

Transcript for Chris Hadfield | Rare Earthling (Episode 625)

Full show notes found here: <https://theartofcharm.com/625/>

CHRIS: If you want to do something worthwhile in life, there is always going to be risk. Your job isn't to avoid risk, your job is to try and do something worthwhile in life and therefore that changes your responsibility.

JORDAN: On this episode we'll be talking with Commander Chris Hadfield, the first Canadian to walk in space, author of [*An Astronaut's Guide to Life on Earth*](#). He stayed in space for six months with multiple spacewalks under his belt and he made the first music video in space -- not bad -- and he's one of the premier space educators of our time. Jason, this guy -- amazing guy -- great stories, super insightful.

JASON: Absolute insightful. I mean it took us forever to get him on the show but I was a fan of his when I saw his first music video from space, the Space Oddity video where he covers the David Bowie song, while floating around the International Space Station with his guitar, which was so cool.

JORDAN: Yeah he's really insightful, he's really self aware, great leader, and he started the path to becoming an astronaut at age nine, which I thought was just incredible. He's going to teach us how to think like an astronaut, how we focus on something so singularly and so hard while managing to keep something like that separate from his sense of self worth and identity, how to stay focused, neutralize stress and persevere when the going gets tough, and we'll discover how he stays calm in high pressure situations by training for his own demise, and last but not least, mindsets of astronauts and other do or literally die high performers. There's just nonstop wisdom here. I was swimming in gold in this one, Scrooge McDuck style. So, enjoy this episode with Commander Chris Hadfield.

We thought, "Okay, we've got all these really serious questions, we've got all these interesting things, but we're going to start with something silly just because somehow this was the most

burning question, which is, what happens with some of the more mundane things in space. For example, if you sneeze, do you get thrown backwards? How do you find everything that, you know, might have happened as a result of that sneeze, is that important because we're reading in the book about things like toenail clippings becoming a problem. It seems like human bodies create all kinds of stuff that doesn't mesh well with space stations.

CHRIS:

So Jordan if you were going to live on a spaceship for half the year, you'd have a million things that you're supposed to do. But, I think like most astronauts, you would sort of make up a list of little things that you wanted to try in weightlessness. You know, like do 100 somersaults in a row or whatever. Or, close your eyes and picture that you've just stepped off a cliff and now that you're falling forever and see if you can maintain that visual image in your head. There's sort of a big shopping list of fun things to try when you're living in weightlessness on board a spaceship, and one of them is sneezing. You would think that if you have a great big, loud, sneeze that it would pinwheel you backwards. But, if you think about it just a little -- and I did try, because it was on my list -- but if you just think about it, anything that you exhale or expel when you're sneezing, you basically had to inhale shortly prior. The air had to come into you in order to go out of you. It's just mass in, mass out.

And so, if it could push you backwards, it could also pull you forwards when you're breathing. And so I tried it and there is no appreciable change as a result of sneezing. It doesn't spin you backwards. Of course you don't want to just sneeze uncovered, just like on Earth, because instead of just arcing a little ways and falling to the floor, in space it'll fly right across the whole ship and land on the wall or somebody else or something. So, you want to cover your mouth but just a straight sneeze does not propel you in a cartwheel across the ship, unfortunately. Your body is too heavy in proportion to the tiny, tiny mass of the air and the little snot driplets that are coming out of your nose and your mouth, so it's not enough to matter.

JORDAN: Ah, that makes sense. Yeah, I guess now I'm just imagining a strong sneeze and then somebody eleven feet away, at the other end, doing an experiment, goes "Oh, man, come on."

CHRIS: Well you know what's worse is when you're exercising. We have a stationary bicycle and a treadmill. And if you've ever looked -- if you go to the gym and look around the floor under the really heavy cardiovascular equipment, you can see where everybody's sweat drips. You know, you can see the staining and actually the corrosion often on an old piece of equipment. Well imagine if your sweat doesn't drop but it just -- it sticks to your body, until it gets thick enough on your body -- almost like a jelly -- that if you suddenly move, it comes sort of, glopping off of you like this now ball of floating body temperature sweat coming across the room. And that is way worse for any other crew members to be attacked by somebody else's flying sweat.

So what you do when you work out is we have a towel floating next to us the whole time, and you regularly -- while you're working out -- you grab the towel and just towel yourself off so that the sweat doesn't inadvertently become an extraterrestrial and go and insult somebody else on the crew.

JORDAN: Yeah, that makes sense, right. Because it seems like, if you're sweating and there's no gravity to pull it down and have it drop off you, it just kind of creates a weird sweat mask that just maybe floats away, depending on how much you're moving and then it doesn't have anywhere to go.

CHRIS: It gets thicker and thicker on you until it's thick enough that its surface tension isn't strong enough to hold it anymore. Sort of like if you took, like a glass and you spin the wine in a glass and it'll stay in but if you spin it too hard, then the surface tension and the weight won't hold it in a glass anymore and a certain little glob of it will come flying out of the glass. Same thing happens with your sweat. It gets, you know, big enough glob of your own sweat that it'll float away. Keep a towel handy.

JORDAN:

Nice, and I'm sure we'll have more ridiculous questions in a little bit but I definitely want to get to some of the really meaty stuff that I think has a great takeaway and great lessons for the listener here. You started planning what to do when you were nine years old, to become an astronaut. That's highly unusual and I kind of want to dig into what that means because I think when nine year old kids mostly say things like, "Oh, I want to be in the army," or, "I want to be a policeman," then thinking, "All right, what's the next step in my career," they're just waiting until they're old enough to become that particular thing. How was that different for you?

CHRIS:

There's a big difference and one is, "I want to be," is one way to express it, the other is, "I want to turn myself into," which is a whole different way of looking but is conceptually the same idea. Everybody wants to be all kinds of things. You know, I want to be a lottery winner, I want to be whatever, but that doesn't move you one iota closer. But if you say instead, "I want to try and turn myself into," whatever -- a heart surgeon. "I want to turn myself into a chess master. I want to turn myself into a mig welder." Then, suddenly it changes your whole job.

Your job isn't just to wait and buy lottery tickets, your job is to actually start to modify who you are. If you're trying to be someone who understand how to do mig welding, then it narrows down your choices of what you're going to read next. Or you might, you know go to a shop near your house and go and learn from the people that are there welding, you know, watch a program about metallurgy or whatever. But as soon as you turn yourself from someone who just wants to be something into someone who is deliberately changing who they are, to turn yourself into who you want to be, then your whole part in the process changes.

And what's intriguing about nine years old Jordan, is that I've spoken to a lot of successful people, olympians and such, and a lot of them had a major event or a decision point in their life when they were like nine, ten. It's when you start to become aware of the world, you start to become aware of the fact that

you have some control over your own life. Things don't just happen by magic and by accident and that you maybe even start to realize you are going to be the results of your own decision making. A lot of people never actually realize that but some of the really successful folks that I've talked to had that -- some influence, maybe some inspiration, something they saw,, something that really inspired them when they were nine or ten years old and it changed their behaviors.

