

Space Capital Podcast s01e09 - Eyes on the Prize with Anousheh Ansari Transcript

When I came back, I felt like everyone's sleepwalking, and I wanted to just shake everyone and then wake them up to the beauty of our world, to the fragile oasis that we live in.

Welcome to The Space Angels Podcast, episode nine, Eyes on the Prize. I'm your host, Chad Anderson, CEO of Space Angels - the world's leading source of capital for early stage space ventures. The purpose of this podcast is to provide investors with the context and information necessary to understand the real risks and opportunities in this dynamic, new entrepreneurial space age. We have a very special guest today; Anousheh Ansari has dreamed of space exploration since childhood. And she's played a critical role in the entrepreneurial space age, as the title sponsor of the Ansari X prize - a ten-million dollar incentive prize for the first non-government organization to launch a reusable crude spacecraft into space twice within two weeks. One by Paul Allen in 2004, the vehicle has now been adapted to the Virgin Galactic SpaceShipTwo. Anousheh is also the first female private space explorer, and the author of the first blog from space. Today, she's inspiring young people to follow their dreams and reach for the stars. Hi, Anousheh, welcome to the podcast.

Anousheh:

Hi. Great to be here.

Chad:

So, like many of us, you've been interested in space since a very young age. I'm curious what your first memory of space really taking hold of you is, and what that was and how that's shaped the person that you are today.

Anousheh:

So, as a young child, I think, probably, I was six, seven-years-old. And what I remember is that summer nights in Iran, that's where I was born, we would sleep outside because we didn't have air conditioning indoors. So, I had this wonderful opportunity to just lay on my back and, sort of, stargaze and look at the stars at night, and let my imagination take hold. And, you know, dream of what's out there, and imagine other worlds, other possibilities of human or non-human life out there. And this whole notion really attracted me to space and wanting to go to space and wanting to learn more about those tiny objects I would see in the night skies. So, that's how my love of space and space travel started.

Chad:

And that's great. That's something that a lot of our listeners, and myself included, can relate to. There have been a few key milestones in the development of what we like to call the entrepreneurial space age. And at Space Angels, we often point to SpaceX in the early 2000's, and everything that they've done to bring down the barriers to entry and open up the market. But there was something else going on around that same time, the Ansari X Prize, of course. Which planted the seeds for what we are seeing today. I'm curious, how did you get involved with the prize initially, and how did you find yourself at the forefront of this commercial space movement?

Anousheh:

So, I was not shy about talking about my passion of flying to space, even as an adult. So, I ended up, from Iran, in US, built a successful business. And as an entrepreneur, when we sold our business, I was hoping that I can spend my time sort of rekindling this lost passion and be able to pursue that again. And that's when in one of my interviews, I had mentioned, that this is what I want to do. And Peter Diamandis is the founder of X Prize Foundation, happened to read that article and decided that he needs to meet me. Because, prior to that, he had been very unsuccessful in meeting a hundred and fifty people, CEOs, entrepreneurs, philanthropists, and getting them to sign up to support the prize. And the idea, which resonated with me and my family very much, was that this concept of the competition where ten million dollars will be paid only if a team can demonstrate that they can fly to space, and carry equipment and two passengers, twice within two weeks. So, it's not a science project, it can be repeated. And that it had to be from the- completely privately and not by government agencies. So, we knew that this is not just a prize, this is an investment in building a potentially new industry. And not only flying me into space, but opening up the door to unlock for many, many millions of people out there who always wanted to go to space and be able to build an industry on it. Coming from the technology, and specifically working in the telecom, I remember when we came to US in the early-80's or early-90's, still the cost of long-distance was very high, you know. And once competition came about, and there were a lot more companies providing this service, and the technology started advancing, and the amount of things moved from hardware to software, the cost went basically down to zero with voice-over IP. And we were hoping that we see the same thing in space, where instead of just having a few government agencies working on it, with innovation through with the private industry, we'll be able to create a business where the cost will come down and everything will become much more efficient and more accessible to everyone. And I think we were right on. And this was one of the best investments we've ever made.

Chad:

I really like that answer. There's a couple of things that made my ears perk up. And one of them is your experience in telecom, your success in that business and exiting that business afforded you the ability to participate in the advent of commercial space in a meaningful way. But also, that your experience in telecom and how you linked that to the invention, and the advent of VO IP, and how that experience helped you to see the possibilities coming together in commercial space. And so, I really liked that piece of your answer. And the second piece is not shying away from speaking up, and I think that there is a lesson in there for all of the young people who are listening to this podcast and listening to your story. That if you want something, speak up, because you never know who's listening.

