Stanford eCorner

Playing With Purpose [Entire Talk]

Brendan Boyle, *IDEO*

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It may not be rocket science, but there's still much to consider when inventing children's toys, starting with all the ideas for what to build. Within the famous design firm IDEO, a small team toils away in a toy lab founded by Brendan Boyle, who also teaches design thinking at Stanford University. In conversation with Professor of the Practice Tina Seelig, Boyle discusses the importance of playfulness, divergent thinking and creativity in making toys.
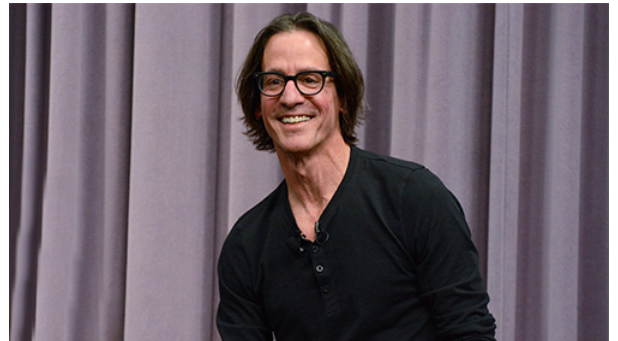
Transcript

(audience applauds) - Shout out to the back row, the people in the back row. Yeah, there they are, okay. (Tina laughs) MSE, okay. - I have to say, it sounds like a lot of fun. Is it fun or is it hard work? Can you give us a snapshot of what life is like working all day, toiling away, designing toys? - So, I'm a toy inventor, that's my profession. I also teach over at the d.School, we'll get into that, but it's a lot of effort, let's put it that way, but it's what we call fit. If you find something you really like doing, you're gonna keep doing it. So it's a lot of effort, but it feels creatively satisfying, so you enjoy doing it, versus fun might be like, it's fun to go to the beach, right, I have no problem with that. But if you find something that you really are engaged in, for us, this is what my class is about, around play behaviors, it's around really getting into it and losing yourself in time. And yeah, it is crazy, it is a crazy industry, it's a really tough way to make a living.

I would... It's a challenging way to make a living. - Okay, so explain to us, (audience laughs) this is a bunch of people who are really interested in entrepreneurship and innovation, and clearly, designing toys is an entrepreneurial endeavor. Can you tell us a little bit about the funnel? I know there's a really interesting funnel of going from ideas to actually seeing a product on the shelf. - I started the Toy Lab with a fantastic woman named Fern Mandelbaum, and she's a Stanford person also, and we each left our respective companies and I had 10 ideas, and three of them were in the toy world, and we thought we were gonna start a toy company, like a manufacturer like Mattel or Hasbro or Moose or Spin Master. Then we started asking questions, like you guys are doing; if you're a good entrepreneur, you have that license to ask questions when you're starting, people really wanna help out. And we discovered this whole world of, there were some really professional firms around toy invention. So my life is around... In my team; I use the word I a lot but it's a team now, and it's a pretty good-sized team, IDEO's 650 folks, so I say that's my team, but I have 10 dedicated folks in the Toy Lab. So, we come up with ideas and we have to prototype them, build them, get them to work, and then we pitch them, so we spend a fair amount of our time with an inventor's hat, a fair amount of time with a builder's hat, and this could be physical or digital stuff, and then a fair amount of time with a sales hat, trying to get people to buy so we can keep doing what we're doing, 'cause we like it.

- So, you talked about the idea, the building, the selling. How many ideas do you have, how many of those do you build? - Yeah, back to your funnel. - I'd like to say I've probably failed more than anyone in this room, 'cause our funnel is a lot of ideas that don't make it. So I'm really... People say get comfortable with failure, I guess I'm pretty comfortable with failure. Bob Sutton did some numbers on our group a while ago, it was like 4,000 ideas a year, just ideas, something on a Post-it, maybe a little sketch, and out of that 400 were probably rendered, 50 or 60 prototyped, we probably sell five or six, and hopefully two or three make money. (chuckles) So it's a lot of nos. But every idea we have, we kinda think's really cool, and then a lot of people don't. - Do you go back and revisit the ones that have been thrown away? - We'll go back and look at the prototypes, those ones that we've invested in, see if there's a way, maybe they're a little bit before their time or maybe there's a way to rework them so

they'll be a little more relevant. So, yeah, we keep a whole database of everything and some ideas we can sell right away, some ideas might take six or seven years, right? - Well that's what I was gonna ask, how long is that process, if you're going from 4,000 to 400 to 40? Is this weeks or years? - Hopefully that's a year process.

