

# **The Tim Ferriss Show Transcripts**

## **Episode 77: Danielle and Astro Teller**

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Tim Ferriss: Hello, homies and homettes, this is Tim Ferriss, and welcome to another episode of the Tim Ferriss Show, where my job is to deconstruct world-class performers, to dig into the minds of people who are the best at what they do to try to pull out the tactics, the routines, the habits, the favorite books, etc. – coping strategies, in some cases, that you can implement right away. And that ranges from hedge fund managers to chess prodigies to celebrities like Arnold Schwarzenegger to iconic music producers like Rick Rubin, and everything in between. This particular episode was an experiment, and I think very appropriately an experiment because it includes two people, a couple, my first couple of the podcast. The first person is Dr. Astro Teller. So Astro is a computer scientist and entrepreneur who currently oversees Google X, which is Google's moonshot factory. They basically try to do anything that seems complete absurd and world-changing, like putting up balloons to give broadband to the entire planet, or who knows?

Teleportation, you name it. If it's crazy enough and big enough, chances are, it falls under his purview. Then you have Dr. Danielle Teller, his wife, who is a physician specializing in intensive care and lung medicines. She has trained doctors and run research at Harvard University and the University of Pittsburgh, for instance. They are both very, very powerful minds. And our conversation is about many things, but it focuses on something I personally have not figured out, which is relationships. And both Astro and Danielle know from personal experience that finding the right life partner doesn't always happen the first time around. And through their own respective divorces, they learned how widely held assumptions and misinformation about relationships, what they refer to as sacred cows, create all sorts of unnecessary suffering.

So the approach here and the idea was to really dig in – because these are two very driven people – dig into the rigor that established both of them as leaders in their respective fields, to have them walk me through how they think about relationships. How do you take two very type A personalities and have them survive and thrive in a relationship? That's something I have not figured out. But these two really seem to have figured out many different aspects. So we sat down to have some wine, and so thank

you for putting up with all sorts of echoes and dramatic wine pouring acoustics. But I greatly enjoyed this conversation, and I hope you do as well. So please meet doctors Astro and Danielle Teller.

Welcome to Tim Ferriss's dining table. This is clearly Tim Ferriss. And we have some incredible guests here. We've already warmed up with a bite to eat. Some salmon, as well as some wine. We've had some Malbec, of course, as you know, one of my favorites.

This is Trepeache Terroire series 2009. And we have a backup just in case we need that to facilitate the conversation, so you don't hear a bunch of sighing and glugs of wine for an hour-and-a-half or two hours. I don't think that'll be a problem. We have two very, very bright folks here. And what makes these folks so interesting is that they are a couple. This is the first time I've interviewed a couple. And on top of that, people who can talk about not just being top performers in their respective fields, but how to harmonize a family, how to operate with significant others and with children. So I'm really looking forward to exploring this. And we have Danielle and Astro Teller. Welcome to the show.

Danielle Teller: Thank you.

Astro Teller: Thanks for having us.

Danielle Teller: Yeah.

Tim Ferriss: And I know it's very typical to sort of ask you to do the Dr. Evil thing and explain your background. But there's a lot that can be found, I'm sure, on the web when people want to search and explore your respective expertise. But I do want to dig into a little bit of what both of you are up to to provide some context from the conversations that we'll have and the topics we'll dig into. So maybe we could start with you, Danielle, and just chat a little bit about what you've been obsessed with, or what has consumed you for the last year, year-and-a-half, and maybe a snapshot of what you did before that.

Danielle Teller: Sure. My current obsession is writing. So writing was my childhood dream. I always wanted to write novels. I was a typical bookworm. Loved to just immerse myself in books all day. And then I realized that it's a really, really hard way to make money.

Tim Ferriss: Yeah.

Danielle Teller: And I got scared and decided to go to medical school instead. But for the last year, I have actually returned to my childhood dream, and I'm writing a novel about Cinderella's stepmother, which has been a lot of fun. Yeah.

Tim Ferriss: Why Cinderella's stepmother?

Danielle Teller: Mostly, honestly, because I am a stepmother, and I think a lot about being a stepmother. And the more I think about it, the more I think, they get a really bad rap in fairytales. They're always the bad guy. The mom's always dead, and if there's a villain, it's most often the stepmother. And I just sort of wanted to correct peoples' impressions about stepmothers a little bit. I feel like the stories are not being told from the stepmother's perspective, so this one is from her perspective.

Tim Ferriss: And what were you doing prior to starting this writing?

Danielle Teller: Prior to that, I was working most recently in Boston at Harvard as a physician and researcher. I did my teaching and my medical work in the intensive care unit, and I did my research in a basic science lab.

I had a small lab that I ran there, and we looked into the origins of chronic lung disease. That's what we were excited about.

Tim Ferriss: And so the chronic lung disease is interesting to me. Some people may know this already, so I won't belabor the point, but I was born premature and had a lot of lung issues when I was born. And my left lung collapsed and had five full body blood transfusions. And I still have a lot of thermo-regulation problems that I think are related to decreased respiratory volume, so I can't dissipate heat as well. But we can dig into that perhaps another time. Astro, what about yourself?

Astro Teller: Well, over the last year, for my day job, I've been spending time at Google X and trying to make the world a better place. Having a good time doing it.

And then Danielle and I have finished this book Sacred Cows, got it out there, and are starting to explore what we might write next together.

Tim Ferriss: How do the two of you – and Astro first, we've known each other for quite a few years now. And how do you decide what the next big project is, or the next –

Astro Teller: You mean personally, or you mean at Google X?

Tim Ferriss: Either. And I mean, that tells me that you separate the two also. So how do you choose either of them, or both of them?

Astro Teller: I don't think they are that separated. I think choosing anything to spend your time on or to have a group of people spend their time on is a confluence of events and opportunities. At Google X, we focus more on, is there a huge problem. Is there a radical new way to get at solving that problem?

Is there some science or technology perspective from which we really think we could make progress on that radical solution? That's the confluence that we tend to look for there. But it really does mean that you can have two of those things. And if the third one doesn't connect, there's just nothing to be done. But in our case, we were both going through divorces, and then ended up marrying each other. And because we were going through our divorces at the same time, we spent a lot of time, as we were falling in love and preparing to get married, talking about our divorces. And that led to, ultimately, this book, where we would never have planned to write a non self-help book about the truth behind marriage and divorce. If we had been happily married and just met at a playground or on the street and said, "Hey, you want to write a book together?" that's just not realistic. And I think a lot of the opportunities that come to us in life are these confluence of events that you can't plan on, you can only recognize when they happen.

Tim Ferriss: Now does that mean – that is something that I often say when people ask me what my 10-year plan is. Do you have a 10-year plan? Because I feel very conflicted about preventing the serendipity of these confluence of factors by having a very long-term plan that I try to hold to. What's your thinking on that?

Astro Teller: My long-term plan – I've had the same answer for kind of a while. Again, I think this is both in my professional life and in my what's called pseudo professional life, like writing books. I want to be working on really hard things that matter with really amazing people I can learn from. And that has nothing to do with whether I'm getting paid to do it, whether it's because my coauthor in a book is my amazing wife, or if it's people who I work with at Google X or at some other place in the future.

I won't do anything that doesn't have those characteristics. And

I'll sign up for almost anything that has those characteristics.

Tim Ferriss: That was a good answer. How do the two of you – maybe Danielle, you can tell me about this. How do you attack problems differently, or do you? If you have complementary skillsets, I'm just very curious. When you have a challenge as a couple, or if you were just in a parallel universe sort of working together and trying to solve problems in front of you, whatever those might be, how do you?

Danielle Teller: I think we're actually fairly similar in how we approach challenges. In how we approach the future, we're kind different. Astro's a planner and I'm not. I read a column a long time ago by David Brooks where he described that everyone's got two kinds of people.

But he described these two kinds of people. There are the planners who have got everything worked out for the next decade or two, and then there are the people who wander through life looking for the next open door. And if it looks interesting, they go through it, and they don't really worry about whether that's part of a 10-year plan or not. So he's the former. I'm the latter. So we're very different in terms of planning about the future, etc. But I think when new challenges arise, we both tend to be very logical people. And it's not that we're not passionate or emotional about things, but we both approach problems from a pretty intellectual perspective. And so because we approach them in the same way, I think that helps us to talk through them and get as close as we can to a solution.

Astro Teller: I think that's true. I would – color commentary on that. We have a joke, which is if we were World War II era British posters, she would be Keep Calm and Carry On. A

And you know the Silicon Valley version of that, the one that's all green and has a crown at the top, but if you look closely, it's made out of wrenches and screwdrivers and stuff? And it says, Get Excited and Make Things. That's me. And I think there's actually quite a bit of truth in that. My way of trying to get through adversity is to change things, is to put out effort. When things get really shitty, I don't like to sit around. I like to change something, and I kind of just churn up my gears if I can't. And Danielle's sort of the opposite. When things get really complicated, she can be much more Zen and patient and just get through it. That doesn't chew up her gears.

Tim Ferriss: I've obviously listened to the TED talk that you guys did together.

I've read through the book. And even though it is looking at relationships not exclusively, certainly, but through the shared experience that you have – many shared experiences, but one of them being divorce, I found that a lot of the thought experiments and questions in this were very fascinating. And we're gonna delve into a lot of that. And I'm sure we'll jump around. But I'd love to start with the idea of a soul mate, and sort of the one that is meant for any given person. There's that shining star. And I'd love for you guys to talk about your position on that. And maybe as part of that, just elaborate – and this is something – I'm 37, of course I'm thinking about these as well.

