahead during the period after WWII up to now — and I am suggesting that if we are ahead currently, it’s just momentum — was the Cold War and our willingness to take risks. Think of it; the space race was a direct consequence of our fear of Soviet technological advancement. From the first satellite shots, to Star Wars (the defense shield, not the movie) we spent a significant portion of our GNP on technology; we invested in it, we exploited it, and we believed in it. Yes, it hurt sometimes, but oh what we enjoyed directly and indirectly as a result of that spending and that national investment, both human and capital.

Unfortunately, once the Berlin Wall came down, we thought we could relax, enjoy the Peace Dividend and spend some of that “gun” money on “butter.” Congress did, at any rate, as the death of the SSC demonstrates too clearly, and we have been paying for it ever since.

The bottom line is this: In this world you either lead, or you simply fade away. We lead the world in engineering and technology, or at least we once did. But how will we compete with the Chinese? Their university technology enrollment is exponentially greater; and while their population is huge, they have a governmental structure that will allow them to allocate funds as they wish, ignoring that population if it suits them. The Russians, already strong in math and physics, now have the money (thanks to oil) to do whatever they darn well please. India is simply huge, and turns out some the best engineers and scientists in the world. Meanwhile, the U.S. seems to have neither the will nor the money to compete.

How do we develop the will? I’m not sure. Perhaps a new arms race with the Russians, a Mars Mission or Moon colonization, or another X Prize aimed at small entities. I just know that we can turn this around, but it will take more risk, more innovative thinking, and it will certainly take engineers and scientists who are willing to do their own PR. Instead of griping about our professions, we should be telling our kids how enjoyable and rewarding our jobs can be.

Because if we can’t get the next generation excited about the next Superconducting Supercollider or similar undertaking, you might as well be prepared to teach your kids the immortal phrase: “Would you like fries with that burger, sir?”

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