

From Canyon to Cosmos

In *Great Mambo Chicken and the Transhuman Condition* (published in September by Addison-Wesley), author Ed Regis profiles people involved in "science slightly over the edge." The following excerpt, from the chapter entitled "Truax," picks up after stuntman Evel Knievel's ill-fated 1974 jump over Idaho's Snake River Canyon in the Sky-Cycle X-2, an open-cockpit rocket designed by private launch entrepreneur Bob Truax.

The X-3 project began when Evel Knievel came up out of the canyon, unharmed except for the cut he got on his nose when he jammed his visor up. Knievel claimed then and forever afterward that he never let go of the stick, and Truax, after inspecting the rocket, agreed, deciding that the parachute mechanism had failed on its own. Anyway, when Knievel climbed up out of the canyon and saw Truax standing there, the first thing he said was, "Well, Bob, that's going to be one hell of a hard act to follow. What else you got up your sleeve?"

Truax had already given the matter some thought. He was impressed by the way Knievel's daredevil acts generated truly massive cash flows. Others were similarly impressed, and soon enough Truax was inundated with all sorts of suggestions for follow-up ventures. A group of Japanese businessmen, for example, wanted to know if Evel Knievel could rocket over Mount Fuji. They even flew Truax over there to assess the matter.

"Technically, it could be done," Truax told them, "but not economically or efficiently." Knievel, though, was always ready: "If Truax says go, I go."

But Evel Knievel would never make an assault on Mount Fuji. Truax had even better things in mind, so when Knievel asked him what they'd do next, Truax's answer was, "Well, if you can scare up about a million dollars, I think I can make you the world's first private astronaut."

It was an altogether reasonable proposition to Knievel, who'd known a few astronauts in his day and already had a hankering to join the club. He gave Truax a small "research grant" of about three

thousand dollars to see what he could find out about costs and so forth, but not long afterward Knievel dropped out of the project entirely. He'd gotten into an unfortunate and expensive fray with an associate and no longer had a million dollars for this or any other purpose. But Truax went ahead on his own, for the project appealed to him on several levels. For one thing, launching the world's first private astronaut into space looked to be the ultimate in amateur rocketry. A single individual—he, Bob Truax—would challenge the mighty gods of outer space, and would prevail, with no government help whatsoever, no NASA, no military, no nothing, just his own ingenuity and spare parts. It was a great idea, probably the single best thought he'd ever come up with.

And there could be some money in it too,

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what with sales of TV and film rights, the book, the magazine articles, all sorts of subsidiary rights, residuals, and God only knew what else. He once asked ICM—International Creative Management, publicists, author's agents, deal maker to the stars—to estimate how much could be brought in from a private astronaut shot. Not much, they said: only \$10 million or \$20 million.

Then, too, there was another angle, a more serious one. If it was successful, the private astronaut shot could be the *Kitty Hawk* of space travel. It would demonstrate that going into space didn't *have* to be an abnormally expensive undertaking. If a single individual acting on his own could do it, then why not others? Why not private astronaut corporations, private space lines? The stunt would be a way of getting the Great Space Migration rolling, of getting on with the whole Buck Rogers scenario. Besides, if he could do the shot the way he wanted to—launching it from the water, recovering the vehicle, and then using it again—then he'd exonerate the idea that he'd for a long time regarded as his own personal baby, the *Sea Dragon*.

The *Sea Dragon* was a launch vehicle of stupendous proportions that Truax had designed back when he was director of advanced development at Aerojet General. The best perk of that high office was the \$1 million budget that he could spend any way he wanted to. Truax used it to test his pet theory that the cost of a rocket had nothing to do with how big the rocket was. You could make a given rocket just as big as you pleased and it would cost about the same as one that was about half the size, or even smaller.

This went against conventional wisdom and common sense, but at Aerojet Truax collected enough facts and figures to prove its truth beyond a doubt. Indeed, he'd been assembling the necessary data from the time he was still in the navy, where he'd had access to all sorts of cost information.

"We came up with a set of ground rules for designing a launch vehicle," Truax said.

