

Adulthood on the Spectrum: A Conversation with Temple Grandin

Andrew M. Komarow

Hi, welcome to Adulthood on the Spectrum. I am Andrew Komarow, an autistic Certified Financial Planner. I co-run Adulthood on the Spectrum with Eileen Lamb. Hey, Eileen!

Eileen Lamb

Hey Andrew! Hey everyone! I'm Eileen Lamb. I'm an artistic author and photographer. Anyway, in this podcast, we want to highlight real voices of autistic adults, not just inspirational stories, but people like us, talking about their day to day life. Basically, we want to give a voice to a variety of autistic people, and our guest today has an inspirational story.

Andrew M. Komarow

Today, our guest is Dr. Temple Grandin, Dr. Grandin became a prominent author and speaker on both autism and animal behavior. Today, she is a professor of Animal Sciences at Colorado State University. She also has a successful career consulting on both livestock, handling equipment, design, and animal welfare. She has been featured on national and international TV, appeared in articles in Time Magazine, The New York Times, among others. HBO made an Emmy Award winning movie about her life, and she was inducted into the American Academy of Arts and Sciences in 2016.

Eileen Lamb

Hi, Dr. Grandin, and thank you so much for being with us! Today, it is such an honor to have you. Great to be here! So we start all our episodes by asking our guests how would you like to identify and what I mean by that is that we would like to know your preferred pronouns, but also do you like person with autism, autistic person, on the spectrum? What are your preferences?

Temple Grandin

Well, you can address me there's, you know, Dr. Grandin, or Temple Grandin. And you know, I get asked all the time about whether the person first or identity first, and I always said all my life, you know, autistic, I'm an autistic person. And I know that some people on the spectrum prefer that. I'm fine with that either way.

Eileen Lamb

Yeah, that's how we feel. There's been a lot of discussion about what the right terminology is. And, you know, feel like this is a personal matter. And that's why we like to ask our guests if they have a preference.

Andrew M. Komarow

So when and how did you get diagnosed with autism? What do you think that process would be like, if you were diagnosed today, for better and or for worse?

Temple Grandin

Well, I was born in 1947. So doctors didn't really know much about autism. Fortunately, the first doctor I was taken to was Dr. Bronson, and Rob Watches, Washington Children's Hospital. And so they looked at things neurologically, they checked to make sure I was not deaf. That's something you always must do with little kids. And they checked to make sure I did not have epilepsy. I have neither one of those things. And then she, the doctor referred the mother to a really good speech therapy school that two teachers taught out of their home. And they're just really good teachers that know how to work with kids. And they just slowed down when they talk to me. So I got very good early intervention by age two and a half. I did not speak until I was four. And since this was so early, because I'll be 74, in August, they just she labeled me as brain damaged. And the autism diagnosis came in later, but I had all of the standard symptoms. You know, there's a lot of services today that are not available. A child like me, and my generation normally would have just been put in institution, a little kid like me. And then the kids that had no speech delight, what they used to call Asperger's Syndrome, well those ended up getting jobs. I have grandfathers coming up to me all the time. And they told me, they found out they were autistic, when the kids got diagnosed, but they had paper routes and I'm working in the computer field or as accountants or a lot of you know, different good jobs. So my early childhood went really well went into small school and another the teachers work together small local school that went really well. And mother also had a good sense of how to push and always giving me choices developing my interest in art, a normal big high schools, disaster, bullying, teasing, I got kicked out of ninth grade for chucking a book at a girl who bullied me called me a retard. And I ended up going to school for kids with problems. And they put me to work running the horse farm. And I learned how to work. And that was something that was really good. I had nine stalls to clean every day, the horses head on out and feed them, I was basically responsible for the horse farm. And studying, didn't do much of that until my science teacher came on the scene about the third year I was there. And he started giving me interesting projects, and he used those projects get me motivated to studying. Now studying was a pathway to a goal to become a scientist. See, I think that's a really important thing. A student has to have a reason to want to study. But I had great mentors. I had my speech teacher, my mother, my third grade teacher was excellent, and then my science teacher, and then getting my business started. There was a there was a wonderful contract. Just starting a tiny business for steel and concrete work for the cattle industry in Arizona. And he was a former Marine Corps captain and he seeked me out and seen my points. And he seeked me out. He was another important mentor, and helped me get my business started.

Eileen Lamb

You've been in advocacy for a very long time. What are some of the ways autism advocacy has changed from your early days to today? Are you seeing much of a difference?

Temple Grandin

More, the biggest difference is you didn't have individuals on the spectrum doing advocacy in early days. Because when it all started, it was the first society was called The Society for Autistic Children, because of parents of autistic kids that got the society together, I'm old enough to remember that. So yeah, it's definitely changed. You know, in the last 20 years, you've got a lot of individuals on the spectrum, doing advocacy, you did not have that much when we started.

Andrew M. Komarow

Actually, I don't know if you've listened to our previous podcast episodes. But Thomas McKean was one of our previous guests.

Temple Grandin

Yup! I know him.

