



Support your rivals: the NASA & JAXA rationality

Yamazaki embarked into space in April 2010 as loadmaster for the International Space Station (ISS). Yamazaki spoke on her experiences of mission management in the context of this enormous international project involving several hundred development companies. “The most important thing was to communicate with others and share a common vision that you align your efforts toward. For example, we astronauts do not just engage in our own practice, but also attend software and hardware development meetings. I also went to inspect the airlock of the Kibo as it was being manufactured at Kawasaki Heavy Industries. Giving opinions from the position of the user encourages the standardization of parts, which differ according to development company or country, and promotes specifications that prevent human error. Space development involves a lot of different people, which means work has to be segmented and it can be difficult to see the broader perspective; as such it is very important that everyone shares the big picture.”

At the same time, astronauts inhabit an extremely competitive environment. Even if they can cooperate with the development team, is it possible for them to smoothly build relationships with other astronauts who are their rivals? “It is certainly true that astronauts carry around their achievements

Naoko Yamazaki, a tenacious astronaut who finally entered space after 11 long years of training.

Yamazaki spoke to us on how she dealt with her uncertain future as both an engineer and as a mother while placing herself at NASA, one of the most competitive environments in the world.

and evaluations, and not everyone can go to space. But unless you give your full support to other people, your turn will not come. If a mistake or accident occurs in another mission, your own schedule will be pushed back as a result. So no matter how busy you are or what conflicts arise, you give your best to supporting other people. This was the rationality at NASA or JAXA.”

While they might be rivals within the organization, from an outside perspective they are a space venture facing a harsh reality. In the end, they are fellow astronauts piloting the same shuttle in the name of space development. Such an environment, which realizes both competition and cooperation while sharing a big picture could be called an extreme exercise in diversity.

Multitasking learned from parenting

Yamazaki was selected as a prospective astronaut in a second exam in 1999 and formerly certified as an astronaut to crew the ISS in 2001. However, she then stood the trial of a long standby. “The 2003 Columbia disaster led to my first flight being shelved. I was stricken by anxiety and disappointment.” During this difficult time, it was her colleagues, the staff, and her family that supported her. “The fact that I was not alone was a big factor in getting me through. I was both moved and proud to have been involved in the project as an engineer and to have worked together to give form to an idea. I also felt that if I trained, some kind of path to achieve my dream would open, even if I could not go to space.”

It took another 7 years for her to actually go to space—11 years in total from selection as a candidate. In 2002, she gave birth to her daughter and had to juggle child raising with her training. Such self-management was not simple. “Neither training nor parenting goes as planned. Even if you are conducting your own experiment, you must give assistance if

there is work of a higher priority; although you may have planned to study for an exam in the evening, the child may run a fever and need to be looked after. Astronauts are required to be skilled in multitasking, and in this respect parenting is good practice (laughs). The advice “When you focus on something entirely, forces get to work” was particularly heartening when I was troubled. Life is long and has many ebbs and flows. Rather than selecting the single path of parenting or my career, I responded flexibly to the conditions at the time; if you always focus on your goals in mind, your next chance is sure to come.”



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Naoko Yamazaki

Entered the National Space Development Agency of Japan after graduating from the School of Engineering at the University of Tokyo. Selected as a candidate astronaut to crew the International Space Station (ISS) in 1999; formally accepted in 2001. Crewed the Space Shuttle Discovery in 2010, and served on ISS assembly and supply mission STS-131. Retired from JAXA in 2011 to serve as a member of the Committee on National Space Policy, Cabinet Office and visiting professor at Ritsumeikan University and Joshibi University of Art and Design. In recent years Yamazaki has served as an ambassador for Kakamigahara Aerospace Science Museum (Kakamigahara City, Gifu Prefecture), where she works to educate children.

Naoko Yamazaki

*Sharing the big picture enables
competition and cooperation*