Anousheh:

Absolutely. I think this has been a consistent part of my story, and a lot of stars aligned for me to get me from a young girl in Iran to being able to go to space on a Russian spacecraft. So, speaking up definitely is a big, huge step toward- to meeting your goals and desires and dreams.

Chad:

I love it. So, in 2004, when the team launched SpaceShipOne to space for the second time in two weeks and won the Ansari X Prize. What was it like to witness that at the time? And did you realize what a historic achievement it would be?

Anousheh:

It was scary, exciting, and, you know, mind blowing all at the same time. And I guess we had a notion that it is a historic moment. There was such enormous excitement. And both flights, people drove from all over the place in the middle of the night to be present in Mojave to watch the flight take off. So, there was a lot of excitement. We all knew what's at stake for us to even be able to be there and witness this flight. It'd taken so many years of not only engineering and ingenuity and innovation, but a lot of hard work that the X Prize Foundation had to do behind the scenes of educating the FAA and the government, and policymakers and scientists, to even get permission for this type of flight to take place. Before that, you know, if you told someone that a private company wants to launch something to space, they would think you were crazy. And there was no such department in FAA that you could call upon for license. And a lot of these activities are the result of the hard work that X Prize had to do behind the scenes to make sure that a marketplace can exist and that, you know, future of SpaceX and Blue Origin, and all these other companies, sort of rested on this policy work and education work that went behind the scenes. And we're standing there, and we are all hoping that this would be successful, and it won't end in a disaster. Because it was so new, and so much in its infancy, that if anything went wrong, we felt that they would just shut it down and there would be at least another decade before they would even look at it. But we were very happy and fortunate. We had incidents, but nothing very serious. And it was a great, great success.

Chad:

Absolutely. There was so much foundational work done in the winning of this prize. The Personal Space Flight Federation was a group of interested individuals who came together, who were involved in commercial space ventures in some way or another, and this was a really important consideration. The regulatory environment. How do you get licensed? How do you fly to space on a private spaceship? And following on that, it's one thing to do it with test pilots but then how do you do it when you start to open it up to the broader population? And a lot of the groundwork was laid then, in terms of informed consent. Similar to skydiving, how you are able to be informed of the risks involved and still be able to decide whether or not you wanted to do that. Which is seen by many as a key enabler to where we are today. So, it's great to hear you mention that, and I think it's important for everyone to think through all of the work that did go on in the background to make this happen. And obviously a lot has happened since then. I'm curious, from your perspective, how has the space ecosystem evolved since then?

Anousheh:

I think there has been a lot of excitement that was created initially by the prize, and all the teams that competed from many different countries. And, of course, not all technologies were viable, but it was a really beautiful breath of fresh air to see all these different types of innovation completely coming from different aspects of solving a problem. And even though not every team made it to the last stages, and not every team won, what we saw was a lot of technologies and innovation that, even after the prize was won, survived in either joining forces with another company and competing in the space with Virgin Galactic, which become the commercial arm of

Mojave Air and Space, and launching this into commercial venture. Or just working with companies, like SpaceX, and providing their technologies and innovation to Blue Origin, SpaceX, and any other entities that were born of it. So that was one great outcome. The other great outcome was that due to our education and proving this whole notion of partnership between the government of private agencies, actually started allocating budget to become the seed funders of a lot of these companies, and provide them with some research money to allow them to continue their work. And even help guide them towards solving some of the challenges that NASA was looking at. And we see a lot of these companies that are benefiting. You know, in the grand scheme of this, it was a small amount of money for NASA, but what was accomplished with that small investing was probably tenfold higher than what they would have been able to accomplish internally.

Chad:

And that's the beauty of these prizes, is that we've seen, throughout history, that a small amount of money can incentivize a great deal more in innovation. So, in 2006, what, just a couple of years later. You traveled to the space station and became the first female private explorer, the first Iranian in space, and the first blogger from space. You sent the first blog from the space station. Are there any other firsts?

Anousheh:

I was also the first Muslim woman in space.

Chad:

Those are four big firsts.

Anousheh:

[laughs] Yes.

Chad:

Yeah. Okay. And then also, training is eighteen months, right? So, you must have gotten started training in Star City just after the prize was won.

Anousheh:

I started that some time later. I didn't quite do that for eighteen months, but I was going back and forth, in the beginning, in between Dallas, where I live, and Star City near Moscow. And then the last, almost year, I was mostly in Russia and training full time. And it happened to be one of the coldest winters in Russia when I was training. So, it really demonstrated how dedicated I was to really be present and finishing, yeah, the training.