What were the non-negotiables for you both that allowed you – that are allowing you to have a happy union? Does that make sense? And you can separate those two.

Astro Teller: It depends. But those are two totally different questions, I think.

Tim Ferriss: Yeah. Those are two totally different questions that I thought I would just make one very difficult, long question, but.

Astro Teller: You want to answer the one true cow and I'll answer the second one?

Danielle Teller: Sure. So the way we approach it in the book as one approach is religion, which is to say, I might be a very strong believer in my religion, and feel that at an emotional level as well as an intellectual level, that what I believe is true, and recognize that other people don't have that faith. That they can't – they just don't believe it. They can't bring themselves to believe it even if they wanted to believe it. I was an agnostic, I guess, about true love.

No, I was an atheist about true love, I guess. I really didn't believe that there was such a thing as true love. And I approached my life through that lens, basically. When we fell in love, it was as though the way I viewed everything in life changed. I saw even the literature I'd read before, poetry I'd read before, I felt like all of a sudden I had this superior vision. I could tell which poets were really in love and which ones weren't. It's like having tasted something or experienced something for the first time, and then you sort of see it around you. And I don't know. You see something that wasn't there before.

Tim Ferriss: Right. It's like The Sixth Sense. Oh my god, the red doorknob

[inaudible]!

Danielle Teller: Exactly. Yeah. So I think that what we say in the book is that we're believers, and that we recognize that not everyone is.

And I don't know. I mean, certainly we don't think that everybody's gonna find their soul mate, or that there's a soul mate for everybody, or that there's even just one soul mate for people, but that there is a very important qualitative difference between different kinds of romantic love. That not every romantic love is the same, and there are some types of love that just require that you be together. And Plato described it, the original sort of platonic ideal of love was that humans were cut in half by Zeus, and were forced to wander the world looking for their other half. And then once they found their other half, they just became bonded to that other half. And they could just lie down and stay together for forever. And if you asked them, what is it that you want? What is it that you're looking for? They wouldn't be able to tell you what it was.

And Plato says it's not sex. They can't explain what it is because they have just found that thing.

Astro Teller: So Danielle got the poetic version. Let me give you the intellectual version. So I personally agree with her. So what I'm about to describe to you is what we say in the book on the same subject. I feel exactly the same, that I was an atheist, and I'm now religious in this sense about true love. But one of the bogeymen in our society on the subject of marriage and divorce, one of the unfair narratives which society keeps and uses to bludgeon people as it chooses, is that true love exists before marriage. If you're not married yet, then your only best, highest purpose life is to find true love.

And anything is worth it to find that thing, up to and including ditching somebody moments before you say the words I do. And yet, moments after you say the words "I do," true love does not exist, because if you tell your family, if you tell your parents, if you tell your spouse, for sure, if you tell your children, moments after you get married, weeks, months, or years after you get married, that you have now fallen in love with somebody else, or that you think love is out there but that it's not with your current spouse, what will everyone tell you? They will absolutely, positively tell you that what you have is as good as it's ever going to get. And that schizophrenia, that we want to have it one way up to marriage, but then we all pretend that it's the opposite, that this

thing doesn't exist after marriage, that's BS. And that's hypocritical.

And our society uses this to try to create fear and shame to force people into marriage, but then to try to keep them from leaving marriage. And though we are believers in true love, we're not advocates for true love or against true love. We're really advocating against hypocrisy, that it can't be both.

Tim Ferriss:

Okay. No, that's fair. So I realize my question about the one true love might actually not be the right question. So that's sort of predicated on, I think, a narrative that a lot of people have, which is find the one true love, get married, have kids. And in my own personal life, looking at a lot of my friends, there are people who are happily married. And I do know some older folks, usually men, that I'm closest with, who have been happily married for a long time. And I'm sure they have their ups and downs. But also seen the sort of collateral damage or the exclusions of marriage all around me, just with friends who are, say, in their mid-30s or so.

And so I'd love to ask both of you, what are the misconceptions – when people think of the world marriage, what should they think of? How should they define it for themselves? What does it represent? And is it for everybody? I mean, is it – I think a lot of people feel pressured to strive towards marriage, and then the downstream affects kids and whatnot. But when people are thinking of marriage and feeling that type of pressure, as I do sometimes, quite frankly, what advice would you give them?

Danielle Teller:

I don't think there is a should. I think if we would advocate for anything, it's just having the space to make your own decision without a lot of social pressure. That this social pressure doesn't help, and it's not aimed always in the right direction.

I think that there are a lot of different reasons to get married. And I'm not sure – we talk about true love in these highfalutin ways, like it's this really awesome thing, which it is, but not everyone finds that. And maybe if you don't believe in it, you're not going to experience it, just like some alternative medical treatment. If you don't believe it, then you don't experience it. Maybe you need to be predisposed to it. Some people get married because they want to have a family, and they like the person that they're with. And it's not true love, but that doesn't mean it's wrong. I guess people just need to go into it with open eyes, and realize what their motivation is, and realize that they're going to – what they end up getting out of it, what they experience in marriage, is gonna have a



lot to do with why they got into marriage in the first place. And I think, having both been married and divorced before, we would wish that everyone could be happily married.

But certainly, marriage isn't for everybody. Because being unhappily married is not better than being single. I mean, sometimes it's lonely to be single. There are downsides to being single. But there are a lot of downsides to being unhappily married, too.

Astro Teller: The other thing I would say is that marriage is not only something that you can enter into for different reasons, but one of the main challenges associated with marriage and divorce is that people don't necessarily go into them with clear expectations that they share with themselves, even, let alone with their spouse. So one of the other sacred cows that we talk about is the holy cow. And we talk about the marriage contract as though it were almost like a business contract. And the concept of the contract is that you pre-negotiate friction. That's the entire point of a contract.

Tim Ferriss: Yeah. It's not for the best case scenario.

Astro Teller: That's right. But when you look at the marriage contract, it is the vows that people say in front of their friends and family. It is the worst possible form of a contract. It has all of the pressure and seriousness of a big contract, but it is ultimately ambiguous. Because to say, "I promise to love you for the first of my life," since that's not something anyone can control, how they will feel in the future, is to leave completely unspoken what actually you're promising. So if you were to say, "I promise to stay with you no matter how miserable I am," that's a concrete promise. Not a very romantic one, but it's a concrete promise. If you were to say, "Look, I hope that I love you for the rest of my life. If I stop loving you, I'm gonna work really hard to work it out with you and start loving you again. But if I can't, I'm gonna leave, and you should want me to leave. That's also concrete.

But we don't, as we're entering into marriage, have a real conversation, typically, with our soon-to-be spouse about what it is we think we're getting into, what it is that they think they're getting into, and whether or not it's the same. Because a lot of the hard feelings that happen at the end are really generated by this ambiguity that's set up at the beginning.

Danielle Teller: I think our society makes it harder for people to really think about things in a really rational way because of the pressures you're

talking about, and because society does put a lot of pressure on people to get them to the altar. But also, the way we've turned weddings into this fairytale of events, I think it really places the emphasis on sort of the magic of love. And love is wonderful, but we can't let our desire to have this wonderful romantic event make us blind to the fact that love isn't something that we control, that love is actually an emotion.

And it's not something that you can just – there's no switch inside your heart that you can just turn on that will make you love someone, or if that love fades away, that could make you continue to feel the way that you used to feel. I mean, if there were, match.com would be the most successful business in the world, right? You just pick someone who seems like they fit some criteria. You just reach in for your love switch, turn it on. You'd be like, oh, I'm so in love with you, this is great, right? But it doesn't work that way. And it doesn't work that way after you're married, either. There's no magic threshold that you cross. You're the same as the person that you dated for two years that you thought was really great for the first eight months, and then things got worse and worse, and you finally decided to go your separate ways. It's not really any different. If you happen to have gotten married before that eight months had elapsed, you would be in the same position. But society would see it very differently, and would treat your feelings very differently.

Tim Ferriss:

So here's a question for you guys then. If you both experienced divorce, why did you choose to officially get married again? Because of all the places that – granted, there's still pressure, but of all the places that are somewhat forgiving, the Bay Area is pretty forgiving.

I mean, there's something for everybody here. And maybe on some other podcast, I'll talk about the time I accidentally wandered into a polyamorous dinner party by myself. And then they all sat down to do self-introductions, and I was like, how do I get? Oh my god. I was a big [inaudible]. I'm not sure – anyway. That's a separate time. But the point being that the Bay Area of San Francisco is pretty forgiving, I think, as far as those things go in the United States. So why did you guys choose to get officially married again?

Astro Teller:

It had nothing to do with what society wanted. I wouldn't have felt whole until we'd been married. I would have been fine not to get married for the rest of my life otherwise. So it's not about marriage per se. But it just would have been tragic to have found my other half and then not to have gotten married to her.

That would have been –

Tim Ferriss: Just more formalizing that devotion?

Astro Teller: I mean, whatever. We didn't need the wedding to know that we have the feelings that we have. But to not celebrate it just would have been a missed opportunity.

Danielle Teller: You know when you're madly crazy about someone and you just want to do everything you can to bring yourself closer to that person?

Tim Ferriss: Sure.

Danielle Teller: It's just another level that brings you closer. It's not that we wouldn't have been happy living together without being married, but when you're that in love, you want to be bonded in every possible way. It's just another way.