And that's definitely what happened to me. I watched the first two people walk on the moon and I thought, "Wow," you know, "I'm going to grow up to be something. Why don't I grow up to be that? That's the coolest thing ever. If that's on the list, if that's a possibility, if that's on the menu of life choices then shoot, I choose that. How did they become that and how can I maybe change myself so I can become that?" I think maybe that's where the difference lies.

JORDAN: Was that more big decisions? Like, "Okay, I've got to this specific college and this specific school," or was this more daily choices that would inform the type of person that you would become?

CHRIS: Oh, the big decisions are the easy ones. That's just saying something out loud. You know, it's like saying, "I'm going to speak Spanish," or, "I'm going to lose 10 pounds." Great, I'm going to lose 10 pounds. That's the easiest thing in the world to say out loud. But what's actually going to make you lose ten pounds is a sequence of hundreds if not thousands of small decisions. Every time I was about to put this food in my mouth I need to make a different decision to take the escalator, I need to walk when I was about to sit down and watch TV, I need to get on a bike. I mean, it's just the little decisions that actually have effect. The big decisions maybe help you choose what you're going to do next. Your life is really only the inevitable accumulating result of each of the small decisions you made. Everything else is just sort of the framework within which those decisions happen.

JORDAN: Did you ever find it hard to focus on this kind of thing when you're nine years old? I mean, were there a lot of moments where it kind of faltered or that you changed your mind or was this something that you were really just hell bent on, even at that age?

CHRIS: Oh, no, shoot. I find it hard now. I'm no different than anybody else. And I make lots of wrong decisions and I don't stick to my own schedule. You know, I try. But if you don't have a long term plan, if you don't actually have that overarching framework of where you're trying to get to, then I'm at a loss to figure out how it is that you choose what to do next. What do you use in order to decide? Whereas if you know that someday you want to raft down the Nile -- if you've never considered it, it's never going to happen and you're never going to be a person that's capable of it. But if you set that as kind of one of those easy big decisions, then it helps you choose what to do next.

And you're going to get it wrong more than you get it right. Life's going to deprive you of a lot of the things that you think you ought to hopefully have a chance to do or be entitled to. But, I think having multiple, very crazy, cool, long term goals, so that they help you choose, no matter what all the messes of life are dealing you -- they help you choose what to do next. Then I think, you have a lot better shot of at least making some of them come partially true. I mean my goal is to walk on the moon, and I still haven't done that, but I was lucky enough to fly three different rocketships and to live half a year in space on three different space flights and command the spaceship and do spacewalks. It is purely the direct result of all of those little, minute by minute decisions that I've made, you know, since -- starting when I was a kid just turning 10.

JORDAN: Did you decide to learn more about how to learn these things? I mean, in the book there's a lot of talk about enrichment classes and things like that and I think learning how to learn and meta learning is a super hot topic but back then, not so much. Was that something you were conscious of at that point?

CHRIS:

Yeah to me it's like talking to a kid about STEM is a waste of breath. Kids aren't interested in the adult acronyms that go along with the process, kids just want to know the information. They just want to learn and they want to be in an environment where the things that they're curious about are available to them. And I was lucky enough to be raised in a place where the education system was available and the advanced education was available, raised in a household where curiosity was encouraged -- but not just curiosity, answers. Answers are more important than just being curious. If you just go around going, "Huh, wonder how that works," then you don't get anywhere. But if you say, "I need to know how that works. And I want to figure it out," and then learn how that works and then add that to the group of things that I know how to do now and then move on from there. And that's the environment that I was raised in, both as a family as in sort of -- in a culture. There's a lot of different ways to get there. But the particular sequence of events that I was lucky enough to be a part of as a kid, encouraged it and enabled it and silently allowed me to continue to pursue the things I was dreaming about.

Information has never been more available now. Back in 1540 when Gutenberg invented the printing press, information was all hearsay and very hard to get a hold of. By 1500 -- in 60 years, one lifetime, they had printed two million volumes. It was like the Internet of the 1500s and suddenly information was available. And now, with social media and with the Internet and with everybody having a smartphone, it's never been easier to pursue the things that you're curious about and add to your own body of knowledge. And so, it's more readily available now than ever and I think people just need to recognize that some accumulated knowledge of humanity is right there in your pocket and all it really takes is you to make sure that you incrementally keep asking questions and answering them.

JORDAN:

Did you have trouble separating your sense of self-worth on making it to becoming an astronaut? I mean the odds are really low and it seems like it would be very tough to focus on something so singularly and so hard while also managing to

keep something like that separate from deciding whether or not you slash your life is a failure or a success.

CHRIS:

Maybe if you look externally at it, it looks like I was pursuing one thing, make or break, and it was never that way at all. You know, publicly people know that I'm an astronaut and lived on the Space Station but, of course, my life was significantly deeper and broader than just that and I've done millions of other things. All of them were interesting and important to me and I never counted on flying in space in order to feel good about myself or to feel like I'd succeeded. You know, as a teenager I learned to fly airplanes and then I went to university or several different universities and I joined the airforce and became a pilot and qualified to become a fighter pilot and worked for NORAD intercepting Soviet bombers, and all of those things -- I was a downhill ski racer as a teenager and a ski instructor. I loved all of those things.

And to me they were sort of leading -- "Someday maybe, if I'm an astronaut -- well, shoot if I have a couple engineering degrees and I know how to fly fighters and I've been to test pilot school," -- all of which are really interesting and a wonderful end point in life. Like, if you can just get that far, that's a pretty cool job and a pretty interesting set of challenges, but they also, sort of shaped my life such that maybe also, I could in addition to those things, maybe get selected as an astronaut also. But even when you get selected as an astronaut, you're an astronaut candidate for years and you're never really sure that you're going to fly in space because you're one small accident or one tiny medical disqualification away from never flying in space, always. And you never can count on it.

So, I always kept it as a long term goal but I tried to succeed as often as I could. It's sort of like, a lot of people keep a bucket list where they have this list of things by which they'd measure themselves. You know, "Here are the things that I need to do in order to feel happy with myself," at least that's what I think bucket lists are. And to me it just seems very limiting. If I don't do these things -- if you look back at your bucket six months

later and you haven't got any of them done then by definition, you're a loser or you've failed yourself. And I think you should drop your personal threshold of victory way lower. You know, allow yourself to be victorious every day.

Don't wait for something that probably won't ever happen, 20 years from now, in order to feel like for the first time in your life, you've succeeded. I've always tried to feel at the end of every single day like, "This was a cool day. I learned some cool things. I didn't do everything right but I got some good stuff done and I'm slightly more ready to deal with the things that are coming along tomorrow." That's how I've approached it and I got to fly in space, but it wasn't make or break for me. It was just a lucky continuing point in amongst all the other stuff I've been doing.