Andrew M. Komarow

It sounds like it was, he mentioned a couple others that were have been, but back when you were doing it-

Temple Grandin

Jim St. Clair would be another one. He's been around for a long time. And also I wrote about him in my autobiography, "Thinking in Pictures". I did this back in the mid 90s. And then my first book, "Emergence", labeled autistic and I use the term autistic there on I, that was the mid 80s. I have written about some stuff about autism, sensory problems and things like this. There was very little information, like my mother had no information. You know, she was really kind of just on her own. But fortunately, I had this really good doctor in the very beginning when I was two and a half, and a super good speech therapy teacher. Those were two very important people when I was when I was two and a half years old.

Eileen Lamb

Yeah, I assume that back then a lot of kids were diagnosed with with autism, when now we have the tools to diagnose early and social media, I feel like has been a been a big help in helping parents recognize the early signs of autism, and there is so much more awareness. I don't know if you're aware of the neurodiversity movement?

Temple Grandin

I definitely am aware of that.

Eileen Lamb

What do you think about it?

Temple Grandin

Well, I agree with a lot of it. But one of the problems that you have with autism is you're going all the way from someone like me that when I was two and a half, I looked really severe. And then you have

an individual who has no speech delay, where they're just kind of geeky and nerdy. Here's one of them, I hear Elon Musk these yellow post it notes. They've been in there six years, when I first bought this book, and I marked the pages while I was sure he was autistic. Now he has come out on Saturday Night Live, so now I could say it! So you're going from Elon Musk or Albert Einstein, who didn't talk until age three, to someone who can never learn to dress themselves. And they have a lot of very serious medical issues on top of everything. And that's labeled autism. And then you've got the non verbal individual. Here's a book that just recently come out by a non verbal person who types independently. And there's another book from Tito Mukhopadhyay, "Hey, How Can I Talk If My Lips Don't Move?", who describes on his experiences and, and he has difficulty controlling his movements. So you have this wide range, that's all labeled with the same thing. See, this is one of the problems with verbal thinking. They over generalize.

Eileen Lamb

Yeah, I'm with you here. I think part of the issue that we see because there's a lot of controversy on social media is that it's become almost too broad. For instance, my eldest son is eight and he is nonverbal. And yeah, you know, he can communicate basic needs with AAC an app on his iPad, but just needs like, he can't communicate his feelings or anything. And not everyone who is on the severe side of the spectrum can communicate. And I love reading all those books from people who are nonverbal, but not everyone who is nonverbal, you know, can like write a book or-

Temple Grandin

That's the problem: you don't know. And one of the books is "Carly's Voice", and I was reading through that. And the speech therapist almost took the typing function off of her device, thank goodness that she do not take the typing function off. And you're going to type completely independently and then there's others that cannot do it. I saw an interesting program the other day, and I'm a visual thinker. So this is how I remember the name of this communication program is "Snap Core Plus", the way I remember that is a mousetrap that snap, with an apple core caught in it, Plus. I don't remember names well, unless I can put a picture with it. And it started out with words to sort of get things done more, but then you could get into names of foods and things like this, then of course, you have promo code to go. And you've got proponents of both of those programs. One thing I liked about the Snap Core Plus is that it was not very expensive. And this is another big problem I run into with services. I've given talks out on low income areas, you've got three year olds that are not talking that are waiting two years for diagnosis, and the kids just sitting zoned out on computers and TV. That's really bad. And I can't get sharp, because the research is very clear that, okay, it was obvious to my mother, by the time I was two and a half that something was really wrong. And I wasn't developing like the little girl next door, and I got into very good early intervention. That's super important.

Eileen Lamb

Yeah, it's not very accessible. I mean, my son uses proloquo to go that you mentioned, but it's like \$250 on the App Store. And then you still have to get the tablets, the iPad, and you need help to-

Temple Grandin

Well that's the problem. Now this Snap Core Plus is a \$50 app.

Eileen Lamb

Do you think it's just as good? Would you recommend that?

Temple Grandin

I think people will argue about that, but-

Andrew M. Komarow

People will argue about anything, if you say the sky is blue, we will have disagreements.

Temple Grandin

But it's a whole, I kind of you know, there was one mom that was using it, she just loved it. And the price is a whole lot better. The other thing that you can use on a tablet is just text messaging, put it in airplane mode, so they can't send the text and just use the text messaging helper. And that the unknown getting tablets. I had a student that didn't have a laptop, I said, "you know what you look around, I think you're gonna adopt a laptop." And she looked around, she adopted a laptop and it had a CD drive, an old-fashioned CD drive, that she actually found that she liked. There's a lot more of this stuff around in the neighborhood there you might think. But we've got to get stuff that's affordable with text messaging on. I think a phone is too small for most people. Now, one thing they did on this Snap Core Go, which stops the person from doing too fast is that you can put a little delay in it. So it might have a quarter second delay or half second delay, so they don't just go crazy all over the team. And that might be helpful for some people and for others not. But the price is a whole lot better too. And it looked like this mom was raving.

Eileen Lamb

This is great information we'll definitely share it with my followers and let them know because every time I share Protocol To Go people are like, "ugh," and I know some insurances will cover it, though is a letter. So but it's it's a process so if we can get it cheaper and quicker.

Temple Grandin

Another thing is just plain old text messaging on a tablet.

Eileen Lamb

That's, that's good.

Temple Grandin

Which is really accessible and, the thing that amazes me is how many old electronics, it's just like all those tablets gotta do is do the text messaging.

Eileen Lamb

Yeah. It's come a long way, even from when I was a kid. So how can we best advocate for autistic people who can communicate to us how they feel?