Tim Ferriss: Yeah. No, no, I get it. I had to ask. I want to come back to the one true cow for a second.

Because I feel like there are many, many people, and I talk to a lot of friends, for instance, who have been with someone for a long time. They feel like if they were putting together a report card for that person, they're doing really well. They're in the 90<sup>th</sup> plus percentile, and they're a 10 out of 10 on all these various important things, but they're very, very low on a couple of other maybe critical factors, right? But they feel like this person is as close to the one true love that I've found. I'm X years of age. Let's pretend like kids are not a factor at this point. If I break up with them, I have to start from scratch. I just feel like that type of anxiety is very pervasive, where there's a certain maybe sunk cost balancing that goes along with being with someone for a very long time. But if you were sort of advising a friend, what would you say to them? What questions would you have them ask themselves, or how would you help them get through that?

Because I think it's easy for people in that situation to feel like they could roll the dice and go out and continue searching, but it's like having a revolver that they're playing Russian roulette with, where there's 100 chambers, and 99 of them are loaded. And there's that fear factor, so they don't leave, right? What would you say? And this is a very difficult question, but I mean, it's not an uncommon situation. What might you say to someone like that?

Danielle Teller: Yeah. I mean, that's really hard. I don't think that we are very good at giving advice in those situations. Because we know people who have chosen to get married for a number of different reasons. And there's more than one reason that works for people. So I guess my question would be, what is it that you want? Why do you want to get married? And if your answer is that you want someone to grow old with, that you want someone to have children with, that you really value the familial bond, it may not be that smart to just continue to wander the world and look for your other half.

Because you're not guaranteed to find your other half, and you might get to a place where you feel like, wow. Now I'm too old to have kids. Now I don't have what I want. But I guess if what you want is this – if it's more about the passion, then I think you have to be extra careful about what you're getting into.

Astro Teller: So we run this experiment, I'd say, at least two weekends a month. My brother is single, and my brother meets a lot of wonderful women. And he's just never found someone that he wants to marry. And he asks essentially what you just asked.

Tim Ferriss: How old is he?

Astro Teller: He's 41 now

Tim Ferriss: Yeah.

Astro Teller: Two years younger than me. And so he asks us this. And we say the same thing to him every time. And there's a presumption buried in here.

Danielle Teller: You make him sound like he's not very bright, but he's actually incredibly bright.

Astro Teller: He's incredibly bright.

Tim Ferriss: I wouldn't [crosstalk] stupid –

Astro Teller: This is hard question. But what we tell him is, for god's sakes, if you don't have to be with them, don't be with them. Not only don't get married, but probably don't even date them. Move on. But hidden in that statement is an understanding that we have about him in particular that we believe that he's wired the way we happen to be wired. That is, that he has it in him to feel the thing we feel. I think – I believe he does. And that he will be unhappy – I believe he will be unhappy if he settles, which, as Danielle pointed

out, that is not true for everybody. That's not necessarily at the top of everybody's list. But because we believe it's at the top of his list, having something that is qualitatively better than anything he's experienced before, what we tell him is, if you don't have to be with them, you probably have to not be with them.

Tim Ferriss: Right.

Astro Teller: And that's not a checklist. When you get to the place where you have to be with someone, there's no nine out of 10 there. It's different.

Tim Ferriss: Yeah. Now other than marriages that you both have observed where the couples would honestly say they are happy, right? They're not putting on a show. They're not acting. What were the reasons they decided to get married, right? So if the outcomes are highly dependent on sort of the reasons for getting married in the first place, what are the reasons that tend to have better outcomes than others?

Danielle Teller: I think it's when the couple is aligned in their reasons. So I do know couples who have gotten married really to have children. I mean, it's not that they didn't love each other, but it was much more –

Tim Ferriss: I think with a lot of people, it's accelerated, or the decision is made for that reason.

Danielle Teller: Right. So they might not have ended up together, except that having children was what they wanted. And they love being parents, and they love their families. They just love being part of a family. So I think that that can work. But the one thing I feel – this is just my opinion – when I see people who are happily married – I remember one time, sitting around the Thanksgiving table, and my brother and his wife were there. And he described looking at his wife – he had been with her for 10 years, married for five years, or something like that. And he described looking at her and thinking, “That's my girl.” And I just thought that feeling that you have, of just I'm so happy that I'm with that person. I admire that person, I'm proud this person's my spouse, I just love being with that person, that is one of the qualities I think that I see in the happiest marriages.

Tim Ferriss: Astro, I think you and I have some similar DNA.

Well, I mean, beyond the fact that a lot of humans have a lot of similar DNA. Like 90 percent the same as chimps, right?

Danielle Teller: Mice do too, actually.

Tim Ferriss: So that's a pretty close [inaudible] as well.

Astro Teller: I'm feeling really close to you right now.

Tim Ferriss: Yeah, yeah. But what are the most common mistakes that you've observed that sort of type A personality-drive guys make when it comes to these big relationship decisions?

Astro Teller: I don't know if this is gonna be a list of the things in proper order that are a problem, but I'll tell you a story.

Tim Ferriss: I like stories.

Astro Teller: All right.

Tim Ferriss: I have a friend who had become single and had moved to a new city, and was just – he's a good-looking guy. He's in his last 30s. And he was just having a hard time kind of getting back into the swing of being single.

And he went from that to discovering Tinder, in this case. And once he got on Tinder, he went from almost not seeing anybody to exhausting himself with how many people that he was seeing. He described it almost like being able to just select the attributes that he wanted, like ordering a pizza, and then the girl would appear almost literally at his doorstep. And the thing that I thought was interesting about this was that he said, after he had ordered a good 30 women who happened to fall into a particular category. They were blond, they were six years younger than him, they'd all gone to Stanford, technical, he had this set of things that he was positive were his type. And he said, "Now that I've been with 30 of those women, I've discovered that's not my type." And I think that that's probably more typical than not.

And he just discovered it a lot faster than many people do. But the types that we think we have come from the movies, come from who knows? What our parents said to us we were supposed to be with, from our own insecurities and hang-ups. And those things aren't gonna make us happy. So those can't actually be the checklists. But if you don't use – and I'm not picking on Tinder, but if you don't use Tinder, it could take you decades to find that out instead of months, right? Because it could take you several hundred experiences to really verify that it's not just her or her or

her or him or him or him, it's actually that you were misguided, that you had the wrong sense of where people would resonate with you. So a lot of type A people think that a type A person is who they have to be with.

Danielle is an introvert. I'm an extrovert. And I don't know. I never had a checklist, but I wouldn't have probably written introvert on some checklist of mine. But really loving somebody is about throwing the checklist out the window. And so thank goodness I wasn't trying to satisfy some checklist, because I'm not sure introvert would have made the list for me. But that doesn't make us incompatible. I would have had a bad list if I'd been making a list.

Tim Ferriss: How did you first meet?

Danielle Teller: We met in 2001 in Pittsburgh. I had just moved there, and I had just gotten married.

Tim Ferriss: I'm putting it together. All right, the Carnegie Mellon connection, yeah.

Danielle Teller: Right. So I had just gotten married, and my husband was still in Boston, and I needed to find a place to live. And I was uncertain as to whether I'd be able to stay. My mentor had just moved from Yale, where I had started my training. I still wasn't quite finished, and my mentor moved to the University of Pittsburgh.

And so I either had to find myself a new science mentor and start all over with a different project, or move to Pittsburgh. But as a Canadian, I didn't have a visa that was going to allow me to remain in the US, necessarily. And so I needed to get a waiver. So I needed to find a way to be able to stay. So I was looking for a rental. I couldn't buy. And in Pittsburgh, the housing costs are so low that nobody rents except students. And so every place I looked at, it was just the smell of beer, and the floors were all crooked, and it was just – it was ridiculously hard to find a rental. And then I found, on the web, a rental, this cute little house. This guy who was going to Stanford on sabbatical, a professor at Carnegie Mellon. And so I went to look at the house, and it turned out it belonged to Sebastian Thrim, who is a good friend of Astro's. And so I walked in the house and I was like, "I'll take the house." And he said, "Don't you want to know anything about it? Don't you want to know what the heating bill is or anything?"

I was like, no, I'll take the house. Because I was so desperate for a

place, and it was a really nice place. So anyway, we hit it off. We had a fun conversation, and he said, well, we're leaving to move to California. But why don't you guys come over for dinner the weekend before we leave? So my husband was back in town. We went to Sebastian's for dinner, and the only other guests were Astro and his then wife Zoe. And we just hit it off, and our families became friends, so we were friends for a long time.

Tim Ferriss: Huh. Gosh, so many questions I want to ask you guys. And it's been very sort of fascinating and comically tragic to watch my own monkey mind at work in the last, say, five years, just as more and more friends are getting married, more and more friends are having kids. You're like, oh, well, maybe someday I'll have grandkids kind of comments maybe more frequent than they used to be.

And the anxiety that's produced. And what I've realized is one of my big fears is – and this is probably right – I mean, I think a lot of it's addressed in Sacred Cows – but is I don't want to lose. I don't want to do a bad job. And so I don't – if I think I'm going to do a bad job, I don't sign up for the job. Does that make sense?

Astro Teller: But what counts as losing for you? Is it a bad marriage, or failing to get married?

Tim Ferriss: No, I'll tell you. So here's a very granular concern. So when I was listening to your story about your friend and Tinder, and how he had the – he went on 30 dates with whatever, 28-year-olds, Stanford grad, technical women. And he's like, oh, I don't think they're my type. Part of me, and call me cynical, but you could read *Sex at Dawn* or just look at monkeys, if you want. And I was like, maybe he just got bored. Maybe he had exhausted – maybe he was looking for novelty after that point.