JORDAN: I think that's great advice, looking at the life -- your life, our life -- as small wins, loosely joined together. And, of course, it's easy for us and for me interviewing you right now, to look at your life in hindsight, which looks like a straight line but was actually a windy road with a lot of different goals that ended up with you in space but wouldn't have been all for nought if you didn't end up on the space station. And I think a lot of us could use a dose of that as well because, lots of us will say things like, "Well I'm not outcome dependent. Well I'm not worried about this, I'm not worried about that," but the more we invest in what we think is our singular goal, the more outcome dependent we become and then one day, if we do experience a setback or a temporary failure, it can look a lot bigger than it really is because of the way that we've magnified it.

CHRIS: Oh, yeah, absolutely. And then I ran into countless dead ends. You know, hey this isn't going to work. Like when the Challenger accident happened in 1986, I thought, "Well what am I pursuing astronaut flying for? NASA's not going to fly again. They're not going to keep flying space shuttles, they just killed all these people, including an innocent teacher, very publicly. You know, and I'm a Canadian. We don't even have a space agency up in my country. You know, how -- what are the odds?"

But I had lots of other options. I thought, "You know, hey, I already have -- engineering degree and I'm pursuing a masters and I know how to fly and yeah, I've got lots of other things I can do and they're all interesting to me." You know, I'd love to be Usain Bolt, I'd love to climb Everest. There's all sorts of things that I could turn and focus myself towards and it's really just kind of up to me to decide what are my own measures of success are and stop waiting for somebody else to tell me when I've succeeded.

JORDAN: Yeah. Becoming a fighter pilot, going to U.S. test pilot school -- in the book [*An Astronaut's Guide to Life on Earth*](#), it's funny because you graduated the top of the U.S. fighter pilot school and I guess the local newspaper wanted to write an article about it. What was the title of that article?

CHRIS: Well it was so funny because they were on the phone with me, I was down in California at Edwards Air Force Base -- I'd won, let's just say top pilot on the course and so the hometown paper up at the -- in Cold Lake, Alberta wanted to write a newspaper article about it so they did it and they said, "Oh, what are we going to call the article?" and I said to them, "I don't know, Canadian wins top test pilot or something to that effect," and that's the title they put. Canadian Wins Top Test Pilot or Something to That Effect. That was the title. That was the headline of the newspaper. It was a pretty good humility check for me like, "Get over yourself. Stop thinking you're too important. Just try and do the things that are, you know, important to you and if other people want to remark on it, that's their decision, not yours."

JORDAN: That's funny. Right, it's like, they've clearly got their best people on this one, right?

CHRIS: Yeah. It's just people and people make mistakes and they do their best and everyone's got a different agenda so, you know, stop thinking that everybody thinks my particular set of priorities are the only ones that matter.

JORDAN:

It seems like becoming an astronaut, the process of going to space is a process of just continually starting over. Go to fighter pilot school, you can graduate at the top and then, "Oh, I've got to apply to the astronaut program." Now you're one in 5,000 which is kind of like top college odds only every one of those 5,000 was probably qualified in some way for space versus colleges where 80 percent of the applications are hail Marys from random people whose parents made them apply. So, you're getting selected for these different programs and graduating from these different programs -- how are you feeling when you finally get selected? Is it more excitement or is it more relief or is it just kind of, "Okay, here we go again, starting from the bottom of the totem pole."

CHRIS:

Yeah we sort of have this weird perception that we're climbing a ladder -- a ladder of success. And everything you do in your life is somehow preordained and organized such that when you've finished this particular phase, you are now going to be one rung higher, and boy that sure hasn't been my experience. It's not really a ladder, it's more like just a million little pedestals that you go stand on and you go stand on this pedestal for a while and you can see some stuff. But then you've got to get down off that one to go climb and stand on another one and maybe the other one will be bigger or have a better view or suit you better. But if you really want to change where you are, if you're tired of the pedestal you're on or if you want to try and come up with something else in your life, then you're going to have to step back before you can step forward, almost invariably, or at least that's what my life has been like.

And the day you're talking about, when I got the telephone call asking if I would like to be part of the space program and be an astronaut, I was at the top of my profession, I'd been the top test pilot, as you say, at test pilot school. I was the top test pilot in the U.S. Navy as a Canadian, and I had lots of other sort of external measures of success so I was respected and competent and really enjoying my work, and then to be selected as an astronaut, suddenly, I'm a guy who knows nothing. I showed up for work, I sat down in the office and the two people in the

office with me, one of them was perfecting his Russian so he could be the first American to live on the Mir Space Station, and the other was John Young, who had flown the flight of Gemini, he'd flown the first flight of the Lunar Lander, he'd walked on the moon, and he'd done the first flight of the space shuttle. These are my two guys sitting in my office and I'm like, "I'm a complete imposter sitting here. I'm just some guy who went through an application process but I have zero skills right now." So I think you need to accept the fact, what you've done so far really only, hopefully, qualifies for what you're trying to do next, but it sure doesn't give you any sort of golden ticket. But, I applied, as you say, with 5,300 other people for a few slots as an astronaut, and in the most recent NASA astronaut class, 18,000 people applied for eight positions. So, the odds are terrible and I really wanted to be an astronaut, I still do. So I had a lot invested in it.

When the phone did ring, that Saturday, just after lunch, and the president of the space agency asked if I would like to be an astronaut, of course I said yes. The biggest emotion was one of relief because I had done a bunch of things with this as a hopeful endgame in mind and that put demands on my family and it had been sort of the reason that I'd made a lot of choices in life. And so to have it actually work, it's like if you're rebuilding an engine and you've taken it right down to all its pieces and you put the whole thing together and then at some point you turn the key. And if it starts up and runs, it's like, "Wow, all of that wasn't in vain and I don't have to go back and try and do that whole process again." And the biggest emotion was one relief. It was sort of like, "Okay, this phase of life -- me being a test pilot -- it's now about to wrap up and I'm about to step off of a new diving board into the void of the next phase of life, so let's see what comes next.

JORDAN:

Yeah, it seems like a very common theme on almost all the shows we have with high performers -- that imposter syndrome where everybody feels like, "Oh, I'm starting over. I don't know if I deserve to be in this company." It seems like breaking through that imposter syndrome is a universal skillset.