Temple Grandin

Well, autistic people, okay, let's break it down by some ages.

Eileen Lamb

Okay.

Temple Grandin

Whether it's little kids or whether it's adults, now this show is mostly about adulting, but people have got to have a way of communicating. I can remember the frustration of not being able to talk, and throwing temper tantrums, because I was so frustrated, because I could not talk. Got to have a way to communicate. That is essential. And it can be something as simple as picture board with some things it can point to, which you can make out of a piece of cardboard. I don't think that's ideal, but it's still something. Some people like to do sign language. You got to have a way to communicate.

Eileen Lamb

How about the kids who can't point or, you know, my son can't do sign language because he doesn't have the fine motor skills. So how do we help those you know, kids who are severely autistic but often have comorbid conditions that makes it hard to even communicate in all of these different ways

Temple Grandin

Tito and also Naoki Higashida's "Fall Down 7 Times Get Up 8," it's a sequel "The Reason I Jump," and he's older, so I think it's a better book. He's older, and he explains things like not be able to control his movements. Tito describes things like sensory squirm, like these are problems that I don't have. One thing that many people describe is the concentration required to screen out background noise. Tito has to really concentrate to write one sentence, and then he's got to flap and calm down and rest. Because they make a really, really big effort, but I met Tito and there's no question that he's got a brain inside there. I showed him a picture of an astronaut riding a horse in the desert that I found in library, because that's what I was visiting with him. I wanted something where his mother couldn't possibly be queuing, or something she'd know about. And I asked him, tell me about this picture, and you type super fast and it was not touched in any way. Apollo 11 on a horse. There's no way that could have been viewed. But the little keyboard thing was on the desk that was not touched, and Tito was not covered. And I and I just pulled the magazine out of a stack of magazines, and I found that picture. I wanted something where it wasn't something he would have seen before.

Eileen Lamb

Yeah.

Andrew M. Komarow

So we have we have a topic that I think you'd probably prefer to talk about more than autism. Although we managed to kind of combine the two, don't worry. Um, do you have any thoughts about diversity in agriculture? Have you seen more diversity lately? Black indigenous people of color, women, neurodivergent individuals, what are your thoughts on-

Temple Grandin

When I first started, there were almost no women. And being a woman in the Mansfield of the cattle industry, that was really hard. And what I had to do as I make myself really good, and when people saw my drawings here, so my drawings right here in my book, "Thinking In Pictures," then I got respect. And then I also started writing for state farming. And people very quickly learned that I could write really accurate summaries of maybe the Arizona cattle feeders needed. And now there's lots of women in the industry, lots and lots of you know, that's been that way for the last 20 years. But when I started back in the early 70s, I got kicked out of a feed yard or saw on the movie for I put bull testicles on my vehicle that actually happened. That is true. It wasn't easy being a woman in a man's industry. But I had to make myself really good at what I did. And where I had most of the trouble. It was not the owners of the feed yards. It was the formans almost all my troubles with middle management. It wasn't the big bosses, it was not the owners, they actually were on my side. It was middle management. And it was the cowboy foreman, who put bull testicles on my vehicle.

Andrew M. Komarow

Do you think it's better now? Or do you think it's still? And how do you see the direction going?

Temple Grandin

Well, it's a whole lot better now. Compared to the 70s? There's no question about that. But there's still plenty of discrimination going on. I've read some of the, all these surveys they do with resumes and you send out resumes with girls name on it, or maybe a black person's name on it, you see how many job offers they get, there's a whole bunch of new studies, the result is still hideous. Let's just look at the hard data. I've looked some of that stuff up. And that's just sending in the same exact resume. All he did was put a different name on it.

Andrew M. Komarow

And given that it's a lot harder to just walk in in person and show somebody your work as you did and, you know, apply somewhere, right? Should-

Temple Grandin

Well, I'm a big believer in the back door to jobs. Half of all good jobs are back door. And I was had my portfolio with me, because you never know where you can show up your portfolio. And I've told a lot of people make a portfolio of their work. Now that kind of stuff I did. I had portfolios of articles I've written, I had portfolios of my project. So I could have photographs of projects, I could have drawings. And when I showed off my drawings, people were impressed. And I look at the drawings, they kind of go, Oh, you may be weird that you drew that. That's where I started to get respect. I learned how to sell the work by showing off the portfolio. And I've suggested to other people to do this, you could do

the same thing with computer programming, you know, presentation maps, that needs to be presented that way, right. And you don't need to send a gigantic hundreds of pages of stuff. You basically want a 30 second file that's the way I sold Cardinal I designed the front end of every card, they'll be flying in North America. And I send a portfolio the head of Target was back in the late 80s. At a big fold out drawing that had two plastic pages full of pictures. It had a professional brochure that I had made a cover letter and two trade magazine articles. It's all in. It sold. And I just sent it in the mail cold. I didn't know how to call the guy, I didn't know his phone number, but I had the address.

Andrew M. Komarow

And now it's almost even easier to send an email with the information, or you can send the physical mail, or it might be easier to find a phone number to just be able to send people-

Temple Grandin

Well, it's easier to find a phone number but the problem now with the strange attachment. Nobody wants to open strange attachments. So I'd recommend calling it and it might even be a place for the old fashioned mail. But the mistake I see a lot, I made this mistake of being too much stuff that they-don't send them a book full of junk. It was one of my best lines, a couple of pages my best pictures. Then and then since I was doing ranch, feedlot and meatpacking plant equipment. If I'm going to sell the meatpacking plant I send my meatpacking plant pictures, not my ranch options. I also learned this is back in the days of papers, I'll let my portfolio get shabby. That was a mistake. Presentation matters.