(chuckles) A day process, that's a long-ass day. Sorry, that's a long day. No, it's a year process, but we've been doing this for 20 years, so we have a lot of things what we would call "in the vault." Ideas in the vault, hopefully they're still good and maybe we can sell them someday. - So this is interesting. You've got this process; is everyone moving in sync through this process, or do you have a lot of things that are starting up all the time? So you constantly have new ideas, constantly new prototypes, or is there a year's schedule that you move through? - Yeah, if you look at our production line, it would be ideas. We have two or three brainstorms a week, and that might be the farm, what we're growing, and then there's people who are dedicated on projects they're really excited about, if we're building something robotic like a really cool dinosaur or something with six motors in it. That's what we're working on, keep it a secret. (audience laughs) That's gonna take a lot of time to work on that and get everything right, so we're investing heavy in something like that. - That's so cool. I love the fact that you have several brainstorms a week.

As someone who loves brainstorming, that just sounds wonderful. How do you actually frame each of those brainstorms? Do you come in and just say, "Hey, what ideas do you have?" Or do you go, "We're looking at a dinosaur toy," or, "We're looking at a car toy"? - If you've taken a d.School class or you're involved in design methodology or Tina's class, you'll quickly understand it's what are the insights? Something has to be around insights. So we spend a lot of time going into kids' homes, talking to moms and dads, and interviewing and observing, being what Tom Kelley calls the modern-day anthropologist, seeing what's happening, seeing behaviors. If you can take a behavior and put that into something, then it's gonna resonate. Which is really cool; can I show you a toy to show some behavior? - Yeah, sure. - I brought some toys, guys. (audience chuckles) Everyone might know or might not know the property Dusty, which is a Pixar property. Dusty is a plane, it's kinda like the Cars property, but he's afraid of heights. So he's basically an RC car for three-year-olds, so he doesn't really fly. So he goes on the ground, (toy plays airplane engine sounds) and a three-year-old, if you give them a remote control, they don't know what they're doing, they're just, right? But how does a three-year-old pretend they're flying? Can you guys act it out, can everyone act it out together? Yeah. (Tina laughs) So we took that behavior and then we give them these little wings, and then when he tilts this way, he goes that way, and then he tilts this way and he goes that way.

(audience laughs) I got a big wingspan; a little three-year-old behind it is pretty cute. - [Dusty] Do you read? (Tina laughs) - [Tina] That's so fun! So how did you come up with that idea? Or how did your group come up with that idea? - By watching kids, and then someone would pretend they're flying and remembering they did it themselves and said, how do we incorporate that into a toy? And then the way we prototyped that was, we had that and someone behind the curtain driving it when the kid did this, we turned it that way. So that saved us some money on the prototyping. (audience laughs) - Well I love that idea. - Then, once we sold it, then we had to make it work. (audience chuckles) - But that's what's really cool, and I am so fascinated with the way you do that, is do these really, really quick and dirty, inexpensive prototypes that test whether a concept will work without actually spending any money or even putting any technology into it. So, talk about that process. - That's a real tenet of IDEO, it's a real tenet of the d.School. It's high-fidelity thinking, low-fidelity prototyping. 'Cause you want rough-and-rapid to get the idea out there so you can learn from it, not test to validate.

Get it out there to learn from it and so you can make it better. For those of you who will start running companies someday, what you want is when your CEO to have that ability to squint and see the real thing through a rough-and-rapid model, 'cause we see so many cultures that the model prototype has to be beautiful before they show it to the CEO or management, because they're going, "What's this piece of crap?" Your whole culture then understands, "Ooh, we gotta make it look good," and they're wasting all this time. - Right, and of course I understand in that situation, you're much less likely to get feedback, you now are fully committed to something that might not work so doing these really quick prototypes is really valuable. - It's a culture, it's a culture thing. And you can do that physical or digital. You love the example where we were working with Sesame Street, we've done a whole bunch of apps with Sesame Street digital toys and we were trying to figure out how Elmo does his dance. Sesame's in New York, my team's here, and we didn't want to do any programming yet, so the team had a clever idea: they plotted out an iPhone this big and then glued it to a foam core, cut the hole out and then acted out the scene with a live actor behind it. The interaction was someone touching; you touch this button and Elmo dances like this, and we could do that and then shoot a video in a morning, we went back and forth three or four times before we had to do any software. So that was a really low-fidelity way to do digital, too, which is cool. - Yeah, I love that.