CHRIS: Actually Jordan, for dealing with the imposter syndrome, here's a coping mechanism I've always used. When I got selected for test pilot school I thought, "Holy cow, and I've got to fly 30 or 40 different airplanes this year and I have to -- I don't know how to do any of this stuff. I've got to learn control theory and all of this," -- very, very demanding year. So what I do is I try and find someone who's already been through this thing that I'm just starting, who's out at the other end of it, and try and find someone who is as unimpressive to me as possible. And then I kind of focus on them and I go, "Well if they could do this, then surely I could do this thing," and that even becomes true -- you know, astronaut is a very esoteric and difficult position but there's all different capability. We're just people and some astronauts are just staggeringly amazing people and some just barely made it into the office and so some are more impressive than others. And so, that's the mechanism I've always used to try and get over what you call imposter syndrome. Just find somebody who's already done that thing, that you otherwise would not have all that much respect for, and just focus on them, and it helps humanize the task that you've bitten off for yourself.

(COMMERCIAL BREAK)

JORDAN: That's funny, it's almost like the reverse comparison. Instead of just comparing yourself to all the amazing things that all the amazing people have done around you and thinking, "Oh, no, I don't know if I can do that," you can focus on that one time that he tied his shoelaces together and you go, "Okay, good. We're all human."

CHRIS: Yeah. Yeah, we're all just human and these guys -- none of them were born doing this. They figured out a way to do it and so I'm going to do the same thing. You know, it's a daunting thing and the beauty of being an astronaut is it is a bottomless pit of demand for competence. You can never be good enough, ever. Right up into the moment of launch, you are trying to improve your capabilities because the vehicle will kill you in a heartbeat

and the only way to survive is through your own wits, your own skills, your own proven competence.

And then it's a life of service as well because you're supporting others and getting other people ready for space flight and supporting their families and training them and working with them -- working the mission control and such. And so, it is just this yawning void of demand on yourself. It's so much more than just a job or a skillset, it is -- completely defines and shapes your life, really for the rest of your life. And that's a really fun thing to be a part of, to have something that is that demanding on you that is that exact thing that's forcing you to constantly rise to a level that you thought you never could or would never be challenged enough to attempt. And so you come out the other end of it with a set of skills and experiences that you never would have allowed yourself to dream might actually be part of who you are. And it's great to be involved in any sort of program like that, especially if it's one that excited you when you were a little kid.

JORDAN: It seems like the ratio of training to mission time is extreme. Do you happen to know what that is? I mean it seems like it's 8.5 minutes to space, give or take, 10 years or 20 years of training.

CHRIS: Yeah, well I was an astronaut for 21 years, I was in space for six months, so you could just do that math of 20 and a half years of training for six months in space. But our space flights used to be much shorter. A space shuttle could only stay up for a couple weeks until you could no longer purify the carbon dioxide or there wasn't enough oxygen and the toilet was full [00:30:24] so the space flights were short. So you could train for ten years for a two week flight and that's a pretty staggering ratio. But the interesting part is, on the day at launch you're still not 100 percent ready. The vehicle is still very unknown and the most complicated flight machine ever built and we learned -- we only flew it 135 times.

Any time you've ever gotten on an airliner, it's flown countless times, thousands of times before they ever take paying passengers on board, and yet we flew the shuttle on operational

missions right from the beginning. So, to try and get yourself ready for that, even with all those years of operation -- on the day of launch, there's still a lot of unknowns and you're -- the only bulwark between success and failure is your own preparedness and readiness to face up to the things that are going to go wrong. So that's an amazing process to be part of also.

JORDAN: I heard that both you and -- I know Mike Massimino is also afraid of heights. I mean, I've got to laugh a little bit. Did you guys not read the job description? I mean, how is it possible?

CHRIS: Oh, I mean, I think everybody should be afraid of heights. I mean, if you're not afraid of heights, then you're missing something. Because if you stand right on the edge, if you just fall from your own standing height, unprotected onto a hard surface, you can do serious damage. You know, just fall face forward sometime and see what happens to your body, just from your own standing height. We can't afford to fall. And so if you're up a ladder or up on the edge of a balcony or a cliff, your body ought to be telling you, "This is dangerous." If you're not bolted to the wall or protected by a guard rail, then you are one tiny little random event away from serious injury or death and that ought to scare you. Just because there's danger present, doesn't mean you need to be terrified. If you're on a balcony with a high railing, then you can't fall. Whatever, if you're in a 20 story building, sitting on the inside 20 stories up, you're 200 feet in the air, but the floor is underneath you so you can't fall.

So, knowledge, competence, is the biggest antidote to fear. Having a basic respect for heights is healthy, you ought to. But if you know that you can't fall, then you don't need to be just afraid. You can go ahead and function. So if you're bolted to the wall or strapped or wearing a harness or if you're supported by something or even moreso like Mike Massimino and myself doing spacewalks, yeah you're 250, 300 miles above the earth, but you can't fall. The spaceship is going so fast that if you let go of the ship, you just fly around the earth with along with the spaceship. You can't fall. And so, even though you're high, if you

can't fall then you don't need to be afraid, and that's the big difference. Have the respect for the things that'll kill you, but don't just be a shivering chihuahua all the time because you can't figure out the difference between actual danger and just perceived danger.

JORDAN: Right, when Mike Massimino was on the show he said something very similar, which was that knowledge is kind of the antidote to high pressure situations. It's how you stay calm. You know you've got the training, you know you've got the knowledge. Is that your experience as well?

CHRIS: Yeah, not just knowledge but proven ability to put the knowledge into practice. Yeah, I agree with Mass completely but just reading a book about something doesn't make you competent. You have to take what the idea is and then get into a situation as close to reality as you can. It's like read all the books you want about riding a bicycle, you don't know how to ride a bicycle yet. You actually have to go out and learn. And when you're riding a bicycle, you have a high risk of falling. You're going to fall sometimes but then you have a tricycle first or training wheels or one of those bicycles without pedals that you just push for a while or somebody running along with you, holding the bike up.

You take the theory and then you practice it over and over and over again under a nonthreatening set of circumstances. And you could do it for anything. You could do it for writing an exam, you could do it for doing public talk, you could do it for your wedding vows, you could do it for whatever. Just practice it under as realistic of circumstances as possible -- circumstances without the actual threats of the real event, so that when the event happens, you have changed who you are. You are not that scared incompetent person, you've changed what your instinctive reactions are. It is not instinctive if you're falling to the left to turn the handlebars. That's not what our cavemen ancestors did a million years ago. We invented bikes and handlebars. But now when you ride a bike you instinctively do something that was not your born instinct. You've changed

what your instincts are and that is the antidote to fear -- is to change your fundamental instinctive reaction to things. And for an astronaut, the list of things that we need to learn and change our reaction to so that we're not overcome by the danger of the situation but can still function and fly the ship calmly and competently -- that's the whole focus of the job. It's what we do for those 20 and a half years of training, getting ready for the 165 days in space.

JORDAN: Were you ever worried about maybe how prepared the Russians were going to be compared to you all? Because when we hear things about like the Kursk submarine and how much went wrong with that -- and that was a nuclear submarine. You know, it's kind of space shuttle adjacent in some ways. It's pretty damn scary.