And that's a fear that I have inasmuch as I've been very good at monogamy. I've never cheated on a girlfriend. But I find, after a certain period of time, I kind of have to – I have to put a part of my psyche into a straitjacket to make it work. And it affects my mood and behavior and everything else. And so I've never had an issue up to, say, several years of dating someone, but I fear. My fear is that I marry someone, and then X number of years into it, who knows? Five, six, seven, eight, nine, 10, whatever it might be, I cheat, or that need – I could call it a want, but I feel like it's very much hardwiring – screws everything up. And it's like we have kids, and then the whole thing explodes. How do you encourage someone to think about that?



Because honestly, this is something I really struggle with because I don't want to be a bastard. I don't want to lie. I don't want to sign up for something that is a doomed mission from the start. How do you think about this stuff? I'm so troubled by this that I don't even know where to start. It's a big question.

Astro Teller: Well, I mean, if you wanted to get married to me, I would hope that you would bring this up with me before we got married, right?

Tim Ferriss: Right. Are you proposing? I accept. Right on. Mission accomplished.

Danielle Teller: What about me?

Astro Teller: No, no, he's gonna be wife number two.

Tim Ferriss: Oh yeah, no, no. This is a very farewell my concubine kind of situation after I've had a wine cup or two.

Astro Teller: If I were your lady friend and who you're considering getting married, I would, at the very least, want you to talk to me about this.

Now that might be a deal killer for me, but if this is something you're really worried about and you talk to me about it, and then I say, look, deal killer, that's probably not the right person for you to marry. So there's some good self-selection going on there. I can't promise, but I don't think we're the only ones who feel like this. If you're worried about that, wait till you don't feel like that anymore. Because I think we both feel that that's not an issue for us. Not because we aren't sexual beings and have desires, and it's not like we don't crave novelty generally, but I don't think either of us has a pressure to leave our marriage to seek out more novelty. And I think it's possible for many person, I bet possible for you to feel like that. And maybe that's just part of your body telling you you're not ready to get married, or you haven't found the right person to get married to.

Tim Ferriss: Yeah. It's entirely possible, yeah. It seems to be a very perennial challenge for a lot of people, not just men. I think just men coming back to the societal framework within where this is operating is just more accepted, I think, for men to talk about it or to lament it. But let's shift gears just a little bit. So when you guys have a conflict, I'm very curious, is there – what have you guys found to be the most effective way of resolving conflict? Because I think a lot of relationship problems that end relationships ultimately could probably – I mean, not probably, but a lot of them could be averted

if people just managed conflict better, or set expectations in the way that you were talking about. Meeting wife number two and everything. How do you guys think of conflict resolution with a significant other?

Astro Teller: I wanted to talk first because I don't want to get yelled at.

Danielle Teller: I'm the boss. There's no conflict.

Astro Teller: There's no conflict.

Danielle Teller: Yeah.

Astro Teller: Or else.

Tim Ferriss: It's an iron fist. As soon as you see that he's gonna dissent, you smash him with an iron fist.

Danielle Teller: Exactly. It's working really well. No, I mean, I don't think that there are a lot of books written about this. So I don't think anything that I could say would be a novel perspective.

Tim Ferriss: Oh, I'm not looking for novel. I'm just looking for effective.

Danielle Teller: Well, I think if you have basic respect and love for the other person, then you're not going to allow your conflict to escalate to the point where you're hurting the other person's feelings. So you're not gonna be – I mean, if you read a book about how to keep your marriage together or how to not have such bad conflict, they'll tell you things like, be respectful. Don't call each other names. That's sort of the basis. These are the things we learned in kindergarten.

And when you're in a relationship that's a loving relationship, I think that you often don't do those things because causing pain to the other person causes you pain yourself. I think that we try to be as rational as we can. I think that helps both of us. But that's just a style thing, and there are people for whom that doesn't work. It's just like everyone has different co-mechanisms, like Freud developed all these different mechanisms for how people cope with various psychological disturbances. Our way is to intellectualize everything. But that works for us. That's not for every couple. But I think that's good. And then I think the other thing is, we agree to disagree about some stuff. We don't always come to a place where we're both like, yup, I totally get your perspective, I totally agree with you, but we can respect the fact

that we don't always completely share the other person's opinion. And that's okay.

Astro Teller: I would say I agree. I know how ridiculous this sounds, but I think that the conflict resolution, in a way, that works the best for us is going to sleep.

Just it's so frustrating, but whenever we have conflict, if we allow ourselves to sit up and talk about it for four hours, typically, the conflict really doesn't go away.

Danielle Teller: No.

Astro Teller: But it doesn't matter if we talk about it for four minutes or four hours. The conflict, if anything, will get worse, typically.

Tim Ferriss: Yeah, that's my experience. Yeah.

Astro Teller: But if we go to sleep, the next morning, we're like lovebirds again, and we can't even reconstruct why we were – and so but we've gotten good about it. So now we will just say – sometimes it's hard, but we are much better than we used to be at just saying, why don't we go to sleep? We'll talk about it tomorrow. And we both understand that that means we're being ridiculous. It doesn't feel ridiculous, but we also understand intellectually that we're gonna feel different the next morning. And then we run the experiment, and sure enough, the next morning, we don't want to fight about it anymore.

Tim Ferriss: No, I like this advice because it's simple, but it also runs counter to what you are told a lot in relationship advice books, which is never go to bed angry.

You have to resolve it before you go to sleep. And my experience is like, all right. The only thing that was just accomplished is we took something that was nonsense and two humans being stupid from four minutes to four hours. And now we're just not gonna get any sleep and we're gonna be bitchy and grumpy tomorrow.

Danielle Teller: Right.

Tim Ferriss: There's not much point to that, okay. What other rituals or routines or habits do you guys have that you guys think help the relationship or help the family?

Danielle Teller: We have a lot of rituals in our relationship, and those have just grown and multiplied. We joke that eventually, our whole day is

just gonna be a 24-hour ritual because we've built all these rituals into our lives. And but the rituals are really wonderful, and they help to preserve our sanity when things are crazy. And we have four kids. We've each got two, so there's a lot of chaos sometimes.

But having our rituals, where after work, as long as the sun is still up, we carve out a period of time, even when the kid are there, to go and sit in the papa san in our backyard, and we have our special drink.

Tim Ferriss: What'd you say, the papa san?

Danielle Teller: Yeah.

Tim Ferriss: What is that? I'm putting a hyphen in there like [inaudible]. What's a papa san?

Danielle Teller: It's a chair, a bamboo frame with a big cushion in it.

Tim Ferriss: Oh, it sounds great.

Danielle Teller: Yeah, it is. It's comfy. So we will do that. And we have a morning routine.

Astro Teller: This is where we have our Monogamy.

Tim Ferriss: This is where you have your Monogamy, which is a nickname for – explain the drink? I love this.

Astro Teller: It is a rosemary martini.

Tim Ferriss: How does one make a rosemary martini?

Astro Teller: So it's not a secret. We only drink it when we're together, but we're very happy to push it on other people, though typically, other people don't enjoy it.

Danielle Teller: Which is one of the jokes about it being Monogamy. It seems like we're the only two people who actually like it.

Astro Teller: But the recipe is three parts rosemary-infused vodka, two parts vanilla-infused cognac, and one part lemon juice. And there's some sweetness from the vanilla, and then there's the tartness from the lemon juice, and the aromatic sort of pungentness of the rosemary and the vodka, and it's really wonderful.

Tim Ferriss: Oh, I'll have to try that. And so by infusing, really, I mean, you're just taking a sprig of rosemary and dropping it in the bottle.

Astro Teller: Well, we take about 20 sprigs and drop it in the bottle, and leave it there for 24 hours until it's really rosemary-ed.

Tim Ferriss: So I like this. This is –

Danielle Teller: Yeah, so that's one ritual. And then we have a morning ritual where Astro always wakes up earlier than I do, and he goes and makes coffee. And then he waits till he thinks I'm waking up, and he brings the coffee to bed.

Astro Teller: That's us sitting in the papa san and drinking green Monogamy.

Tim Ferriss: Oh man. That's a great ritual. So in the morning, he wakes up earlier, and when he thinks that you're not going to throw a book at him.

Danielle Teller: Right. I would not throw books. Worse than books.

Tim Ferriss: Worse. Not me, but the ninja stars. Bottles.

Danielle Teller: I care more about the books.

Tim Ferriss: Molotov cocktails, right. So he'll come and wake you up.

Danielle Teller: Yeah, and then we have our time in bed where we just snuggle and drink our coffee, and that's also sort of sacrosanct time. And the kids are up and they're doing their thing. But we just carve out that time so that we're in our little bubble, and we start our day out just by being just the two of us and having this calm moment.

Tim Ferriss: Now this is before the kids get up?

Danielle Teller: No, they're up and getting themselves ready. I mean, they're older now. They were 13, 12, 11, and 10. So they're old enough to.

Tim Ferriss: Yeah, they're not banshees unless they're [inaudible].

Danielle Teller: No, and they don't need us to do everything for them.

Astro Teller: They're self-organizing banshees.

Tim Ferriss: Now when the kids were younger, in both cases, I'd be interested to hear.

So we were chatting before we started recording about this article that was written some time ago by – I’m blanking on the author’s name.