Chad:

I would say so. So, I'm not that familiar, how cold is coldest?

Anousheh:

Well, it was, you know, I think, most of the winter was ten degrees below freezing. And I had issues with hot water, so the, you know, Star City, it's a military base, so everything's very old. And, you know, for a period of, I think, two or three weeks, we didn't have hot water at all. So,

every time I wanted to take a shower, I had to go to the gym and, you know, at least I could take shower, and then walk in a lot of snow back to my dorm room. So, not fun, but I'm glad it worked in the grand scheme of things.

Chad:

So now your part of a very small group of five hundred-plus people that have been to orbit. And I'm curious what it was like, from your perspective, to experience something like that.

Anousheh:

Being able to go to space and experience this first time, definitely is a life altering experience. It's something that changes the way you see the world, and the way you see your relationship with the entire world. And people around you in your environment. It gives you a new perspective. It gives you a perspective of our planet, all interconnected as one. A place where we all live as earthlings, as human beings that are not separated by those thick lines we see on the maps. But that we're only separated by oceans, and lands, and mountains. And so, it really changes how you see the world, and it's a humbling experience and an empowering experience all at the same time. Because why, you see how small you are compared to the universe that surrounds you, it also helps you see the world as a much smaller place and makes you feel like you solve any problem. If we work together, there's nothing we can't solve. And it makes the problems also shrink that much and it makes you feel empowered.

Chad:

That's great, and something that I really hope to experience for myself one day. While you were onboard the space station, you conducted a number of experiments for the European Space Agency. I'm curious why and how you got in touch with ESA and settled on those experiments, and what exactly you were doing while you were up there?

Anousheh:

So, there were four experiments that were being conducted during that mission. So usually, when you fly to space as a private space explorer, you go through a long period of planning beforehand. If you know my entire story, I actually went to Russia to train but I didn't know if I would ever get the chance to fly to space. I went as a backup. And I was there training and training hard as if I would go to space but not knowing if it becomes a reality anytime soon. So, I didn't have a chance to prepare any experiments of my own. So, when the news came, which was three weeks before the flight, that actually there was an issue with a primary crew member and they wanted me to step up into the primary crew member's position. And at that time, there was not enough time for me to design my experiments, and I had the choice of participating in the experiments that were active. And also, you know, all the crew members do that. They- The entire space station is a big collaborative research laboratory, and the results of those research are shared amongst space agencies and nations to help solve problems here on Earth, actually. And I was working on the experiments on microbial lifeforms, radiation, and the effect of, you know, micro-gravity on the human body.

Chad:

That's great. So, you went to a huge orbiting research and development facility, and you did research while you were there. Makes perfect sense. So, I've watched a TedTalk that you gave,

and you mentioned that after your eleven days in space that it was really difficult to adjust to life back on Earth. I'm curious, why was that?

Anousheh:

When I flew I was forty-years-old. So, up to that point, I had this huge, big dream go in front of me, and I felt like everything I did was toward that goal. And so, I had this big thing in front of me that I have now accomplished. So, I had to find a different reason for my being on this planet. And at the same time, this whole experience had given me this amazing opportunity to see our world through a different lens. To experience something amazing, my oneness with everyone else on this planet. And what is important in life, and what is a priority. And when I came back, I felt like everyone's sleepwalking. And I wanted to just shake everyone and wake them up to the beauty of our world. To the fragile oasis that we live in. And how important it is. So, I was frustrated, and I was depressed. And, you know, it was a difficult time, but at the same time I sort of had to go deeper inside and, when I looked back at my life and looked at how all the different, sort of, events and things that had to connect just in the right way, all the people I had to meet for me to end up where I was and have this experience, I felt that there was, you know, some reason to it. And being able to do the first blog from space. And having, I don't know, millions of people, I think, we had like twenty million people just after three months, after my return, sort of going to the blog. It told me there is a thirst for inspiration, for hope or a better world, and that perhaps by sharing my experience I can bring a little bit of that hope, that beauty that I saw from space to everyone around the world. So, I have been and continued to work the best of my ability to do that through collaboration with different organizations, through talks at school and universities, and different vocations. And inspire the young generation and help them see a picture of a better world that they can help create.

Chad:

I really love to hear you say that. And it sounds like a really profound experience, and this is something I hear quite a bit from space travelers. That they experience something similar to this. Look forward, there are spacecraft coming online very soon, like SpaceX's Dragon, that's going to bring down the cost and make space much more accessible. Bringing the cost down is going to make it much more accessible to the general public. I'm curious what kind of impact you think that's going to have on the world when thousands or millions of people experience what you've experienced.