Eileen Lamb

We know you have a huge love for animals, what is your proudest contribution to the field of animal science?

Temple Grandin

Well, I have things from an engineering standpoint on you know, my proudest achievements be the center track restrainer system, conveyor restraints, cattle, everything plants got one. But the thing that probably made the biggest difference in welfare was a very simple scoring system I developed for evaluating slaughterhouses, where you're looking at the outcome, things like electric projects, animals falling down and carry them around. And if that's going on, something bad's going on. And I originally developed this for the American Meat Institute with my good friend, Janet Riley. And then I got hired by McDonald's to implement this. And at first, it was really interesting watching the animal welfare issue, go from this abstract nuisance, give it to PR, give it to the lawyers make go away. And I took high level executives out on that first trip to the farms and slaughterhouses. This was back over 20 years ago now was in 1999. And they saw something bad. It's like the show "Undercover Boss." Oh, we've got things we got to fix. And we started using a scoring system on very, very simple, that plant had to make certain numbers like if you couldn't shoot dead 95% of those cattle, one shot off the half a gold star, you got kicked off the McDonald's food suppliers. And what I found is that in most cases, rebuilding the whole thing wasn't required a lot of repairs, a lot of maintenance, also, management caring about doing things right. That's the other big issue: management got to do stuff right. In three

plants out of 75 plants, plant manager had to be removed, and then things improved. So that's the two things I've done, like equipment stuff, and then they are developing the scoring system, and the scoring system is being used around the world. Alright, very simple you got to figure out what are the important things to measure. So like traffic rules, the three most important things to measure for traffic would be drunk driving, speeding, and red light stop sign violations, and seatbelts and texting. Now, if you just enforced all five things, and we have five things we measure, you get 90% of your public safety benefits. That's the trick. What's the important thing to measure?

Andrew M. Komarow

So you've written a lot about employment for autistic adults, and the unemployment rate is something that is very high. And I've read professionally and advocacy wise, it's something that I care a lot about as well, what is the best piece of advice if you could give to a young autistic person seeking employment?

Temple Grandin

Well, I've searched around for a lot of the back doors. Also, let's start with little kids chores. Learning how to work early, mother got me a job with the seamstress when I was 13, when I was 15, that my school I was cleaning the horse stalls, learning work skills before you graduate high school I'd recommend but it's never too late to start. Okay, avoid jobs with a lot of multitasking, like a takeout window at McDonald's, I want to avoid that. And the other thing is a person with autism needs clear guidance on what to do. Any task involves a sequence let me make a pilot's checklist where I write down the steps. And then I can do the steps. I had a chance to visit Aspiritech. So that's the company outside of Chicago, they test websites, and fancy headphones and things like that. And they've got some big, huge major clients. And they find a mistake on website like a transposed telephone number that was costing the company a ton of business. That's a service that a company really couldn't figure out why the webpage phone calls went down after the webpage got updated its own transport phone number. And the autistic person found it. And I think that's really important.

Andrew M. Komarow

Like Blue Star Recycling is in your home state of Colorado, I think right? And that's again, something where they found a need for something and you know, that autistic individuals happened to be better at a certain kind of work. Do you see a problem with you know, individuals thinking because they have autism that they need to go to these employers like Blue Star or Aspiritech or that if they're good at something, then they're going to excel at it. And those companies are great-

Temple Grandin

I'm sorry for interrupting I still have the problem. I think you have it too. Can't time me conversation, right? Still can't do that. I've been at Silicon Valley, I've been in a major company-

Andrew M. Komarow

I'm told I hang up the phone awkwardly, you know, and that will just never change. I've just accepted that one. So anyway...

Temple Grandin

Now I lost my train of thought here...

Andrew M. Komarow

You were talking, I think were you saying-

Temple Grandin

Oh yeah, Silicon Valley, big tech companies.

Andrew M. Komarow

Yep.

Temple Grandin

I've been out there, you've got people on the spectrum all over those places. And I was really pleased that Elon Musk came out on Saturday Night Live saying he was on the spectrum. And so you've got, I've worked on with a lot of engineering companies and with equipment suppliers. I've worked with people that design and build equipment in the meat industry in the food industry. And when I was out in construction, spent 25 years of construction, out on jobs, and I'm going to estimate the 20% of the some of these really high end skilled trades people were autistic or dyslexic or ADHD. And they were saved by a single welding class. And they own big metal fabrication companies. I know one that has, that's very autistic he's got his own private plane. I can't go into any detail. I've been on that plane. And just as autistic he's gonna be in fact, we had a half an hour long discussion on what labels he would have had, you know, and he's somebody who's my age, maybe a little bit over, he would have been autistic, oppositional, defiant, dyslexic, ADHD, you name it, he would have been it. Now he's flying around the private jet and has a gigantic factory.

Andrew M. Komarow

Well, the nice thing about being autistic, especially when you don't like to do lots of different things, and you're the boss is, the more successful you get, you can hire other people.