Astro Teller: Aya?

Tim Ferriss: What was that?

Astro Teller: Aya Wolet? Woodlet, excuse me.

Tim Ferriss: I think so. About how she – and I’m paraphrasing here, but prioritized her husband over her kids, or loved her husband more than her kids, or something like that. What I’m curious to know is, so what have you found the balance to be in terms of one, handling conflict resolution or anything else siding with the spouse over the kids, or the kids over the spouse. I think that, like you said, Astro, earlier, about expectations being clear, I was very fascinated when I was in college. Took a year off of college for a whole lot of reasons we can talk about another time. I was on the extended plan. And I lived with this fascinating Mormon guy who was very high up at Unilever.

And he said that part of the reason he felt his family had a very low degree of conflict is that his wife was always prioritized over his kids, so they couldn’t be divided. And so it made conflict resolution much easier. And I’m not saying that’s the answer, but it was thought-provoking enough to a college kid who really wasn’t thinking about marriage at all to stick with me. So I’m curious as to sort of how you think of managing the spouse or significant other relationship with the kid relationship.

Danielle Teller: I don’t think it has to be about love. I mean, I don’t think there’s anything wrong with loving your husband more than your kids, or loving your kids more than your husband. I mean, I wouldn’t cast judgment on anyone for how they love. I think love is just what it is. It happens. It’s not something we control. But I think that being a team is absolutely necessary. And I think that this is the message that we always try to give to the kids, which is that we’re on the same team, and they’re on the same team.

And that may seem like we’re setting things up to be like a little war at home, but I think it works because they band together more, and they don’t try to divide and conquer us because they know that we will refuse to allow them to divide us, yeah.

Astro Teller: Oh, totally. We're playing two men down as it is. If we allowed any opportunity, because we're back to back like Batman and Robin. If they could separate us and take one of us down and come get the other one, we'd never survive.

Tim Ferriss: Game over. What is the worst advice that you think people are routinely given about relationships? And that could be marriage, but I'll keep it broad. Just about significant other type relationships.

Astro Teller: Well, here's one of the ones that bothers me a lot. We refer to it as the defective cow in the book, which is there's a strong social narrative – it's one of these other bogeymen in our society – that if you're married and you are in an unhappy marriage, and you're getting anywhere close to thinking of leaving, you're not just a bad person. Like I'll get back to how bad a person you are in a minute. But you're also a broken person. You are a defective person because you got married to them, so obviously, because I mean, it would be even worse if you were a liar, you at some point loved them. So you lost your way. So were whole, now you're broken, and it is your job to mend yourself. And we'll know that you're mended, we'll know that you're no longer a broken human being, when you love your spouse again. And this narrative is incredibly strong in our society, and confuses people very badly.

Because not for all of them, but for some of them, the answer might be, actually, I'm not broken. I'm just not in love with my spouse anymore. But if you don't allow that to be one of the possible explanations for why you're having a hard time in your marriage, if the only possible explanation is that you're a broken human being, people spend a lot of time being very unhappy at themselves and trying, completely futilely, to fix themselves, when the problem is in fact not that they're a bad person, that they're not trying hard enough, all the things that they go to their therapist and say. So that's –

Danielle Teller: I think it's not just love. I mean, love as it encompasses desire as well. Because this is probably even more common with sexual desire than it is with – because I think a lot of people still really do love their spouses, but are not sexually attracted to them. And this idea of focusing on what is wrong with you that you lack any sort of libido is – I mean, some people do have medical reasons or psychological reasons for why they may have an abnormal desire for sex.

But we don't as a society spend enough time talking about the fact

that sometimes, it's about the relationship. It might be that if you were with a different person. And maybe it's a novelty thing, as you were talking about before. Maybe there are other issues. But we're so afraid as a society of coming close to that because that is threatening. Because that might mean that, well, we can't be married anymore if the problem is not you. If it's not your libido that's got to be fixed, it must be that our relationship isn't working. And maybe one of the solutions is you need to be with someone else. And that's not something we want to talk about. But I think it does cause a lot of pain and confusion for people that are not willing to at least bring that up. That may not be the cause, but the fact that we never bring that up is a potential cause, and I think it's a lot more common of a cause than we let on is – I think it's hurting people.

Tim Ferriss: Yeah. Do either of you know any long-term single people, older than 40, you would consider to be genuinely happy?

Danielle Teller: Yeah.

Tim Ferriss: Okay. Tell me about them. Because here's – I'll give you a timeout so you can think for a second. Because part of me is like, yes, he just married, but George Clooney had a pretty good run of things. And I wonder if there is, especially as a male – I've felt so much pressure from different corners in the last few years related to marriage. And I'm like, is it really so bad? I'm a pretty happy guy. I would love to be with the true love of my life, of course. But if there's any degree of doubt, I don't want to rule that out as a completely nonviable path, at least for a period of time.

And so I'm just very curious to know – because now the feedback that I'll get, which is very much kind of this conversation in the book and elsewhere about societal pressure will be like, well, that's great. You can focus on yourself and do this, this, and this. But that's not true happiness. And it's like, well, maybe. Maybe. But maybe you're taking a bunch of baggage and anger and stuff that you have and throwing it on me.

Astro Teller: Sure.

Tim Ferriss: So I'd be curious to hear of sort of any single people, male or female, who you think are genuinely happy, and why you think that's the case. And it doesn't have to necessarily do with their singlehood, but.

Astro Teller: You mean specifically single people.



Tim Ferriss: Yeah.

Danielle Teller: Yeah. No, I mean, I think that we've lived long enough now to have seen a lot of our friends go through various states of singleness, marriedness, divorcedness, remarriedness. We've seen people cycle through these things.

And I think people are, in a way, their own best control. Because people probably have different happiness points. Some people are probably just more predisposed to being happy than other people are. And I think what I've gathered just anecdotally from watching friends go through various types of relationships and singlehood is that they're kind of – there are times when they're very happy, as married people or as a couple, and times where they're very happy as single people, and times where they're very unhappy in both situations. And I don't think that their overall happiness correlates very well with their marital status. I think if you sort of graphed it, there wouldn't be a super good correlation to how happy when they were. When they first got married, there was a lot of happiness, and then there were some very dark moments. And then after they split up, they were happy again. I think they go through happiness and sadness at kind of the same rate as single or as married people.

And the people I know who have remained single their whole lives, who are now in their 40s and 50s, I think that the reason – so people who seem unhappy are the people who are obsessed with why aren't I married? I should be married because society's telling me I should be married. Should I have had children? Can I still have children? What's wrong with me? But the people I know who just have a very strong inner sense of this is how I'm meant to be. I tried being part of a couple. It really isn't my thing. It just doesn't really work for me. They seem as happy to me. I mean, you never really know how happy any other person really is, but they certainly seem as happy to me as any married people I know.

Astro Teller: Yeah. I would also say that I think one of the things that does correlate with happiness – this is well-known to be part of what tends to cause happiness in people – is a sense of gratitude, a sense of connection to other people, and a sense of caring for, spending time on, thinking about people other than yourself.

Now having a family happens to drive all of those things. And so there can be sort of happiness benefits of a kind. There's lots of stressors also, but happiness benefits to being part of a family. But

that doesn't mean that you can't get all of those same benefits as a single person, right? And I know, for example, entrepreneurs who treat their companies like their families. And they really care a lot about their companies and about the people in the company. They care about it more than they care about themselves, and not just because they're trying to win or make a lot of money, but because they're very purpose-driven, and they're very community-oriented. And this is the community that they've created and they care for. And so I've seen people who are single have all of the same benefits that you get from having the benefits of having a family. So I think it's a sort of false sense that you have to be selfish or an egomaniac if you stay single.

I don't think that's a necessary outcome.

Tim Ferriss: Ah, so much food for thought. These are big subjects. I mean, there are very few things that really, really, really stress me out these days, and it's like this relationship stuff is one of them. Because I think there's so much subjectivity involved, and I like to be able to kind of slice it and dice it and put it on a plate of glass, and be like, okay, here's what we have. Great, okay. All right. Fantastic. What are our assumptions? Okay. And here are three or four things we can test, and great. Which is where Tinder is potentially invaluable, where you can spend three weeks figuring out, oh, maybe this isn't my type, as opposed to three years or three decades. What are little things that both of you do independently to help happiness or well-being?

So not a routine with the other person, but things that you guys do separately or individually that sort of help you maintain an even-keeled sense of well-being?

Danielle Teller: Well, exercise. That's a not very interesting answer, but.

Tim Ferriss: No, no, I like the real answers, not the.

Astro Teller: Exercise is the answer, but we do a lot of exercise together. So it happens to be that if you separated us for a year, we would both keep exercising. It is also the case that whenever we can, we exercise together. It's one of our favorite things to do. It's one of our rituals.

Tim Ferriss: Um-hum. And that's running, or what other types of?

Astro Teller: Running.

Tim Ferriss: Running, primarily.

Astro Teller: Yeah.

Tim Ferriss: Do you talk, or do you just run?

Danielle Teller: We usually talk. Sometimes we just run. But I have always felt like exercise is the cure for everything, the cure what ails you kind of.

Tim Ferriss: No, I agree. I totally agree.

Astro Teller: My favorite form of our talking when we run is she listening to more podcasts than I have time to listen to, and she'll narrate podcasts. Like this one, she'll hear something that she really loves, and then in an hour-long jog, she will narrate – I think often better than the podcast itself, which sometimes she later plays for me – almost like thought for thought, everything in the podcast. It's a particularly fun way for us to spend our time.