CHRIS: Oh, I think ignorance is always scary because you have no idea what to be afraid of. If you don't know what you're doing, it's scary because you're incompetent. But if you actually start digging into the reality of things, then you can knock off the things that scare you, one by one. I mean, nobody is perfect. I was a test pilot. Airplanes crash all the time in everybody's test fleets, it's part of the job. That's why we have test pilots because we don't completely know what we're doing and someone needs to figure out what to do. And it's true for space ships. And of course, talking about the Russians as if they're some monotheistic or singular --

JORDAN: One person, right.

CHRIS: -- one person, you know -- we killed the crew of Apollo 1, we killed all seven people in Challenger, multiple astronauts died in airplane crashes and in training accidents. The Columbia crew, we killed them through our own decision making, and we were doing our best to not do that but things go wrong. And if you want to do something worthwhile in life, there's always going to be risk. Your job isn't to avoid risk, your job is to try and do something worthwhile in life and therefore that changes your responsibility. You have to be the person that figures out

what the risks are, what the actual dangers are, and then deal with them. And it doesn't matter if you're flying a ship where the instructions are written in English or in Japanese or Russian or -- doesn't matter, the real task is you and how are you going to understand this ship and how it's going to try and kill you and how are you going to recognize it and train and become ready enough for it. Just like riding a bike. It doesn't matter who wrote your book of instructions or who built the bike. Your job is to look at the bike, find out its strengths and weaknesses, and then go figure out how to make this bike do what you want.

And the Russians build great hardware. They got into space before anybody else -- Sputnik and then Gagarin. They build great space stations. You know, they're not perfect but they have a long legacy of extreme success in space and so -- And I was a pilot of a Russian Soyuz spaceship. Really beautifully put together and well evolved little space ship. A lovely thing to be able to fly. Imperfect, like all machines, but immensely capable.

JORDAN: How's your Russian these days? You still keeping it up?

CHRIS: Oh, yeah, it's -- how's my English these days? [00:37:54] I've studied Russian for 20 years and was the pilot of a Russian spaceship. So what that means is I've spent years in Star City Russia, one on one with a professor, learning basic control theory, orbital mechanics, orbital dynamics, meteorology, vehicle design, vehicle programming, and then all operations and emergency procedures -- doing all that, in Russian. If you want to fly a ship you have to speak the language of the ship.

JORDAN: Right, so you know space Russian.

CHRIS: Yeah. I'm not sure I'd want to discuss theology in Russian. Like anybody, I have a limited vocabulary in language. But yeah, my Russian is good enough to get by, yeah.

JORDAN: Sure, good enough to get by slash pilot a spaceship, that's pretty impressive.

CHRIS: Well yeah. I don't want to overstate it. I mean, if I talk to a native Russian speaker for a very short period they'll immediately recognize that it's my third language, not my first language, but it's good enough to do all the things I need it to do which is why I learned it.

JORDAN: It seems like there's so much training that at some point you'd think you'd have a day where you go, "Ah, I don't want to do this again," but then maybe thinking, "Well, this is better than dying." Is that kind of what keeps you through some of those long days slash long years of training, doing the same things over and over?

CHRIS: Whenever anybody has offered to teach me something for free, I've always taken them up on it. That's a wonderful opportunity in life if someone says to you, "Hey, you know what? I'm going to show you how to play Taps on the trumpet. In the next hour you're going to know, you know, Taps, da, da, da," you know that little --

JORDAN: Sure.

CHRIS: [00:39:26] at a funeral whatever.

(sings melody)

CHRIS: If someone says, "I'm going to teach you to do that in the next hour," and they have a trumpet and you've got nothing going for the next hour, who wouldn't you say yes? "Shoot, at the end of this, I'll be that same guy I was before and I'll know how to play taps on trumpet, that'll be cool." And that's what astronaut training is like.

You know, they say, "Okay, this week, we're going to be in the cadaver lab at Hermann Hospital, and we're going to teach you basic surgical techniques. How to do a physical on somebody, how to find all of the major parts of the body that you need in order to do first aid and basic care, how to reinflate a lung, how

to do a tracheotomy, and that's what we're doing this week." And that's just part of your astronaut training because when there's only three of you up on a spaceship, you may well have to do surgery on somebody else. And so, to me it's just the right way to go through life and that is to constantly be trying to learn and improve on who you are. If at some point in life you think you know everything you need to know then you're just in the process of dying. [00:40:26] what Shawshank Redemption, right? Get busy living.

JORDAN: Yeah.

CHRIS: So I just see that as an important part of it.

JORDAN: In [*An Astronaut's Guide to Life on Earth*](#), you're training for your own demise doing these death sims and I wondered if maybe prepping your will, your taxes, all that kind of stuff maybe makes you feel like you've got one foot in the grave in some way?

CHRIS: Oh, I don't know. I think at some point you need to accept the fact that you're going to die. It's like people say, "Hey would you go to Mars on a one way trip?" and I go, "Hey we're all on a one way trip."

JORDAN: Yeah, we just don't all end up on Mars.

CHRIS: If you think this a two way trip then you're just deluding yourself. So the real question is, what are you going to do during your one way trip and are you really that concerned about where you are on the last day of your one way trip? I mean it's kind of -- it's a little bit of a delusional question, I think. The real question is, what are you hoping to accomplish and what gives you a sense of satisfaction and joy while you're alive? And how you're living your life in order to do as many of those things as possible.

What gives you a sense of pride and joy at the end of the day or -- that's how I shape it all. I don't worry too much about the fact

that this is an overload or that I feel like I'm studying for my own death. No, it's more like, "Okay I am going to die someday, so -- probably good to have a will. Okay, that's done now I can stop worrying about that." Anything that you've gained competence in really just gives you an improved opportunity to be calm.

So here's an example. I had a really major medical issue while I was training for my third space flight. I was disqualified from space flight, they took away my medical. We fought it and I did all the research and tried to learn everything I could and worked with the medical community and the regulatory community and tried to do -- but it was going nowhere but finally it was going to come down to one day where my wife and I were going to get in the car, drive to the hospital in downtown Houston -- which from the Johnson Space Center is about a 30 or 40 minute drive -- and we were going to do this test. And as a result of this test, it was either, "I'm going to continue and go fly in space on my third flight or my astronaut career is over," or, "I'm never going to fly in space again." So what would you do during that 30 minute drive?