Temple Grandin

Where there's been really successful, high end jobs, they have their own businesses. Mine is an example where I am a professor at Colorado State. I'm halftime at Colorado State. But I'm someone that has my own business, I like working for lots of different places. Now, that's something I like and and these people that I work with, a lot of them had their own businesses and metal fabrication shop, there'd be a big one and maybe a small one.

Eileen Lamb

What do you want to be the most known for? What do you think you would be the most known for you've accomplished so much in your life?

Temple Grandin

Well, one of my big things I'm working on right now is what I call the different kinds of minds. And I've discussed that in my book, "The Autistic Brain", this came out 2013, visual thinkers like me, to mathematical, visual, spatial, and word thinkers. And one mistake I made in my early writings, I thought everybody on the spectrum is a visual thinker. That's not true.

Andrew M. Komarow

Okay. Can I stop you for one second?

Temple Grandin

Yeah.

Andrew M. Komarow

This is actually a question that I was going to ask you about. And I'll pause that we may- But actually, I was told to, I'm like, Well, are you sure that she said she made a mistake? And that she said this? I'm like, Well, I think I remember reading it like three or four years ago, but we actually tone the language down. So it's actually one of the very specific questions we have for you. So I actually recently discovered that I have something that's been called aphantasia. So that is me. So when I was first told that I had autism, and I'm suggested to read your book, I was not convinced I had autism, right? Because I have the complete opposite of thinking and pictures.

Temple Grandin

I'm a visual thinker,

Andrew M. Komarow

Yeah.

Temple Grandin

and when I was working on "The Autistic Brain," back in 2013, I was on a computer at three o'clock in the morning and couldn't sleep. And I found this paper about object visualizers. There's a difference between an object visualizer, and a visual spatial, which is more mathematical kind. I kind of was already figuring that out. Because originally, I thought it involved visual and verbal. There's actually three kinds there's the object visualizer, that thinks in pictures like me, the HBO movie showed it very, very well. Then there's the more pattern mathematical thing, or that's gonna be your programmers. And then you've got a word thinker and if they're on the spectrum, they tend to love facts on things like history and sports statistics, things of this sort. And there's science now that backs that up, and there's a whole lot of science. And then a lot of people are kind of mixtures. But I then went back to every project, where I spent a considerable amount of time on the job site, big food factories. And it was interesting how the work was divided up, and more mathematical engineers did the boilers the re Fridgeration, the roof trusses, snow, low water and power. And the visual thinkers like me design what I call the clever engineering department. Super clever, mechanically clever machines, like packaging equipment. Then I was talking to somebody in a candy factory and the old guy who

invented the machine that makes candy canes that be an example of a clever engineering department. And this is where there were a lot people that I know I've worked with, I know would be autistic. Yeah, and I made a mistake back in when I did that book, that thinking everybody on the spectrum was a visual thinker. Now, I know that that's wrong. There's some of them are visual thinkers, like me. I put some updates in "Thinking In Pictures", but the original version in 1995, I would not have had that I'm now familiar with aphantasia, oftentimes good at mathematics, but no visual thinking, and I've run into a few people that have aphantasia, I didn't know the name of it till recently, that-

Andrew M. Komarow

I just figured it out this year that the name of it I saw somebody described like a picture does actually have a horse and an example. I'm like, there's a name for this. But what I find most amazing is you admitted you were wrong. Right?

Temple Grandin

I was wrong. And it's admitted in here.

Andrew M. Komarow

No, and that's. And I think there's another version of that book that says "Thinking Across The Spectrum".

Temple Grandin

Well, yeah, but that's the paperback.

Andrew M. Komarow

Yes.

Temple Grandin

The first version was very literary. And then, "Thinking Across The Spectrum," and I've changed it over the paperback, it's the same book. When I did "The Autistic Brain," I found the scientific articles, I was so happy when I found them, that showed that there was a difference between a visual thinker who thinks in photorealistic pictures like me, and the more mathematical, visual, spatial thinker. And there's a whole lot more research I'm working on, we're working on another book right now on just the science on this. And I'm worried that our school system screening out us visual thinkers, because I have some, I managed to get out of it. Because in '67, when I went to college, it wasn't the required class, thank goodness. But you will need our visual thinkers, and we need our mathematical thinkers. And so you need all the different kinds of minds, and they can work together. And when I look at the, how we worked, okay, you build a big complicated factory. Right now we have to import equipment that I would call clever engineering department for either a pork or chicken processing plant from Europe, because we're not making it anymore, because it took shop out of the schools. So you're not getting the tiny shops for me, that turned into these businesses. I've been in this industry now for 50 years. Nobody knows how to weld anymore.

Eileen Lamb

You know, I was wondering, you just got me thinking because my youngest is so good at maths, he's six and is honestly really good. And so he really has a special interest and you know, a set of skill. And I was wondering if you would recommend that an autistic person follows what they like and get a job in a special interest. Can you see any downside?

Temple Grandin

Yes, and I want to make a distinction here between an ability and special interest. Okay, when I'm talking about the object visualizer, or you're talking about aphantasia or someone's talking about mathematics, that's the ability or the you know, where a special interest might be cars or horses.

Andrew M. Komarow

I like to say how somebody thinks vs. what they like to do.