Danielle Teller: He could just listen to the radio or listen to –

Astro Teller: No, it's way better.

Tim Ferriss: Now what are you go-to podcasts? You mentioned Serial?

Danielle Teller: I'm an NPR junkie.

Tim Ferriss: NPR.

Danielle Teller: Yeah, so I listen to all the NPR ones.

Tim Ferriss: Okay. Have you sort of wandered out into the odder neighborhoods outside of public radio, or not yet?

Danielle Teller: Not much. I probably should do more of that, but there are just so many. There are so many podcasts, and I can't listen to as many as I like.

Tim Ferriss: There are so many. I've recommended it before, but I'll recommend it again. Check out Hardcore History.

Danielle Teller: Okay.

Tim Ferriss: It's so amazing. Maybe one episode every two to three months, and it's phenomenal. Check out Wrath of the Khans. It's a multipart series on Genghis Khan, as he says. So let me ask you a

couple of very different questions. They're not necessarily relationship-related, but they're questions that I know listeners enjoy hearing answers to. That I enjoy hearing answers to. So the first one might sound odd, but it's related to a purchasing behavior. So what is the most impactful \$100 or less that you've spent recently? And it could be on anything. But I'm curious. And it could be something free, for that matter. But what have you spent \$100 or less on in the last six months, year, that has disproportionately positively impacted your life?

Danielle Teller: That's a really hard question.

Tim Ferriss: We can plant that seed and come back to it.

Astro Teller: I'm gonna tell you the first thing I thought of. It's not something we spent money on. But as many people do, we pile up stuff that we don't need anymore. And we took a big pile of it to Goodwill today. And we were saying how wonderful the Goodwill sort of jujitsu is. That many people don't understand that it's not just that they happen to sell the stuff that they sell cheaply, but they have this balanced just right where they take the stuff that they get for free, and they mark it up a nontrivial amount, but still a lot less than the people who go to Goodwill would otherwise pay for that stuff. It has no value to us. We would otherwise have thrown it away. So it's sort of something for nothing.

But then they take the profit they make from that, and they have other philanthropic enterprises. They use up all of that profit doing other things. And I don't know. So that was the first thing I thought of.

Danielle Teller: That's not really spending. That's the opposite. Because you were saying how great it is that we give away something that has no value anymore for us, and they derive so much value from it.

Astro Teller: Right. It's just the first I thought of. It's not just that it feels good to donate something. It's that I particularly love the idea of a well-crafted business model. And there are many NGOs that are just highly nonefficient with the money that they get, to put it diplomatically. And Goodwill is not once of them. Goodwill has actually got the sort of flywheel going in a really positive way, where everybody goes home happier. The world should be more like that, so.

Danielle Teller: Oh, you know what has made a big difference, actually? So this is not to plug Google because Astro works for Google, but Google

Play, getting that family account for Google Play has really changed everything. Because we used to have to listen to the radio, because the kids all want to listen to pop music. And they'd switch from one station to another, and we'd have to listen to this horrible advertising on the radio. And then at home, they would play it on YouTube. So then they'd all be hunched around the computer, and then they'd end up watching videos, and then it would just be all sort of choppy watching what they wanted. And so we finally got them their all you can eat buffet of Google Play. And now they can, for a flat fee every month, get as much music as they want. And it has made our car rides much nicer. Yeah.

Astro Teller: Right. And then because, for whatever it is, \$7.99 a month, they can make their playlist as long as they want. Instead of listening to the 10 popular songs, they've made playlists that are several hundred songs long. They left today.

Danielle Teller: And we kept their playlist on.

Astro Teller: And we kept their playlist on because at least it's not repeating every 20 minutes the song we heard 20 minutes ago.

Danielle Teller: And they're not asking us to buy music for them.

Astro Teller: That's right.

Danielle Teller: And that gives us some money.

Tim Ferriss: Pretty cool. I like that. Oh yeah, so a side note, very closely related. It's taken me years to upgrade to Pandora Pro, which is \$3 a month, or whatever, to get rid of the horrible ads.

Astro Teller: And now you wonder why.

Tim Ferriss: Yeah. And you're just like, why did it take me so long to do this? And what's really funny is I set up my Pandora account initially when I was on Long Island. So all of the ads are targeted locally to Long Island. So it's like, hey, come on down to Cormac Ford and minivans. We'll sort you, yeah, it'll be great, yeah. And all of these ads, they're so bad. So finally, I was like, all right. I'm gonna sit down for five minutes and fix this problem once and for all. It's like, yeah, \$3 a month, or whatever the hell it was.

Danielle Teller: Best \$3.00, right?

Tim Ferriss: So well-spent. Oh my god. Because I'd be pretending to dance

tango with my girlfriend. We'd be like all in this romantic moment, and then it'd be like, yeah, this is Jimmy Jones from Cormac and Ford, yeah. And it was like, oh Jesus, really? On a Saturday night.

Danielle Teller: Ruins the mood.

Tim Ferriss: There goes the magic. So, books. I want to talk about books for a second, and documentaries. And there are two options. The first is favorite book, if there's one that immediately comes to mind. But usually people don't know and they just kind of pick one randomly out of memory, or most gifted book. The book you've gifted to the most people. Let's start with books. Astro or Danielle?

Astro Teller: I'm not gonna even try to go for favorite book. Too many books. But I will tell you the sort of recent books. Most recent gifted book from our family is What If.

This is the XKCD.

Tim Ferriss: Oh yeah, I've seen it.

Astro Teller: Amazing book. The kids are obsessed with this. They can quote it from memory. They've learned probably more science from the What If book than they have from their science class in the last two years. And we've given out quite a few copies. And we just finished reading – we read in bed together a nontrivial percentage of the evenings. That's just what we do.

Tim Ferriss: You read silently side by side?

Astro Teller: No, we read to each other. I mean, at least lately, I've been the one who was reading. So I just finished reading her Ready, Player One, which was –

Tim Ferriss: Oh, I just bought that audiobook. I have it.

Astro Teller: It's so much fun. And now we're in the doldrums because it was so fun that we're like pouting because nothing's gonna be as good. You know that feeling after you read –

Tim Ferriss: I do. I have a suggestion. Do you have any interest in fantasy?

Astro Teller: Yeah. Yes.

Tim Ferriss: The Name of the Wind, by Patrick Rothfuss.

Astro Teller: All right.

I have yet to suggest it to anyone who hasn't enjoyed it. Now the other option that also has a really good track so far as far as people I've recommended it to is the Graveyard Book, by Neil Gaiman. It's about a young boy who is raised in a graveyard. Really, really stellar. I think the audiobook is partially what drew me in, just because Neil Gaiman is such an incredible narrator. Okay, so What If.

Danielle Teller: And isn't the Graveyard Book a recreation of another famous book?

Tim Ferriss: Ooh, that's a good question. I don't know.

Danielle Teller: I just thought I heard someone say that once.

Astro Teller: What about you, my love, first?

Danielle Teller: Well, I would say the one that I probably try to push on the most people, and it really didn't take, so I stopped pushing it on people, was Oscar and Lucinda by Peter Carey. I just fell in love with that novel.

Tim Ferriss: Oscar and Lucinda.

Danielle Teller: Yeah. This was a long time ago. I just really, really loved that book.

Tim Ferriss: What did you like about it?

It was just so lyrical. Every single chapter is like a little jewel. He has the most amazing way of bringing to life a scene with not just beautiful language, but incredible imagery. Like a coat rack with cats and coats on it looking like it's covered with crows, like this image of these birds who are gonna take flight. And one of a bird diving into the water, piercing the membrane between dreams and reality, and he just had these wonderful turns of phrases where this woman who – there are parts that are really funny, too. So it's not just all lyrical. But the Lucinda character in the book gets really angry and yells at someone. And then she realizes that she's created a scandal, and this is gonna create problems. And there's this great image of her saying that as her anger cooled, it was like an athlete who had torn a muscle in the middle of a race or a game. And then as the anger went away, then she could feel the pain. The pain set in.

It's such a common feeling, right, where you do something in a moment of anger. But this comparing it to this athlete who's just feeling this pain for the first time. Anyway, I love that. And the other one I love is *The Hours* for a very similar reason, by Michael Cunningham.

Tim Ferriss: *The Hours*.

Danielle Teller: Yeah.

Tim Ferriss: Now why did the first one not take? So you're trying to push it, but it didn't take.

Danielle Teller: I think because it's not very plot-driven. It's kind of long, and it's really about the moments, and about the writing. And the plot is very slow to get going. Until you get halfway through the book, you're really not sure where the book is going. And then it's a romance, but it's not a very uplifting romance.

Astro Teller: See, this is why we're each other's other half. My favorite books have the exact same problem. And I push them on people, and nobody likes them either. It's the *Gormenghast* trilogy by Mervyn Peake.

Danielle Teller: What was the name of the trilogy?

Astro Teller: *Gormenghast*.

Tim Ferriss: *Gormenghast*. How do you spell that?

Astro Teller: G-O-R-M-E-N-G-H-A-S-T. *Gormenghast*. It's the name of a castle. It's this castle. It's like a fantasy story, but there's no magic or witches or elves or anything. It's just this castle that's set in this very abstract place. And it's just the political life in the castle.

Tim Ferriss: It's like *Downton Abbey* in a castle?

Astro Teller: It's more abstract than that.

Danielle Teller: It's like a cartoon version, but a very gorgeous cartoon.