"Make it big, make it simple, make it reusable. Don't push the state of the art, and don't make it any more reliable than it has to be. And *never* mix people and cargo, because the reliability requirements are worlds apart. For people you can have a very small vehicle on which you lavish all your attention; everything else is cargo, and for this all you need is a Big Dumb Booster."

Bob Truax's *Sea Dragon* was a Big Dumb Booster, an absolutely titanic launch vehicle, one that would weigh forty million pounds at lift-off. The *Saturn V* rocket, by contrast—the one used for the Apollo moon flights, and at that time the biggest rocket ever launched—weighed in at a paltry six million pounds. The *Sea Dragon* would be the *Spruce Goose* of space travel, so big that it would have to be built in a shipyard, and both launched and recovered from the water. After being hauled out from the ocean, the *Sea Dragon* would be refurbished and then sent back up into space. It would be a true "space truck," as opposed to NASA's space shuttle, which was then on the drawing boards.

* * *

Finding volunteer astronauts was a lot easier than finding the cash. For both, Truax placed ads in the *Wall Street Journal*: "Wanted: risky capital for risky project." And: "Man or woman interested in becoming the world's first private astronaut—must be in reasonably good health and able to produce \$100,000 in spendable money."

For a long time not much money poured in, but Truax was committed to his project to the point that he mortgaged his house to keep it going. After all, he had plans, drawings, dreams. And he had his surplus rocket parts.

He'd been walking through his favorite rocket-part junkyard in Ontario, California, one time when he spotted some Rocketdyne LR101 vernier engines, *seven* of them. Truax knew all about these engines. They were used for making course corrections on Atlas rockets after main engine shutdown, and to Truax they were works of art. The government had paid millions of dollars to make these things, and there they were, just sitting around rusting. Truax figured he could get them for twenty-five dollars apiece. "For twenty-five bucks," he said to himself, "I'll buy 'em, even if I have to use 'em for paperweights."

So Truax bought 'em. Later he yoked four of them together, to be the motive power behind the X-3, the "Volksrocket."

If surplus parts were easy to come by, so were astronaut candidates. In fact, Truax

always had far more astronauts than he ever knew what to do with. There was Martin Yahn, for example, first in a long line, who at the time he volunteered happened to be unemployed and therefore unable to come up with the required \$100,000. On top of that he was married and had two children. But he was nuts about going up into space, and whenever Truax rolled his Rocketdyne LR101 vernier engines out for static tests Martin Yahn would be there in his powder-blue jumpsuit marveling at the sights and sounds, enthralled. Truax was so impressed that he put Martin Yahn at the top of the list and decided to send him up for free.

But after a while Martin Yahn vanished into the mists of time, only to be replaced by others . . . Eventually, astronaut applicants started showing up at Truax's house with some folding money in their pockets. There was "Ramundo," stage manager for the Beach Boys. And there was Daniel J. Correa.

Dan Correa was from Peru. ("He's a bona fide Inca," Truax said.) The son of a mechanic in the Peruvian Air Force, and distantly related to a former president of the country, Correa and his wife arrived in the United States with about \$150 between them.

"He heard about the X-3 project in the paper or something," Truax recalled, "and he came around to see me because he thought that his ancestors had come from outer space, and that it was his destiny to go back into outer space. He's a Rosicrucian, and they got some weird ideas."

Correa spoke Spanish and looked Mexican, and anyway he got a job in a tortilla factory rolling out the dough. Because he was always a very gung-ho, extremely ambitious type, he convinced the factory owner to put him out on the road selling tortillas on a commission basis.

Correa sold lots of tortillas, oceans of tortillas, so many you'd never think there were that many tortillas in the whole world, and after a while the owner was paying him off partially in the company's stock. Eventually Correa had acquired so much of the stock that he controlled, and then owned, the company, the Mission Bell Bakery, in Redwood City, California.

Then, right at the apex of his tortilla career, he decided to enter a hitherto unexploited market niche. The average housewife, he realized, had no good way of reheating frozen tortillas. If she put them in a frying pan they got greasy and burned before they were heated all the way through, whereas if she put them in the oven they dried out too fast and got brittle and ended up in a million pieces.