Temple Grandin

That's right. They're two different things. Now, when asked in third grade, I just wanted to draw the same horse head over and over again, my mother said, Let's draw the whole horse. Take that interest in broaden it. Okay, we can put math into how fast a horse can gallop, you know, put mathematics or how long to take cars get to different places you do physics on engines, you know, take that interest and broaden it. My one big problem I'm seeing the school system now is you get a little kid who might be in the second grade. And he's forced to do baby math over and over again. Then you wonder why turn into behavior problem, when he should have been moved ahead, and there's all kinds of great free stuff online. On Khan Academy, on Code.org for programming, Wolfram Mathematica. That's a really fun website. The stuff is free. And the thing that blows my mind chemistry now is I look at my sciences and my nature's, and I'm saying chemistry molecules that are inside the body, or there might be material science. They look like Cathedral windows, beautiful symmetrical patterns. Some of these math kids need to be exposed that. Go online to Google Images, and type in protein symmetry, protein symmetry, you'll be amazed to see what pattern thinkers have just got up to.

Eileen Lamb

They're doing it now.

Temple Grandin

Protein symmetry on Google Images. You're going to find really, really beautiful stuff.

Eileen Lamb

It is really beautiful. I have no idea what it is. But it is beautiful.

Temple Grandin

Well, you'll see designs that are beautiful, symmetrical designs. And you know, I go through sciences, the natures and chemistry, I don't understand a lot of the math but look at these gorgeous patterns. When there are certain kids that you show are grownups that you show them that stuff. They're going

to eat that right up, but they have to be exposed. Individuals have to get exposed to stuff get interested. I got into the cattle industry because I got exposed when I was a teenager.

Eileen Lamb

Yeah.

Temple Grandin

You're not exposed, you can't get interested in something.

Andrew M. Komarow

So you you think that we're sheltering young adults or even adults too much?

Temple Grandin

I think, well, I can't believe the kids are not learning things like shopping, I was shopping and handling money when I was seven and eight years old. And in the early '50s, when I was a child, 50 cents would buy by \$5 buy today. And my 50 cents, I could get five Superman comics or 10 candy bars. But if I want that 69-cent airplane, I had to save two weeks, I was learning that at a very young age, and I'm now realizing just how important that is. And going into stores and buying things I'm saying kids that are good students in school and teenagers, they've never gone shopping by themselves. It's ridiculous!

Eileen Lamb

We're just talking about this with Andrew and how we need to talk more about the importance of teaching young kids on the spectrum or not, but we're talking about kids on the spectrum to use money, and you know, all everything around money. And I think we just touched on that I take my, my son because he loves money. It's it's a skill, the numbers, but it's also a special interest. It's both, so I take him to the dollar store. And you know, the value of money, what he needs you save and because the dollar store is, you know, objects that are more than \$1. And then he's like, yeah.

Temple Grandin

Absolutely. My sister and I, we were in elementary school, we saved for an entire month, so we could blow our allowance at the county fair. And mother won't pay for those silly games at the county fair. And we had to save up for it. And I'm realizing now what an important skill that taught because it made money real. That's important.

Eileen Lamb

You're totally right. And I think that goes with neurotypical too. But I feel like in school, we don't learn about like, for instance, taxes and like, life skills, you know, things that are so important that it's like geometry and things like that. And I mean, it's cool. But in real life, that doesn't help us much.

Temple Grandin

Well, you've got kids growing up today who've never used a tool, they're totally removed from the world of the practical. They have no idea how stuff gets here. Okay, in fact, when another company, make something has to get here it comes over container ship I had a student who didn't know what a container ship was, till I showed it to her on her phone.

Eileen Lamb

Yeah, yeah, I'm with you here. We need to-

Andrew M. Komarow

Do you think that's all young individuals or and especially those on the autism spectrum? Because they're taken out of other classes? Or it's deemed not as important? Or is it the same? Is it, just an issue...

Temple Grandin

I think it hurts the autistic kids more and hurts the so called "normal" kids. But I'm saying, well, the other thing I'm seeing is writing skills are just horrible I got graduate students right now where I've had to correct the grammar on the journal articles, like they were in middle school. And I find out that nobody ever marked up the work. Just how do you write a business letter down? When I sent in my portfolio, I had a nice business letter on it. See, that's just basic, important stuff. And my writing skills in ninth grade, and I got better than a lot of grad students today, just straight clear writing. And I have to go through the work and mark it all up. The other thing I make them do is read their paper out loud, like they're giving a speech, and then you can really see the mistakes.

Eileen Lamb

And that's hard to do for a lot of people so it's good to practice.

Temple Grandin

But these are smart students. And then I asked, "Well, did you write a book report when you're in school?" Find out that they hadn't. "Did a teacher or marking papers up make it correct them?" No, they hadn't.

Eileen Lamb

Yeah, I want to come back to you admitting that you were wrong. In your book, "Thinking In Pictures," I think it's so amazing to be able to do that, especially right now, you know, with social media, and a lot of people are very stubborn. And it's hard for people to admit that they're wrong in some communities.

Temple Grandin

It was wrong! It was wrong. And when I try to tell people, I say something, it's the best knowledge I have. Now, if I find out tomorrow is wrong I'll change it. And I was wrong to say that everybody on the autism spectrum thought in pictures. It was simply not true. And I know that now. But I didn't know that when I wrote the book.