And what I did is sort of what I always do and that is, I said, "Okay, we're going to get one decision or the other but this is not going to define us for the rest of our lives. We've already done a million cool things. We've got a million cool things coming up. This is just a day and something is going to happen today and then we're going to tomorrow so let's just start ready for it. So, if they say, 'Hey you passed and you're going to continue being an astronaut,' then that's easy. We know what we're doing. We're going to go back home and I'll go back into work tomorrow. But if they say, 'Sorry you failed. Your medical is done. Now you can't be an astronaut anymore,' what are we going to do next?" And I talked to my wife about it, I said, "Okay, who are the first five person we're going to phone? And what other jobs do we want to do? And okay, so we're done with job, so what? What do we want to do next? Where do we want to live? Where are we going to move to? What jobs are we going to

apply for? Hey, what other education would you like to get and what haven't we had a chance -- where do we want to go?" So we spent the half hour planning for what we are going to do when they tell me that I've failed my medical and I'm never going to fly in space again. And so when I got there, and they laid on the table all their tests, and they came up and said, "Hey, it turns out false alarm, you're healthy, you're going to fly in space," either way we were okay with it. I would much prefer to have flown in space the third time but I wasn't going to let that define who I was. I'm not going to be that poor sniffing guy who didn't get to fly in space the third time. You know, that's not going to be the definition of who I am. Instead it was, prepare for things going wrong, have a plan, and then you can come into it sort of calm and competent and relaxed and not just spending your whole life with your fingers crossed, feeling all stressed.

And so that's why we do death sims. You know, what happens if I'm up in space and I'm killed in an accident or something? What should my wife do? Who should she call? Is our insurance good enough? When is she going to move back to Canada? Because she's not going to stay in Houston forever if that's not my job. And where should she be and does the right people have the right phone numbers? And who does she want to have help her? To me that all just improved her state of mind. Rather than just sitting there with this big, scary, blackness, on the edge of your worry and stress system -- instead it's like, "Okay, we've addressed this. We've got a plan. If it happens it's undesirable but we've got a plan. If it doesn't happen, great, move on." And that's how we prepare for space flight. I think it then sort of helps shape how you prepare for everything. And to me it's just -- it's a choice -- but to me, it's the choice that I make in how to deal with the rest of my life as well.

JORDAN:

It seems like there's a lot of, "Look on the bright side but train for the worst case scenario." In Astronaut's Guide to Life on Earth, you mentioned no matter how big a problem is, you can always make it worse. And that, of course, seems a bit pessimistic but that seems like a requirement of just the -- because of the gravity of what you're doing, is so -- any little

mistake, an astronaut that doesn't sweat the small stuff is a dead astronaut, also from the section of your book as well.

CHRIS:

Absolutely right. There is no problem so bad that you can't make it worse. And that's a good thing to remind yourself of. If you're doing something that has no consequence, if you're playing tiddlywinks, then, you know, who cares? So you get an, "Eh, we'll play another game." But if you are doing something that has huge consequences, life or death, or big financial consequence, or a reputation or whatever, then you need to find a way to get as good and ready for it as you possibly can and take it seriously. And if you just sort of wave your hands and go, "Eh, it'll probably go okay," that's not how we fly rocketships.

When you get on an airliner and you sit there in the back, and you look up through, you don't expect the pilots up front to be waving their hands going, "Eh it'll probably go okay." You expect them to have trained and learned everything about that airplane and to have sweated the small stuff and to have been in the simulator recently and practiced all the emergencies so that when you take off out of New York and you get a Canada goose going down each intake, and now you have to do a forced landing in the Hudson -- that that's the skillset that the crew up front has. That's what you expect sitting in the back. And that's what everybody expects of astronauts. They expect us to have done all of that work. And if you had done all of that work, then you do a much better job in a more calm and comfortable way or job of doing it as well, you don't miss it, you're not overwhelmed by it, it's within your skillset, it's something you could do while thinking of something else, you notice how beautiful it is, how magnificent it is, how much fun it is, you're not just completely overwhelmed by the demands of the moment.

What astronauts do for a living is visualize failure, figuring out the next thing that's going to kill you, and then practice it, over and over and over again, until we can beat that thing. We know how to deal with it and then move onto the next thing and the next thing and the next thing. And that rigor of preparation and

rigor of thought, I think applies to any profession. Or your personal life. How are you getting ready for the major events in your life? The things that matter to you, the things that have consequence. How is it that you're actually preparing for them? Are you just sort of waving your hands and going, "Oh, probably turned out okay," or are you actually using the time available to get ready for it? And it's a personal choice and maybe it will turn out okay. But if the stakes are high, to me that's just not a gamble I will willingly take.

(COMMERCIAL BREAK)

JORDAN: You mentioned in Astronaut's Guide to Life on Earth as well that it seems like this really dovetails with that story that promoting the success of others enhances competency, right? You always sought, in the book anyway, and in the stories in the book to promote the success of other people, which is strange in a competitive environment because it seems almost like the opposite of what most people would do in that situation. How does promoting the success of others enhance competency of the whole team, of the whole organization?

CHRIS: Well, ants do it. I mean if you are one ant in the world, you're basically useless. You're incompetent, you can't get anything done. One ant? But, a bunch of ants promoting each other and helping each other out, it's pretty amazing what an ant colony can do. And bees do it and lots of other species on earth, plants and animals, promote the competency and the capability of others, within their own little tribe or group, in order to improve the chances of success of the rest of the group. At times dog eat dog is what we do and it's completely competitive. But for most complex environments or environments that are bigger than just one member of the species, you are better served to recognize that you do not have every skill needed, or you don't have all of the strength needed or the raw capacity needed to face up to the things that are liable to happen and you are better served to build a team of people.

And the more skills your team has -- if everybody on your team is super competent and has all the abilities, then you're combined chances of success have gone way, way up. Whereas if you've been spending the whole time putting the other people down and pushing yourself forward, maybe that'll work for some operations but it sure won't work for a space flight because you count on each other with your lives all the time, and there's no way you can have all of the skills that are needed. There are too many things that need doing simultaneously.

So both when I was a member of the crew and when I was the commander of the Space Station -- to me, get yourself a long term goal and then start simulating the things that are going wrong and find out what you as a group of human beings can't deal with yet and then start building the skills of the people on your team so that when this thing happens, at least one of you, if not all of you, can deal with it. Or at least collectively you can get it solved. Any skill that exists in your team is one more opportunity or one more incremental chance for your group to succeed and sometimes I think we lose sight of that in a day to day business -- and if you see somebody else getting ahead, you somehow sort of think it's you getting behind but if you're both on the same team then you need to get over yourself. You need to look at what is actually the purpose of your team and not just think about your own particular selfish games.

JORDAN: Yeah that sort of dovetails with your idea of always aiming to be a zero. What do you mean by that? I'm aiming to be a zero here.

CHRIS: Yeah well I try to take what is maybe a counterintuitive or slightly unusual idea and put it into a phrase that you can remember and it does not sound like a good idea to aim to be a zero. You know, it's just -- it's not what our cultural mantra would value. But, when I was a fighter pilot, I was in my early twenties and I'm flying one of the most sophisticated flying machines ever built, an F-18, and I'm doing it to defend North America against Soviet bombers during the Cold War, that are

practicing Cruise Missile Launchers on North America and I have to get out there with a fully armed F-18, with the capability of my own airplane to cause a big international incident.