"So I redesigned my baby daughter's vaporizer and came up with this device for rejuvenating the tortilla."

It was Dan Correa's new invention, *The Tortilla Steamer*.

"The Tortilla Advisory Board is pleased with it," he said at the time, "and if I sell 350,000 steamers this year, I will make \$5 million, plenty of money for the rocket."

Clearly, Dan Correa was Bob Truax's man. But like the Sky-Cycle X-2, the tortilla steamer concealed a tragic flaw that was

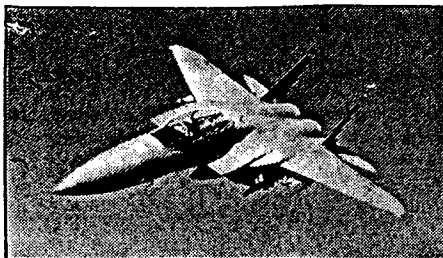
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not apparent at the very beginning. The steamer, which was a small box with a clear plastic top—it looked like a phonograph turntable—was an electrical can of worms. Steam would condense out on the top, drip down the outside, and get into the circuitry where it would cause shorts and make a mess of everything. Unfortunately, before he submitted one of his steamers to the Underwriter's Laboratory for its seal of approval, which it refused, Correa had already manufactured 10,000 units. He then had on his hands 9,999 non-UL-approved tortilla steamers.

What do you do with 9,999 non-UL-approved tortilla steamers? Why, you ship them to Mexico, where consumers are not so uptight about having *seals of approval* on every last item, and you hope to God you can unload them down there.

By this time—it was early 1979—Correa had given Truax a healthy down payment on the rocket flight. "He got to \$17,000 or \$27,000," Truax recalled, "but then he ran out of money. He lost the bakery, he lost his house, and finally he lost what he had put into the project because he couldn't come through with any more. That was part of the deal, you know: if you didn't get the whole \$100,000 then anything you put in was down the drain, because I was spending it as fast as he was putting it in. In



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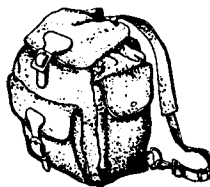
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fact I was spending it *faster* than he was putting it in! And so he lost the whole deal."

When the astronaut position came open again, Truax was besieged with the usual nut-case phone calls. This was his own fault. He'd appeared on "The Tonight Show," and he was telling Johnny Carson and all the rest of the world about the X-3 private astronaut project, and Johnny seemed to love the idea, until Truax suggested that *he* be the victim. "I told Johnny he'd make a good astronaut," Truax said. "But he backed off."

Anyhow, people who wanted to be the World's First Private Astronaut were bugging the hell out of him ("I even had a *blind* guy who wanted to fly it!"), and at length he became a desperate man.

But then one night a San Jose businessman by the name of Fell Peters walked into Truax's garage and asked to go to the top of the list. "Well, it'll cost you \$100,000," Truax told him.

Peters started laying \$100 bills on the table, arranging them all into neat piles. Truax, who'd been through this kind of thing time and again (he'd sold the astronaut job four different times by then), expected a few thousand dollars to appear at most. But Peters was still going strong at \$20,000. He kept on going even past \$30,000.

Finally, the pile reached \$40,000. Here, Truax admits, "I weakened." Fell Peters then went to the top of the list.

Later, Truax put Peters through his astronaut training program, which consisted of a ride in Truax's private plane, a Burt Rutan Vari Eze homebuilt. The ride included stalls, steep turns, and other hair-raising maneuvers, all to establish that the astronaut candidate could tolerate high levels of airborne stresses and strains. One of Truax's worst visions was that five seconds into the blast-off, which would be broadcast over live TV, the passenger would start screaming into the microphone, "Let me out of here!"

Bob Truax knew as well as anyone else how improbable the whole scheme was (just like the canyon shot had been, for that matter), but still he was utterly serious about private space travel. Sooner or later, he was sure, the X-3 really would lift up into the heavens with a live person aboard. It was no more than a right-thinking man could do with the proper combination of hubris, talent, and spare parts.

"We've got to stop thinking we're helpless," he said. "Hell, we knocked off the moon in ten years."

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