I think that it's called Monster Maker, right? And I love the fact that in a really short time, without any technology, basically no money, and you were able to really get some great feedback on the concept. Great. - Yeah. - One of the things that's super interesting about toys is that they often foreshadow the technology that we're gonna be adapting as adults in our lives. How do you try to anticipate what's gonna be happening in the real world and then adapt that to toys? - Well, my team's really lucky, 'cause IDEO's working in almost every industry, so we can see what's happening in transportation and we can see what's happening in consumer products and we can see what's happening in health. We did a $300 Barbie Hello Dreamhouse that

was out this Christmas, 300 bucks. That's good if you're an inventor, it's a lot of royalties. (audience chuckles) So it's a smart Dreamhouse, all this cool smart technology in it, and we'd been working on smart houses for a long time at IDEO, but for billionaires and other types of folks. And all this sort of stuff, like the Nest and other stuff, is recognizing your behavior versus programming, no one wants to program. So we put all this same thinking into this cool Barbie house, it was awesome. It was on Jimmy Fallon, which was really funny.

- So see, really, it's not expensive, I can get a whole house for $300! - (laughs) Yeah you get a whole house! For 300 bucks, try that in Palo Alto somewhere, right? (audience laughs) Put it on a piece of land. - Yeah, so that's an interesting point, is that for $300 I can get a real house. Do you use this, actually, as a way to test concepts for real products in the real world? Are toys a foreshadowing? - Toys is kind of a foreshadowing, because pretty fast in the marketplace, and a lot of technology finds it way in toys in a hurry. RFID was in toys in a hurry, different colored LEDs were in toys in a hurry, just because toys don't last long. You buy a refrigerator, it's gonna be there for 15 years, so that technology, it's hard to keep updating on that in a hurry, but toys have such a short life and they're a lot more physical, so you'll see this technology in there, which is pretty interesting. - Very cool. So, can you tell us a little bit about the relationship you have with the manufacturers, who, I assume, are also the distributors, right? - We have great long-term relationships with Mattel and Hasbro and Fisher-Price and any of the big toy companies, Moose and... Who's got kids here, anybody? So, if you have a three-year-old or a five-year-old daughter, you know what Shopkins is. - [Audience Member] Are you the guy? - No. (audience laughs) But I know the guy, but it's a brand that went from zero to almost a billions dollars.

We do have a Shopkins item called the Shopkins Tall Mall, it's like a Dreamhouse. But yeah, these are long term relationships, these are our customers, so to speak, and there's always tension there, because Mattel has a huge design department, but the market forces are such that there are about a third of all new toys are licensed from the outside. Toy industry's been looking outside for ideas a lot longer than other industries. A little bit open to innovation, but with known innovation partners, like my company and others. So, it's interesting, because they can't tell you exactly what they want, 'cause they'd tell their own team, but they're looking, and you start to understand, you start to get some really good institutional knowledge. I've been visiting these guys for 20 years, so I know their history, know their product line and kinda know where they should be fishing, so to speak. - So are the toy manufacturers and distributors, like Mattel, are they like venture capitalists, that there, you go in and pitch them and then they say yes or say no? - Kinda, it's much more like a screenplay or royalty deal; they'll publish your work, so to speak. If you're an author, you'll get a royalty on a book. Although people care who wrote a book; they don't necessarily care if IDEO invented a toy or not, unfortunately. (audience chuckles) - Yeah, but they might say, "I want something like Sesame Street." - But it's a long-term relationship.

I got some really good advice from an inventor when I first started, he said, "It's important to you to sell something, "but it's more important you get invited back "to the meeting." 'Cause if you don't get invited back, you're not gonna have a sustainable business, 'cause if you go in and burn your bridges on one deal, you'll throw it. - Do you find that you're often working on the same projects, the type of things that they are, and so you have intellectual property issues? - Uh-Huh, exactly. It's a relationship built on long-term trust, so if they say, "We're working on something very similar," we'll take their word for it. Because they're not gonna try to rip us off because there's a tension, they want us to come back too. But we all see the same things in the marketplace, we were exposed to similar ideas, and sometimes things are... - The same ideas bubble up to the top. - Yeah, exactly. - So, let's go back into the lab where you're designing all this. What makes something fun? - Yeah, that's a really interesting question. It has to have an element of surprise, of delight, it has to meet some kind of...