Anousheh:

So, actually, you're absolutely right. This is a common experience amongst astronauts. And Frank White coined it as overview back then, and he has an organization and a book written about it. And I think, from what I've seen in working with other astronauts, it has a very positive and profound effect on us as astronauts and allows us to work together in helping make the world we live in a better place. Just recently, actually, a group of us have joined together with a creative team to find a way to bring this experience to more people. We realize that not everyone can or want to go to space and see it with their own eyes, but there's no reason we can't find other ways of having similar experiences. And being able to see the world through the same lens that we've seen. So, we call our group Constellation and we are working with a lot of different foundations and innovators through AR, VR, conferences to help bring that to people. But there's nothing [laughs] close to actually being able float in micro-gravity of space, to float above a

window and then look down on our planet and see it as it rotates and go by and see that beautiful line that separates the night and the daytime. And just be able to ponder on what's going on in this planet and what people are thinking, and how it can be a beautiful place for everyone to experience.

Chad:

That's a great segue to my next question. I'm wondering if you can tell us a bit about your life today, and what you're doing to inspire the young ones that are building on your work and taking the next steps?

Anousheh:

I live a very busy life. There's so many great opportunities to really advance this notion of the next generation explorers on Earth, in space, and beyond. There's a new interest, actually, in space, which is really, really heartwarming for me. For a while, space had become sort of this thing that only a selected few can do, so it doesn't concern me and therefore the young people had lost interest. But I see a whole new level of interest and enthusiasm, because of the private companies coming in and creating a space for the new space to grow and to employ and to engage these young people. So, I'm excited that. And I advise and work with a lot of the startups in this field. I also continue my work with X Prize Foundation and look at challenges that our world faces, and how we can use innovation to solve some of these challenges to create that beautiful future that we all want. And a big part of that is engaging with the young people. As a woman in technology, I feel like we need more women's voices in how our technologies, our exponential technologies, are being developed and therefore spend a lot of time at, you know, schools and universities, encouraging young girls to take part in this amazing revolution that's going on. Because we live in very interesting and exciting times, where the pace at which technology's changing our lives can make a huge difference. And how we utilize this time and how utilize these technologies can really make a difference in the outcomes we want in the future. And lastly, I believe in the energy of the youth, and the fact that we are not tapping enough into that energy, not taking them serious enough. So, working with organizations, like Peace First, we're trying to create a platform for young people to receive seed funding, to have mentorship. Basically, all the tools if they need to launch a project, to look at what solutions they want to bring to the table and help them create those and bring those solutions to solve problems in their communities or the world at large.

Chad:

Fantastic. We had a Brooke Owens Fellow here, an internship this summer. And I know you were involved as a mentor. A Fellowship that's really set up to get more women into aerospace, and it's a really, really positive initiative, as well as all the other things that you've mentioned that you're involved with. So that's fantastic to hear about all the energy and all the many things that you're still involved with. Pushing- pushing the boundaries and pushing us all forward. So, thank you. On the show, we like to say that there's never been a better time in space investing. And I'm wondering if you can give us your personal perspective on that, and which areas you think are most exciting.

Anousheh:

There's truly... an exciting time for investment in space technologies. I have seen a lot of innovation come out of Singularity University and the students there, and beyond. And what excites me is especially ideas that look into the future and look at how perhaps we can even completely redesign how we go to space. New propulsion systems. Or how can we tap into the resources in space? More importantly, what excites me is after, you know, Elon and Jeff Bezos are successful in opening up and democratizing access to space, I feel that there will be this whole area of, you know, what happened with Internet. When Internet became accessible to everyone, and with Netscape, easier for people to innovate on. So I'm hoping that once access to space opens up to everyone, people and innovators and entrepreneurs will come up with thousands of different business ideas on how to use space for the betterment of our lives here on Earth, or as a launching pad to take humanity beyond- beyond Earth. So, I think there's excitement around, you know, different ways of monitoring our climate, different ways of looking at, you know, the changes in our environment. And using all this data, combining AI data, image technologies, satellite technologies that's shrinking. And many other things, robotics, to really create new business opportunities in space.

Chad:

Couldn't agree more. Anousheh, great talking with today. Thank you very much for your time.

Anousheh:

My pleasure. It was great to be part of your show. Thank you.

Thanks for tuning in to The Space Angels Podcast. If you're interested in learning more about space startups, I invite you to visit our website, Space Angels dot com - where you can learn all about Space Angels membership and how you can get involved in this exciting new sector.