Andrew M. Komarow

So I've also noticed that certain, you know, as we've learned a lot about autism, even certain organizations have said things that they've retracted and they've admitted were wrong, but they're still it's almost like, even in the political environments, just in general, that were penalised more for changing our mind than holding the same opinion for 40 to 50 years. And I think it should be the opposite, right? You know?

Temple Grandin

Well, you don't want to be changing your opinion just like wind changes direction.

Andrew M. Komarow

Correct but an actual-

Temple Grandin

There's basic things that I've been doing all my life, you know, trying to do constructive things in life and, and people ask me what turns me on now. It turns me on when an individual with autism or autistic individual writes to me that my book helped them out or a parent writes to me that their kid has job and bought a house because of my book. That makes me really happy. I'm happy when things I engineer work. That, that keeps me going. And that's a basic drive I've had for my whole life. But just changing- there's a lot of other things, let's say, let's say somebody thinks it's was okay to rob the bank one day and the next day, it's not okay to rob a bank. Well, I'm not going, it's never...always bad to rob a bank. Period.

Eileen Lamb

I mean, some opinions though. Sometimes you gain knowledge and insight into something just like you did by looking at scientific evidence. And it made you change your mind. And in that case, it's totally acceptable, but also very brave to admit it. And I think that a lot of people even if they know that they were wrong, and they have to prove they were wrong, they're still not gonna admit it. So I just wanted to really applaud you on that because it's impressive.

Temple Grandin

Well, it was just wrong. I didn't know any better. And after I got criticized about it, I started talking to more people about how they think. And then I started getting a pattern idea. When I read Clara Claiborne's first book, "Exiting Nirvana", about Jessy Park, and then I got to thinking about the pattern thinker. At this point, I had not read any of the scientific papers.

Eileen Lamb

Speaking of being wrong, Andrew and I, and his wife actually, have been talking about whether vegetable are fruit or not, and we don't agree. Are vegetable fruits? Can vegetable be fruit?

Temple Grandin

Okay, well. Like, I don't even want to fight over that. You know, let's get one where it's more obvious. I don't think broccoli and oranges are. I don't think broccoli is ever gonna be a fruit. Let's take a tomato. Is that a fruit or vegetable?

Eileen Lamb

It's a fruit!

Temple Grandin

That's not quite so clear cut.

Eileen Lamb

How'd you decide?

Temple Grandin

The fruits tend to be sweeter, for one thing. The carrots can be sweet. And then I go, "is it really worth arguing over that?"

Andrew M. Komarow

Well, if you're trying to settle a debate between my wife and I tonight, that in my mind, if you're saying I'm correct, then yes, it is otherwise, no, it's probably not so, that was a little bit of sarcasm, sorry. But to your point, it's not really worth arguing.

Temple Grandin

No, that's not worth arguing. I think the other thing is, I spent a lot of my life where I would design something, draw a drawing, and then I'd watch it get built. And that's, you know, in construction. It's all about designing a project, getting up though, and making the thing work. It's about real, tangible results. And there's an awful lot of stuff happening now with a lot of broad big concepts. This is where the verbal thinker, I think is more different from the way I think, than even the mathematician. Because the mathematicians and I, we like to plan our functions and not have big mistakes. The verbal thinker, you get big generalized theories. Okay, diversity or inclusiveness? Well, how do we actually implement this out in the real world? You see, I didn't try to do everything with animals. I've worked on fixing slaughterhouses. That's something that's targeted, is something pretty specific. It's not a vague abstraction. But a lot of the education right now is too much in the verbal world, very, very abstract. It's what the big education conference, you know, were talking about culturally relevant classes and things like that, but they didn't give any examples! Giving examples as simple as the music of the culture, the art of the culture. It was all very vague and abstract.

Eileen Lamb

Okay, we're going to wrap this up with our quickfire questions. So what it is, is that I asked you some, some question and you you give me the first answer that comes to your mind. Sounds good.

Temple Grandin

Well, I may not give you the first answer that comes to mind. One of the things is I'm kind of a slow processor, alright? It has to be a question.

Eileen Lamb

What is the best piece of advice you've ever been given?

Temple Grandin

The one piece of advice I got from Norb, the superintendent with the swift point in Arizona, he was one of my early mentors. He said, You always have to persevere. Even when there's hardship, you always have to persevere. I never forgot that.

Eileen Lamb

What do you like to do to relax?

Temple Grandin

Well, I like movies like "Avatar", I thought that was a fantastic movie. That's something I like to do. And also a lot of some of the funnest stuff I ever did. We'd sit around the job trailer and discuss how to build stuff. That stuff I find really interesting.

Eileen Lamb

What's your favorite movie? Is it Avatar?

Temple Grandin

Avatar is one of my favorite movies.

Eileen Lamb

Do you watch TV shows?

Temple Grandin

No, I'm not that much. I'm during all this COVID stuff, I was working on my new book on visual thinking. I've been doing a lot of writing. And I've been doing a lot of Zoom calls. And there's been some advantages I've been able to, you know, reach different audiences like you that I had not talked to before. A lot of people in foreign countries. That's been really good. But I'm also hungry to get into the office. Yesterday, they took the masks off at CSU, went into the office, sat down with Monica. She's the nice lady that schedules the classes. And we sat down, we went over my class schedule. But I talked with the other advisors there, it was so nice to just go back into the office and have some normal collaboration. I had a good time yesterday doing that.

Eileen Lamb

Do you enjoy being around people?