It's best if it's based on some kinda insight, and insight could just be it wants to be fun, right. Like, the plane had that element of magic 'cause it felt like you're actually flying. Let me show you another toy. This is a... You haven't jumped to failure yet, but I'm gonna jump to failure. This is one of my earlier products. This is a baseball bat, for those of you listening online. It's just a kid's baseball bat, and it was called Grand Slam Bubble Bat. You hit this button and there's a mechanism in here, and out came a bunch of baseball-sized bubbles and then you smash them. Pretty clever idea. - Oh, that's kinda fun.

- Yeah, I thought that was great. (audience laughs) This was early in my career, at Mattel, in a conference room, I think it was one of my first meetings with them, and there were five or six execs there and they're all sitting there looking pretty formal, back when people wore suits, and I'm hitting a button, there's a mechanism in here and it's not working, and I'm feeling like, "Oh no." So I just try to jiggle it and then I swing it, and (laughs) it just threw bubble stuff out (Tina laughs) and laced them across the suits. (audience laughs) And they looked at me like, "Are you goofing on me?" (Tina laughs) That was a huge failure. (audience laughs) I was very polite and wrote them each a sorry note, so I got invited back. I went back and fixed it and then we sold it to another company, and it came out and it had a really cool commercial and was doing really well, and then there's, I think it's Roger, I forget his name, but it was a lawyer who, once a year, put out the 10 most dangerous toys. (audience laughs) And the bubble bat was number five on the list. And that killed sales on the bubble bat. That product failed twice, at least. - When you design something and you pitch it, have there been any that have been picked up that you have been totally surprised by their success? I mean, this is you were surprised that people didn't love it instantly, but... - Yeah, no, you never know 'til the scorecard's out and it's in the marketplace.

People may love it and it's got a ton of tooling and advertising and then it still doesn't do well, so that's always surprising. Or, it's like, "Wow, this did five times better "than we thought it did," which is great. It's such a roller-coaster; I used to go up and down on that. Now, I think 'cause I'm older, I'm just a little more steady (chuckles). - Do you think that market timing plays a big role in kids' toys? It certainly does with consumer electronics, you know, it has to be the right time. How does timing fit in this? - Timing definitely fits, 'cause if you're in this industry, it's fourth quarter. 70% of your sales are fourth quarter. So if you're missing Christmas, you're missing out. - [Tina] So that's timing in the year. - Timing in the year.

Timing otherwise is like, yeah. Right now, skill and action low-cost games, has anyone seen Pie Face? Anyone played Pie Face? (audience titters) This crazy game, but it's 20 bucks and it smacks a pie at you... (Tina laughs) It actually was out in the '60s and then someone brought it back. There's sort of a trend around getting family away from screen time and playing a fun game like this, so there're all sorts of these things out now, and if you're chasing those kinda ideas now, it's too late, 'cause you gotta be thinking what's two years out, three years out. So, definitely, there's luck, but there's luck if you're really working hard on these things. - So let's go back further into your design process and the brainstorming. A lot of people say brainstorming doesn't work, and they try to do brainstorming and they're not successful. What makes brainstorming in your group successful? - Yeah, that's a really great question. If you back off of brainstorming a little bit and think of the design process: there's inspiration, so you gotta get inspired, see something your competitors aren't seeing; then there's ideation, take what you saw, it's framed up somehow into an opportunity, a strategy. Brainstorming's just one technique.

You could have a technique where you get good ideas in the shower. That's just not very repeatable, you have to run home or tell your boss, "I'm going--" - [Tina] And you use a lot of water (laughs). - Yeah, you use a lot of water. But for us, brainstorming's a really great tool that we know how to use. So I think it gets a bad rap because people that just read the rules and try it once don't actually know how to do it. I think it's your analogy around if you put four people in a room and they know how to play musical instruments, they can jam pretty well. But if you put four people who don't know how to play, it's not gonna sound very good at all. So, if you are practiced at brainstorming, you understand it, you're gonna get better at it, it's a muscle. If you think about ideation too, it's divergent thinking; how wide can you go, versus converging. And we are so good, everyone in this room is probably so good at converging thinking, 'cause you didn't get into Stanford, you didn't get all these degrees without converging and making decisions and understanding how to get to the answer in a hurry.