So that requires a lot of competence but it also requires a lot of confidence and that is a certain mindset and if you give a young person that level of responsibility and therefore confidence, they tend to start thinking that, "I'm good at this, I bet you I'm good at everything. I bet you no matter what problem comes along, I've got the answer to this." And you walk into a room with that attitude and you look around, and you make your own immediate snap judgements and you start giving people the benefit of your brilliance, you're pretty sure that you're a big positive influence in what's happening around you.

You come into a situation, you look around, you size it up, and you start making pronouncements based on your own arrogance. But everybody else in that situation looks at you and recognizes that this isn't a positive, this person is a negative. They don't understand the subtlety of what's going on, they don't understand the nuance, they haven't been here, they're just trying to knock off the easiest, simplest things, and they really aren't proposing anything that's actually going to work in the long run. And so they see you, obviously, as a minus, not as a plus. You know, I left the buildings on fire. If the building is on fire, you've got to come in and make decisions. The building is hardly ever actually on fire.

And so what I learned, as I got a little bit more experienced, was that rather than just coming into a situation all pumped up on my own abilities, and then starting to tell everybody else what they needed to be doing. Instead, come in and -- instead of aiming to be a plus one and everybody knowing that I'm a minus one, come in and deliberately for a while aim for neutral. Aim to be a zero for a while. Nobody needs me within the first three minutes of walking in to start telling them how to live their lives or what they need to be doing because I'm just showing what an idiot I am.

I'm much better served to come into a situation and watch for a while and learn and try and figure out what's actually important here. What are the actual factors? How can I actually be useful? And then be much more measured in how you try and be a positive influence. Maybe wait a while and then see if you can actually make a useful suggestion or just spend a while -- like a friend of mine who reported for duty with the Navy headquarters in D.C. and his boss said, "You are going to be given several God given opportunities to keep our mouth shut and you should take advantage of every one." And that sort of thought process of learn a little bit before you start making an announcement. Aim for zero when you come into a new situation until you have the nuance and the competence to be able to be a positive influence. And a lot of us go into new situations regularly and I think that little pneumonic sort of reminder of, "Aim to be a zero," is maybe worth thinking about, at least initially.

JORDAN: Do your job well, don't try to be a hero, focus on not hindering others, and just do your own job until you've got all of, like you said, the nuances of the situation and you know you can play with those rules.

CHRIS: Yeah, or at least enough. I mean you may come up with a good idea in 10 minutes but recognize that that situation existed before you got there and there's probably parts that you do not understand when you first arrive. So do yourself the favor of waiting a while before you start inflicting your uneducated opinion on everybody else.

JORDAN: A lot of people ask you, "Oh, how do you feel now that it's all over, so to speak or that, now that you're back?" and you've got some thoughts on that mindset. I'd love to hear that.

CHRIS: Nobody understands anybody else completely and we only see a small subset of what other people are thinking or doing or what their concerns are or what they've actually done in their lives or what battles they've fought. I think when people look at

my life, they only know about the parts that have been reported publicly. They know perhaps that I was commander of a spaceship or that I recorded a David Bowie song or that I, you know, did a whatever -- because they only know about that one shining moment in my life. They might immediately make the assumption that that was the only shining moment in my life and now that it's over, my life must be a hollow echo of what it issued to be or something. And so a relatively common question asked of me is, you know, "Boy, what do you do now after you've done something so fantastic as that? How do you ever top that?"

I was never in the business of topping anything. I wasn't trying to command a spaceship so it would top something. It was more just a huge demand on myself of trying to be able to do something that there was a really interesting and complex task, an interesting job. But I've done all sorts of other things and been a lot of other places in my life and for me it's all much more balanced than in perspective. And I didn't need that third space flight in order to feel that my life was fine or that I'd been successful or that I'm happy with what I've done.

And so, I try and be interested in and take pride in everything that I'm doing, whether it's a menial task -- I mean recently the winter's damage on an old hiking path needed cleaning and I spent most of a day, by myself, with a chainsaw going along this hiking path and just clearing the fallen branches and rerouting along the new wet spots and such. And at the end of the day, I felt really good and proud. I had set myself out a task, I'd applied the skills that I had, the technology I had available, and I had accomplished something that was important to me and that gives me a feeling of satisfaction and self worth.

That's how I feel about my spaceflight as well. It's not blown out of proportion in my own my mind. It's just one of the things in my life that I set my mind to that now I feel that I did a good job at and that it served a good purpose and that allows me to now face up to the things that are coming next in my life. I think that your own personal balance and perspective -- you shouldn't believe all your own press and you need to really just

be paying attention to what's coming next and are you ready for that and not just live in the past on some sort of glory of one thing that happened that one day in your life.

JORDAN: I think a lot of us do that to ourselves. We convince ourselves that only the high points of our lives matter and it sets us up to think and feel pretty badly most of the time because if it's not the day we get launched into space or have babies or get married, we're kind of like, "Well, you know, I guess I'm not really doing anything. I'm not really accomplishing anything," and it's dangerous I think.

CHRIS: Yeah, it's -- you need to keep your own life in perspective and you need to take pleasure and notice that life is a limited resource and you should not miss a part of it just because it's not the most externally validated part of your whole life. You know, there are beautiful things within eyesight all the time. There's interesting stuff going on. You can choose to love what's happening or hate what's happening any time you want. It's totally kind of a personal choice and of course life deals you circumstances that are more desirable than others but at the same time in a very good set of circumstances who, for whatever reason, almost miss their own life. I try not to be one of those people.

I try not to get too enamored with the big events, but try and take pleasure in each thing as equally as I can. And I'm not any sort of perfection at it but I try and keep that in mind. And I think as a result, you end up a little more balanced and looking forward to each day better than only if you look forward to one or two or three days in your whole life time. It just seems like you're missing the point.

JORDAN: What's the deal with the shot of rocket fuel before the flight? That sounds both nasty and dangerous. And also, where do you have that? There's no tap for that, I assume, at the office.

CHRIS: Yeah, what you're referring to is an old Soviet and now Russian tradition of the people that built your rocket, they've worked for

a long time, they're hugely competent, they're a big team of folks, and they're very, very proud of the work that they do. And being able to build a ship that could take people off the surface of the planet. You know, for a group of engineers and technicians to successfully do that, that's hard. And almost no country, no group of people in the world can do that. They're very prideful and they feel hugely responsible for the crew on board. They recognize that the life of the crew is counting on their competence. Often, sort of traditionally in Russia -- actually, down at the launch site, which is just in Kazakhstan, just south of Russia, in a place called Baikonur -- at some point, prior to your launch, not the day of launch, but well in advance, you sit down with the rocket builders, and you have a ceremonial little sip of rocket fuel, which is really just distilled alcohol. Very, very, strong, you know, almost pure -- you cut it with a little bit of water, maybe take it down to 100 proof -- but very, very strong, seering, wickedly dry alcohol. But that's not the point.

