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Technorican: The Life and Times of Candy Torres, Space Lover

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By Alexis C. Madrigal

It wasn't easy being a Puerto Rican woman in South River, New Jersey, who wanted to go to space.

Sure, it was the 1960s, and the astronauts of the Mercury and Apollo programs were national heroes. But if you were coming from where Candy Torres was coming from, you were supposed to worship them, not want to *be* them.

While white men were walking on the moon, other white men around New Jersey had some things to say about the domestic situation. "Being Puerto Rican, I would hear people talk, not necessarily negatively to us because we are light skinned, but people would talk," Torres told me. "'Blacks and Puerto Ricans' was the exact phrase, and people would say negative things."

But Torres had decided that she would pursue her interest in space anyway, and she made it. Through a long career in space-related fields, she has worked on satellites, the Space Shuttle, and the International Space Station. She hasn't made it to space, but she has lived two blocks from the Johnson Space Center, where she could stroll down Saturn Lane and NASA Road One.

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Her parents didn't quite understand her dreams. They'd grown up in Harlem, then moved to the Bronx, where Torres was born. She proudly notes that she and Sonia Sotomayor were living not very far apart "for the first six years of our lives." By the time she was a young girl, they moved the family out of the city and out to South River and up a few rungs on the socioeconomic ladder.

Torres graduated from high school in 1971, finding her way to Douglas College, which was a women's college that's now a part of Rutgers. She pieced together a major in space science from the offerings at the schools, a little aerospace engineering here, some geology over there, some astronomy —"anything space related."

She nursed her interest in space adventure and technology with science fiction. Her first love was the '60s kids show, *SuperCar*. The doll heroes of SuperCar were a model for her. "The technology was being used to do good in the world," she said. "They were always going after villains." She graduated to other shows, too: *Twilight Zone, Outer Limits,* and *Star Trek*.

As she neared the completion of her undergraduate studies, a friend told her a job had come up working at Princeton on the Copernicus OAO-3C Satellite, which mostly made observations in the ultraviolet part of the spectrum.

She went back to an astronomy professor she had, Dr. John Caldwell, and asked him about the job. It turned out, by sheer coincidence, that Caldwell knew the person hiring for the position and offered to be a reference. So, it was that she ended up graduating on a Thursday evening in 1976, interviewing the next morning at Princeton, and getting the job by the afternoon. "Less than 24 hours after graduating, I had a job in the space industry."

"I would be on site and I'd go to Building 1, where I had an office, and on the door, there was a metal [plaque] with the NASA logo engraved on it, and I would caress it, literally, touch it," she said. "Because I knew what it had taken for me to get there. So I never saw it as just another job."

Like most jobs related to space, the actual work is not as glamorous as the field. She poured over computer printouts of data coming back from the satellite to make sure that it looked okay before passing it to the astrophysicists who were running the experiments. She worked on the project for more than five years.

As the satellite neared the end of its life, she started working on some other projects. One of them was organizing vast files for NASA. The computer printouts had a regular structure, but they were not in the format that the space agency needed.

At first, Torres did this work by hand, but she realized that her brain was working like a computer, and that if she could systematize what she was doing in code, software could do her job for her. "I had to think through, when I see this, I do this." she recalled. "If this, then that." She talked with a programmer in the department, who got her started on FORTRAN, and soon, she'd written the program. Drudgery eliminated: "I don't like being bored."

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But NASA was about to run into some hard times. She was at Johnson Space Center, Building 37, when the Challenger space shuttle exploded in 1986. She kept a journal from that day, and she read from it to me.

"Oh my god, it's finally happened! Several minutes ago, we watched the Shuttle explode. No one could really believe it. We just watch, moist, mostly dry-eyed. It's a very bad nightmare. I feel shaky inside," Torres said. "Everything was looking good for launch. The weather was clear. I guess the icicles were gone. I thought the liftoff was a bit slow, but what do I know? I had an ominous feeling, but it was not the first time..."

The loss of Challenger—and subsequent changes—meant a difficult work environment for the thousands of people working on the many aspects of the space program. Torres went back to school, eventually returning to Johnson with another contractor to work on the International Space Station.

The Supercar-like optimism of the early days of space exploration were gone. Funding would never return to those heady days of the 1960s, and even now, the future of American spaceflight is unclear. And it's not just the astronauts whose lives have changed as a result. "People don't realize how many thousands of us worked on these programs," Torres said.

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Nowadays, she spends her time thinking about how she can help young people in her position, who didn't have people helping them figure out about technology. She maintains a blog at technorican.wordpress.com. She's fascinated by 3D printing and augmented reality.

And she keeps her hand in space exploration, too. She presented a paper at the 100-Year Starship Symposium, an event produced by a group that wants to deliver on Gene Roddenberry's vision of a spacefaring humanity.

"I loved being part of something big, and I knew that I had worked hard to be there," Torres said.

ABOUT THE AUTHOR

Alexis C. Madrigal

Alexis Madrigal is a contributing writer at *The Atlantic* and the host of KQED's Forum.