Astro Teller: Right. But it's written by an artist and a poet, who had, until he wrote the first book, never written a novel. And it reads like that. They are word paintings. And so many people read them and just are like, eh, I just can't keep going. But I just loved it.



Tim Ferriss: I have another book recommendation for you.

Astro Teller: Yeah?

Tim Ferriss: It's called *Motherless Brooklyn*. It's by Jonathan Lethem. It's a fantastic, hilarious novel about a detective with Tourette's syndrome.

And it's based in Brooklyn. And it fully embraces all of the clichés of the detective genre. I love it. It was recommended to me by two staunch critics who seldom recommend books, my mother and my brother. And I can count on one hand the number of books that have been recommended to me by both those people. So *Motherless Brooklyn* might also be a fun one.

Danielle Teller: Right.

Tim Ferriss: I'll ask each of you separately. So Astro, when you think of the word successful, who is the first person who comes to mind?

Astro Teller: The first person who came to my mind was Elon Musk. I don't know that I would – yeah, I mean, obviously he's a successful person, but there are so many different kinds of success.

Tim Ferriss: No, let's dig into that. Yeah, that's worth exploring, I think.

Astro Teller: I admire the fact that he has singlehandedly done what most other people need a large crew to help do.

He has started a series of really successful things, and he's highly involved. And I admire that sort of boundless ambition combined with the seriousness about digging in and doing what it takes to get it done. And he's quite purpose-driven, which I happen to like also.

Tim Ferriss: If you had to put half of your net worth into Space X or Tesla, which one would you choose and why? This is dramatic wine pouring. That's the sound of Astro's money going down the drain.

Astro Teller: No, I'm gonna say Space X. I think Tesla will be a more financially successful business, but it would be hard to get as excited about that.

It is just inherently more audacious, more in the spirit that moves me to dream about going to Mars, which is what fundamentally drives Elon. And especially about Space X, there's just – the ethos

of that adventure is worth more to me than the dollars that would be created by better electric cars. So that's not a knock on Tesla, but that's my kneejerk reaction.

Tim Ferriss: Yeah, okay. Cool. What about you?

Danielle Teller: I think I'm gonna take a pass on that one. I don't really have –

Tim Ferriss: I like that.

Danielle Teller: Nothing leaps to mind. I mean, there are just so many successful people, and I don't know. I feel like I –

Tim Ferriss: That's the benefit of going second, or the curse of going second.

Danielle Teller: Well, I had all this time to think of someone, and I was thinking. I was thinking, who could I? But there are just so many people, I just wouldn't know where to start.

Tim Ferriss: Okay. If you could choose anyone throughout history to ask 100 questions. I'm not gonna ask you to give the questions. But who would you choose?

Danielle Teller: Ask 100 questions –

Tim Ferriss: About anything.

Danielle Teller: About anything.

Tim Ferriss: Life, career, or otherwise. Preferably a factually verifiable figure.

Danielle Teller: Right. I think I'd be most interested in talking to one of the Greek philosophers, because I feel like we have a lot of documentation about their thought, and a fair amount about how they lived, but it's not a complete picture. And obviously, they spent a lot of their lives thinking very deeply about things, but I would like to get their sort of take on the questions that I would want to ask them.

Tim Ferriss: Any particular philosophers?

Danielle Teller: Probably – I mean, Plato is, I think, the most interesting.

Tim Ferriss: Interesting guy. They're all such fascinating, conflicted characters, just like modern human beings. Imagine that. If you had to point to ways in which your medical or scientific training has helped your relationships with family or significant others, is there anything

that you could point to?

Danielle Teller: Yeah, I think there are a lot of things to point to. Probably the most significant is that being in medicine, you deal with people from all walks of life, from all cultures, all parts of the world. And working in an intensive care unit, you're working with families and patients who are in some of the most dire straits that they've ever been in. And I think that it really forces you to not just pay lip service to seeing things from the perspective of other people, but actually having to really try to understand where they're coming from, and how to connect with them.

It's really important, in those times, to connect when you're trying to talk about decisions surrounding life and death. You really need to have a strong connection. And I think that opens your mind so much to realizing how differently different people feel about the world and think about the world. And it puts you in the mindset of having to adapt yourself to their way of thinking. And so I feel like that has been very valuable, that I don't sort of have a kneejerk reaction to a perspective someone has is right or wrong, that I've been trained over the years to not see it in black and white terms, but just see it as, I mean, people are different.

Tim Ferriss: So it's sort of pragmatically trained you to have an immediate degree of empathy that you wouldn't have otherwise, necessarily?

Danielle Teller: Empathy, but also just not to shut my mind to what they're trying to say because they might have – I might be speaking with someone – I'm not religious, and I might be speaking to someone who's very religious. And I need to try to see the world from their perspective. And when you're talking to a teenager, you need to employ these sorts of skills and see that they may have a radically different way of seeing the world than you have of seeing the world.

Tim Ferriss: Yeah. What type of medicine were you involved with in the ICU?

Danielle Teller: So I worked in the medical intensive care unit, which is the unit for everyone who's severely sick enough to either be on machines to support them, or who are going to soon potentially need to be on machines to support them, who don't have a surgical issue. So the people who have had surgery, they go to the surgical intensive care unit. And then there's also a separate cardiac intensive care unit. So if you have a heart attack, you go somewhere else. We kind of get – we're the grab bag of everything else.

Tim Ferriss: And is there chronic sort of progressive diseases?

Danielle Teller: Acute. Well, no, I mean, we see them when they're in their acute phase, and hopefully get them better and send them on their way.

Tim Ferriss: Okay.

Danielle Teller: Oftentimes, they don't get better, and this is their sort of last chance.

Tim Ferriss: Got it. So you're having a lot of those what if conversations with [inaudible].

Danielle Teller: Yeah. You have a lot of conversations about the end of life, because a lot of these people are at the ends of their lives.

Tim Ferriss: Do any of those conversations in particular stand out to you, that have kind of stuck out in your mind?

Danielle Teller: Well, I think, yeah, a few of them do. I think one of the ones that's pertinent to seeing a different perspective was a – one of the problems that a lot of the medical professionals, nurses and physicians who work in intensive care units in this country have, is that we end up having a very different view of the end of life than people who are coming in, than families and patients who are coming in.

Our society has such a strong optimism and such a belief in the medical system that they believe that everyone's gonna be made better. Not everyone. That's an exaggeration. But I think that they have more confidence than maybe is warranted in how much the medical system can do to save their loved ones. And a lot of people have – in order to provide them with hope, they have been told along the way that things were maybe rosier than they actually were. And then we were put in the position of having to deliver the news that unfortunately –

[Crosstalk] Unfortunately, we've already passed the point where there's nothing left to do. And at this point, we're just coming to the end. And what's very difficult is when families won't hear that, and they want us to continue to provide life support. We know that it's going nowhere. We know that it's just a bridge to a more difficult, challenging death for this person.

And we feel like we're sometimes torturing people. We're just causing unnecessary pain and harm, that the outcome's the same,

that they're gonna die very soon. And they may die in one day. It may be two weeks. But if it's two weeks, it's gonna be two very horrible weeks. And we feel awful doing that to people. We just feel like it's undignified, and people have very strong – the staff have very strong emotional reactions to that. So I had one patient who was a very successful medical researcher who had a type of cancer that had spread throughout his body. And he had insisted on having it hacked out one piece at a time, even though it wasn't really the thing that you – from a medical perspective, that wasn't gonna improve his life expectancy. But he was young. He was only in his 40s. And he had been very successful, very well-known scientist.

And he insisted that he needed to have everything done, absolutely everything done. And when I met him, he was at death's door. But because his underlying body was so strong, he could stay at this door for a long time. It could take a long time for him to actually die. And I spoke with his wife. We had talked to the other teams who had taken care of him, and they said, look, he's never said that he's willing to let people stop with any kinds of aggressive treatment, even if it's futile, even if it's hopeless. And in theory, doctors don't have to provide treatment that is futile. But because we so strongly right now in our culture want to respect the wishes of patients, we often do provide futile care, which is where it's hard emotionally for everyone. And I had this conversation with his wife. And she said to me, she said, look. And she's this lovely, lovely woman.

And she said to me, "I know where you're coming from. I totally get what you're saying. I know he's gonna be dead soon. And he wanted to die a warrior's death. And he is a warrior, and this is how he's gonna go out. He just wants to go out fighting." And I just suddenly felt at peace. I was like, you know what? From my perspective, this is the wrong thing, but we are honoring his wishes by letting him breathe until the last moment, where even a machine can't support him. It's not what I would choose. It's not what I would choose for anyone I cared about. But he was dying as a warrior, and that was what he wanted. And I just felt so much better about what we were doing, and it also let me see that, yeah, my perspective's not the only one. There are other ways of looking at life and death.

Tim Ferriss:

Yeah. I had a very close friend – I had no idea he had metastasized pancreatic cancer.

And we went on this skiing trip in South America, which I knew was very, very expensive for him, with another friend. The three of

us went down and skied in Las Lenos in Argentina. And literally, I think it was less than six months later, he was dead. And part of the reason that I read so much of the Stoics because they reflect on death. Some might say obsess on death. They can't seem to get tired of talking about it. How do you think about death, Astro? I mean, how do you feel about the prospect of biological death?

Astro Teller:

I'm not particularly looking forward to mine, but I've made peace with it, I think. I recognize that it's gonna happen, and I worry, frankly, about people, especially in the tech community, who are obsessed with trying to prevent death. I have no objection to generally trying to help people live longer or be healthier while they're alive, more functional while they're alive. Those are all good things.