The point is, it's to thank them and to honor their work and for them to meet you personally, the person that is going to bear the fruit of their labor and have the chance to fly their rocket ship to space. Actually, I very much value traditions. I think they give a sense of relative importance or of lack of trivialness to some of the events in our life. If you could get married in one minute, you know, how important is the institution? You know, if we gave out the medal of honor, and we gave one to everybody in the country, then it's no longer any sort of measure of anything. Having a tradition and a ceremony and a time honored way of doing something that represents something else, I think is valuable and is worthwhile, and it helps you prepare or get ready for the next things that are coming. And there are lots of those, they're around us all the time.

But, sitting down with the rocket builders and having a little sip of wickedly powerful refined rocket fuel alcohol, that was one small but fun, memorable event on the way to space.

JORDAN: Jason you had a question about maple cookies?

JASON: Yeah, so my dad's birthday is this weekend and he's a huge space fan so I bought him your book [*You Are Here: Around the World in 90 Minutes*](#), and I noticed in the very back of the book, the last photo, is a picture of a maple cookie floating on the International Space Station. And as a huge personal fan of maple cookies, even though I can't get my friends to bring them back from Canada for me because they eat them all before they get to my house, I was wondering, after you have your maple cookies up there, do you have to go around to all the air scrubbers and clean out all the crumbs just so you don't gum up the space station?

CHRIS: There are ships that come up that have people in them but there are more ships that come up that are unmanned robot ships, resupply ships. They're built by SpaceX and by Japanese Space Agency, European Space Agency, by the Russians -- and the unmanned ships come up and they're filled with food and supplies and clean clothes and experiments and all that stuff. But there's a little bit of room in them for a care package from home and my wife would try and choose one or two small things to put in there that would give me a touch or a taste from home. And plus my psychologist and my psychiatrist, the whole support team, they would do their absolute best to put something in there that would be fun and interesting and good for my mental health.

And in one of those came up some maple cookies. I mean, I love maple cookies. They have that strong taste and smell and they're in -- for a Canadian, they're in the shape of a maple leaf, which of course is in our flag, so very nice.

Crumbs normally happen when you set something down and it sits on the plate and gravity is pushing it into the plate. So, if you're careful in space, you can just float the cookie in front of you, and take a bite and the crumbs are just floating there in front of you. So you can have a relatively crumb free experience eating a maple cookie. And in that picture, in the back of [*You*](#)

[Are Here: Around the World in 92 Minutes](#), that picture I took -- it was funny, I opened this cookie, I had it floating, I thought, "Oh, I should take a picture of this cookie," took a picture and then I took a bite of it, and floated it again. So I took a couple pictures of this cookie floating with my particular bite marks. And then, at the end, I took one last picture of just a couple crumbs, floating there in space as well, just before I ate those. So, it was a quick little touch of home, a really nice treasured little moment, and I thought, a fun little picture to put in the back of my second book.

JASON: I really, really enjoyed it. After going through all of the pictures of all the continents and all of the great stories that you have in the book, just getting to that little picture of the maple cookie at the end, I was just like, "Oh, man, now I want a maple cookie. This is great."

CHRIS: Well who doesn't want a maple cookie? So, my wife sent up enough for -- I could float around the ship and give one to everybody on board. We work hard and the station is pretty big and noisy and demanding and you could go half a day and not even see another astronaut because you're working on your own set of experiments. So it's so nice to have somebody float up to you part way mid-afternoon, give you a smile and float a cookie to you, and then go back and suddenly you've got this little tasty treat of -- relatively symbolic of Canada. It was a nice thing to be able to do as commander of the ship too so I thank my wife for it.

JORDAN: Yeah I can imagine. It's like, "Here's a cookie and don't forget to take the crumbs and your toenail clippings out of the air intakes when you're done."

CHRIS: Yeah, well we vacuum out everything once a week. But yeah, anything disgusting like toenail clippings, you are far better off to vacuum those out yourself immediately. Don't wait for somebody else to clean those up.

JORDAN: Commander Hadfield, thank you so much. This has been wonderful.

CHRIS: Jordan, it's been fun talking to you and Jason also. Nice to speak with both of you gentleman. It is such a rare, new, and amazing experience to be exploring the rest of the universe in person. The people up on the Space Station, Peggy Whitson, who's the commander up there right now, it's her third time. She's got the all time record for Americans in space -- her third time living on the Space Station and her second command and these are just the first steps, you know? This is just us leaving earth, permanently. The earliest phase of that. And to be part of that, it's been what I always dreamed of doing, it's what I passionately pursued and tried to be good at most of my adult life -- just thinking about it gives me great pleasure, so it's been a lot of fun talking to the two of you about it.

JORDAN: Well thanks so much for doing so. It's been just amazing and we'll look forward to having you on pretty soon, hopefully again at some point. I know you're up to a lot, even helping kids lose their fear of the dark -- a lot of things worth talking about, so we really appreciate it.

Great big thank you to Commander Hadfield. The book title is [*An Astronaut's Guide to Life on Earth*](#). Of course that will be linked up in the show notes for this episode and if you enjoyed this, don't forget to thank Commander Hadfield on Twitter. We'll have that linked in the show notes as well. Tweet at me your number one takeaway from Commander Hadfield. I'm @theartofcharm.

Remember you can tap your phone screen to see the album art and see the show notes for this episode right on your phone. I also want to encourage you to join our AoC challenge at theartofcharm.com/challenge. And you can also text the word 'charmed,' C-H-A-R-M-E-D to 33444. The challenge is about improving your network and connection skills and inspiring those around you to develop a personal and professional relationship with you. It's free, just in case you didn't know that,

and it's a fun way to start the ball rolling and get some forward momentum in this area.

We'll also email your our fundamentals Toolbox that I mentioned earlier on the show, which includes some great practical stuff, ready to apply, right out of the box, on reading body language, having charismatic nonverbal communication, the science of attraction, negotiation techniques, networking and influence strategies, persuasion tactics, and everything else that we teach here at The Art of Charm. It will make you a better networker, a better connector, and a better thinker. That's theartofcharm.com/challenge or text the word 'charmed,' C-H-A-R-M-E-D to 33444.

For full show notes for this and all previous episodes, head on over to theartofcharm.com/podcast. This episode of AoC was produced by Jason DeFillippo, Jason Sanderson is our audio engineer and editor, and the show notes on the website are by Robert Fogarty. Theme music by Little People, Transcriptions by TranscriptionOutsourcing.net, I'm your host Jordan Harbinger -- go ahead, tell your friends because the greatest compliment you can give us is a referral to someone else, either in person or shared on the web. Word of mouth is everything. So, share the show with friends and enemies. Stay charming and leave everything and everyone better than you found them.