Temple Grandin

Yes, I do. And the thing that everybody's missing is that collaboration to do in the office. Now, I think some jobs you could do truly remotely forever, like if your job is airline reservations. But let's say you have any kind of a job like teaching or research or developing on marketing or anything like that, you need to be talking to other people. And there's an informal collaboration that just doesn't happen on Zoom. And that's what I've talked to a lot of people about this. So what I think going to happen, that we were getting kind of a hybrid format, get them in there two or three days a week. And then there's some stuff that can totally be done remote. But there's other things where you really need the collaboration, because I find you go into the office. And I talked to another professor, we did a research idea. And that would not have happened, being at home. And then you've got jobs that have to be done in person. Now trying to put everything online...

Eileen Lamb

Which I like personally because I have a really hard time meeting people in person. So that was like a upside of the pandemic. For me it was...

Temple Grandin

Well that's what I've heard from a number of people on the spectrum. Thing that helped me not pandemic I had to get up every morning, showered and dressed for work by seven every morning. That helped a lot. A whole lot.

Andrew M. Komarow

I will say that I am the same in that way. That's the first thing I have to do every morning. I am lucky that my job was considered essential during the pandemic. So I drove to work, it was just me and a phone I sent everyone else home, but I was able to get up and shower and go somewhere and get started. And I think my wife would have murdered me otherwise for driving her crazy. But in all seriousness, being able to keep that was important.

Temple Grandin

Well, and I did have some stuff that you know, livestock is considered essential. So I did have one project with a shop we worked on and I designed a lamb handling unit during COVID. My students' projects got messed up when I was still meeting with them every week. Outside in the gazabo. We were being really careful.

Eileen Lamb

Is there anything you want to tell our listener? Anywhere they can find you online?

Temple Grandin

I prefer the phone. And in fact, when I was selling jobs, I we got very good on the phone. I call up meat packing plants I'd find out that they were building a new plant as I was getting all the trade magazines and I'd say "engineering office please!" That I'd get a hold of em, "Can I have Mr. Smith's direct line extension?" I got really good on the phone.

Eileen Lamb

This like Andrew, Andrew loves calling customer service people

Andrew M. Komarow

Like lower the Comcast bill. Yeah. Oh, yeah, it's one of my favorite things. So like the cable bill.

Temple Grandin

But then also we're gonna we got to start looking for a lot more things that are just in the neighborhood, you'll have taken up the hands on classes on the schools. Well, let's look at things we can do in the neighborhood. maybe it'd be a retired car mechanic and start car shop on my assistant Cheryl she does beautiful crafts. She'd probably be willing to teach a class to some kids. There's a lot more there in the neighborhood, a little shop that would be willing to hire somebody. I always ask parents and you got teenagers and they haven't worked and they haven't learned any skills, "who do you know, that owns a shop?" And they'll say, "We don't know anyone," but I go, "Wait, who do you know? Maybe it's a manager of something at the supermarket or whatever." And then I pushed and they go, "Oh, there's a little mechanic down the street and my kids 18 so he can work for that mechanic," or there's a little flourist shop or some other thing and just make it work in the neighborhood.

Eileen Lamb

It's a good, good advice.

Temple Grandin

Half of all good jobs are back door.

Andrew M. Komarow

Then I'll tell you about my back door.

Temple Grandin

A recent job, really good job at a big food safety lab and it was see the samples, you know, powdered milk, meat, all kinds of stuff. And then it has to be tested for, you know, salmonella or e-colai and all those things. This person doing a beautiful job. Absolutely follows procedures. You know how they got the job? Somebody's housekeeper knew somebody. This is true. This is right now, this happened in the last six months. This is one. But that's just an example of a backdoor way into a job.

Andrew M. Komarow

So almost everyone at my company I've hired through that way, it's my preferred method of hiring. And actually, so one of the individuals, you, you spoke with who works with me, I hired him because he was always sharing events all over Facebook. And I noticed that I also saw parents and individuals were always looking for support groups or things to do all around the country. And I said, You know, I had mentioned it three times he got it. But it was, how would you like to get paid to put together a calendar of events, nobody else can find these. He was always finding them and sharing them. And

then he was talking about autism and driving and, you know, it's not always just, I like what you're saying about the back door. And the last thing I want to say before, thank you, is-

Temple Grandin

I gotta say something about Brian, okay?

Andrew M. Komarow

The name of my company is Planning Across The Spectrum. And the company was inspired from your book, "Thinking Across the Spectrum," and I currently four plus autistic adults work for me. I pay them all well, on purpose.

Temple Grandin

What does your company do, exactly?

Andrew M. Komarow

Oh, I'm not sure. No, financial planning. So planning for the future, if I were to say it simply but there's a few other parts to what we do. But to say in one sentence,

Eileen Lamb

Life insurance?

Andrew M. Komarow

Well, that's the boring part. My favorite part is helping companies like the Aspiritech or the Blue Star, for example, hire workers and pay them in a way that is inclusive and reflective of, you know, again, neurodiverse workforce and/or just investments, all that stuff.

Eileen Lamb

Yeah. Well, again, thank you so much for talking with us today. We're very honored to have had that conversation with you. And

Temple Grandin

Thank you. It was really good to be here. Hope I helped some people out.

Eileen Lamb

Always! Thank you.

Temple Grandin

Okay, thank you. Thank you for having me.