It still sometimes smells like kind of a creepy desperation the way the tech community can get overly obsessed about death. And I think that they're chasing something that they won't find, and making themselves miserable in the process. Because trying to convince themselves that they're gonna be able to avoid death, which they don't really believe in their hearts, leaves them feeling panicked in a way that if they just made peace with the fact that they're going to die, they could just focus on being happy. My personal philosophy is to live my life as intensely as I can every single day, and if I do that, then it doesn't matter when I go. I had this experience when I was in the middle of graduate school, but I was playing soccer very competitively still. And it was the last time I ever asked someone to take me out of a game.

I said, take me out. Because I wasn't dying, but I just felt like someone else could be doing more for the team. Because I was sufficiently tired. This was the middle of the second half. The coach got me out, and as soon as he got me out, I was dying to go back in. And I thought, I am never doing that again. I would rather collapse on the field. Which was, I suppose, a somewhat selfish perspective to have, but I just thought, you know what? Wait. It's the coach's job to tell that I'm tired, and I sort of overthought the whole thing. And then I had all these regrets after I got off the field, and they couldn't put me back on because there's only two subs a game. And it's become very metaphorical to me. It doesn't matter when the game's over, as long as I don't leave anything on the field.

Tim Ferriss:

So, and this is very Vince Lombardi. I like it.

So this living intensely, I want to dig into this for a second. When

you come to the close of a day, what does a successful day look like versus a failed day, or a suboptimal day, if we want to?

Astro Teller: It's entirely a perspective thing for me. I mean, I never cross everything off my to do list.

Tim Ferriss: Well, I mean, just to give some people – people may not be familiar with Google X. I mean, if you wouldn't mind giving some examples of the kind of stuff that you guys are working on. And what is the function of Google X? It sounds very X-Men.

Astro Teller: The function of Google X is to try to find some new, really important problems with the world that are not yet Google's problems, and to make them Google's problems. To take on things like the transportation problem. Solving the connectivity problem. There are five billion people in the world who don't have connectivity, who are not connected to the Internet. Let's make that not be true. There are very few things that would make the world a better place than solving that problem.

What could we do to produce electricity cheaper than a coal-fired power plant? That would radically change the world. And we think we might have a way of doing that via these energy kites that we're working on. So we have some in health care, some in sort of human computer interactions, like Google Glass. But each of these have wild – and I don't know the technical equivalent of mood swings every day. I came home one day, and I told our kids – I couldn't tell them – this was before Lune had actually launched, but I told them, truthfully, that one of our creations had gotten free, and we had to send a Marine, or an ex-Marine, I guess, after it with a Bowie knife to take it down.

Tim Ferriss: Wait, a Bowie knife?

Astro Teller: Yeah, and so I told them that our creation was the size of a house. It was also true.

Tim Ferriss: You're talking about a balloon.

Astro Teller: Yes. In this particular case, it was a balloon that was like half-inflated, then took off rolling across the countryside.

We had an ex-Marine sort of hop a couple fences and chance it down, and sort of slash at it with a Bowie knife till enough of the helium came out, it stopped rolling across the Central Valley. But the good parts and bad parts kind of play like that.

Tim Ferriss: Do you guys publicly dispose how many balloons you've released?

Astro Teller: Several hundred at this point. I think it's when we're ready, it will take a lot more than several hundred to be put up, but we have – I don't know, on the order of 100 in the air, but it's a testing process. So whether it was 100, or 50, or 150, it doesn't really matter. I think we just had our first balloon sort of – I'm not sure exactly what the birthday was, but we've now had many balloons that have stayed up more than 100 days. Many have gone around the world on the order of 20 or 30 times.

So we're running all of the experiments it will take so that Lune can, in the not too distant future, do what we've aspired for it to do, which is to set up an infrastructure that then the local telcos in various regions can use to provide Internet to everyone in their region. And by doing that everywhere, to everyone on the planet, hopefully.

Tim Ferriss: And with your subjective assessment of success or failure on any given day, how do you approach that, or how do you just feel about it at the end of the day? When you're like, fuck yeah, that was a good day. What are the things that contribute to that, or like, Jesus, I have no idea what I did all day. Maybe you don't have that feeling.

Astro Teller: Oh, I do, I do. No, I mean, was I authentic? Did I really bring my –

Tim Ferriss: You mean did I say what I mean and mean what I say kind of thing?

Astro Teller: Yeah, exactly. Did I really bring the best part of me intellectually and the best part of me emotionally to work? Did I really share that with people? Did I move them? Did I help them to get to a better place? We had a team meeting recently for one of the teams where they have some hard work to do in the not too distant future, and I needed to deliver some hard news to them. And the one version of it could be, you suck, run harder, run faster. And that was not the version that I gave to them. I helped them be inspired. I helped them feel like a family again, the way I think they had been struggling to feel like. And I left that meeting feeling incredibly good about myself and about them, and not just because I had given a rousing speech, but because they had met me halfway. They had responded in the way that I was hoping for.

And that's a good day, when I leave the office feeling like I've



helped people. Someone recently said, it's kind of a funny way to put it, that I'm like a big flywheel at Google X. That when things are going well, I have no effect, but that as soon as things start to wobble, I prevent things from getting crazy.

Tim Ferriss: Right. You're like the safety guy at the amusement park.

Astro Teller: Well, I hope not just that, but yeah.

Tim Ferriss: But I'd love to ask you just about your own – and we'll close up in then next five minutes. For yourself, I feel, as a writer, a degree of kinship with what you guys have gone through and what you're tackling at the moment with the writing. For me in the last few years, it's been very much a case of losing my identity, in a way. So I've pegged myself to being, say a writer.

But then I'm not working on a book. So what am I? And then I'm working on a TV show, but that falls through. What am I? And I'm not saying you're in that position, but I certainly have been. And not having sort of a big team to account to or account for, how do you, at the end of the day – what makes you feel like a day has been successful or not?

Danielle Teller: Well, that's very interesting that you should ask that question because I feel the way you do probably times 10. I was hanging on to my job with my fingernails. I really loved what did, and I couldn't find an equivalent position in California. And decided to take a risk and do something very different that I don't know if I'm at all qualified for, and I don't know if I'll have any success at. So this is actually the big struggle in my life right now, is I spend my days writing, and I have no idea if anyone's ever going to read anything that I'm actually writing.

So every day, I ask myself, is this worth it? Was it not? I think, I don't know. The things that make me feel like it was a successful day is if I feel like what I wrote was good. I don't always. I mean, there are days when I just think, that was crap. I spent my day writing something really quite terrible. Or I don't make any progress on it. So that's hard. The small projects. We've been writing a lot of op-eds and so on to support Sacred Cows.

Tim Ferriss: And you're the one that had more than four million or so reads at this point. That's a lot.

Danielle Teller: Yeah. So when we get what we get –

Astro Teller: She has high standards.

Tim Ferriss: Four million's a lot. That's probably more than anything I've ever written, in fact.

Danielle Teller: So when we get feedback from people, and they say, "That was great. That really helped me to see things in a different way. I really appreciated that," then that makes me feel good. But of course, as a writer, most days, you get no feedback at all.

I saw this interview with a guy, I don't know his name, who wrote *The Fault in Our Stars*, which my kids love.

Tim Ferriss: Oh god, John Green, I want to say?

Danielle Teller: I think that's right.

Tim Ferriss: Am I making that up? No, I think it's John Green.

Danielle Teller: Anyway, he gave this interview, and he was saying that being a writer is like playing Marco Polo, where all you say is Marco, Marco, Marco. And then if you're successful, two years later, finally, someone will say Polo.

Tim Ferriss: That's a great description.

Danielle Teller: Yeah.

Tim Ferriss: Kurt Vonnegut said, I think it is, "When I write, I feel like an armless and legless man with a crayon in his mouth." I thought that was a pretty good description. All right, guys. Well, where can people learn more about both of you, about the book, about what you're up to? Tell us where people can check you out.

Astro Teller: They can check out *Sacred Cows* at Amazon, at Nook, on Google Play, they can get the book. iTunes has the book. They can order –

Danielle Teller: Astro has a website.

Astro Teller: Yeah, you can go to [AstroTeller.net](http://AstroTeller.net) to learn more about me, or go to [SacredCowsthebook.com](http://SacredCowsthebook.com) to learn more about the book. We just gave this TedX talk, TedX Boston, about *Sacred Cows*, that we gave together that I think is a good sort of 15-minute intro to the concepts in the book. It's another good way, just go to YouTube and you can check that out too.

Tim Ferriss: Cool. And what was the piece that you wrote that stirred up so much fire?

Danielle Teller: Oh gosh, what did they call it?

Astro Teller: “American Parenting is Killing the American Marriage.”

Tim Ferriss: That is a good [inaudible].

Danielle Teller: Yeah, [inaudible].

Tim Ferriss: All right, well, thank you so much for coming over, guys. This was fun. We should hang out more. And lots of food for thought.

Lots of stuff for me to consider, and hopefully everybody else out there listening, you can find the show notes, obviously, on the website. I’ll include the links to everything, including the book, at [fourhourworkweek.com/podcast](http://fourhourworkweek.com/podcast). And that is it for this evening. Thank you guys.

Danielle Teller: Thank you.

Astro Teller: Thanks so much for having us, Tim.

Tim Ferriss: Oh yeah. My pleasure.