Divergent thinking is just like, how do you keep your brain going wide and ridiculous ideas and all sorts of crazy ideas because that's where you're gonna find a good idea. If you're really close to being ridiculous, it probably could be brilliant, otherwise it's just okay. So getting in that mode, and then there's confusion around, folks think creative people are only divergent, they're just constantly. No, they know when to turn it on and when to turn it off, versus too many people go a little bit then close, little bit then close. - Well see, that's one of the big problems, right? If you're actually evaluating the ideas too early, you kill them. Can you talk about how you get people ready for a brainstorming session, where they can be as prepared for divergent thinking as possible? - When we bring in new folks, we sorta indoctrinate them a little bit at a time. You put them in with a bunch of good brainstormers so they see that behavior and they know how it's working. So that's one way. Before we go into the brainstorm, you have to have your question; it's all around the right question, so we've got the insights, we've got the question. But we'll do a lot of list-making.

A lot of list-making gets your brain just rapid-fire, so a lot of list-making, and then we'll-- - Just double-click on that, give me an example of a list. - Let's say we're inventing a car for travel. Plane, car, transportation. What do people do on planes? Types of play, all these kinds of things; just lists, lists. What do kids do for fun, what do kids do that's stupid? Just, how do you do this list in a hurry? That gets your brain rapid-firing. Then, we'll discover something that works really well, then we'll say, let's do a couple minutes of heads-down time. Sketch up two or three ideas. We're huge Post-it users, by the way. People come in and think, "You guys are nuts," but it's a way you can cluster in teams. So then we'll do a couple minutes of heads-down time, sketch up two or three ideas, which is, we've found, really good for some of the introverts, so they can get some ideas down.

And then people start to share, then riff and build off them. - So that's really interesting, I was gonna ask you about the trade-off between individual time and team time. Do you find that when people brainstorm by themselves and then come back, that they're very wedded to their own idea? - No, we don't give much time for that. It's just to get a few ideas out of your head right away, and then we're all gonna build on it. And we're very clear at a brainstorm to let anyone new in the room know that these ideas are all the group's ideas. It wouldn't exist if everyone wasn't here. It's not just one musician in the band, it's everyone. So we're careful not to call that Tina's idea or Brendan's idea, we'll number the ideas so you can go to the numbers. And then we'll have a little mini-goal, "Let's get 50 ideas," and that flips everything around people's heads. - So, obviously brainstorming session's only good as the brains in the room.

What type of people do you have on your team? - A lot of industrial designers, but mechanical engineers, computer science, a lot of technical folks, and then the design researchers, but we, at IDEO and the d.School, look for what we call T-shape people: they have a real depth in one area, and that might be design, it might be computer science, but they're interested in the other disciplines, they're really interested in design research. So they play well. If you think more of an I-shape

person that's more of a guru, they only wanna do their stuff, and they get kinda grumpy if they're talking about other people's stuff. Gurus can be great, but they're just not a fit for our culture. - Do you invite them in? Do you invite in people to participate? - We'll interview gurus like crazy, 'cause they're experts and they're extreme, so you wanna know what they're thinking. But they're not necessarily right for our culture. - Does everybody on these teams have to be able to build something? Do they all have to be able to-- - In the toy group, they have to be able to build, whether it's physical or digital, they have to be able to make something tangible. It's a lot of misconception around ideas where it's all in your head and then you just have to give it to someone else. There's a lot of what we call thinking with your hands. So as you're building, you're designing and creating at the same time.

The brain gets way too much credit. The hands should get just as much credit, 'cause it's informing your decision and making thing happen and discovering things and inventions as you go. - Super. How do you manage a group of creative people like this? I imagine you get a bunch of folks who have lots of independent ideas; what type of culture do you create and how do you manage that group? - I was on a panel once and a similar question came up. I was on a panel with a Navy SEAL, the captain of the America's Cup, and the president of Sonos, the founder of Sonos. And the audience asked me, he said, "What do you do "from your teams to keep them from burning out?" And I looked at the SEAL and I said, (chuckles) "This is the guy that can answer that question." And he said, "They're burned out when they fall over," so it was just like... (audience laughs) "Alright, we don't burn our guys out that much." So, we'll brainstorm, and then we'll look for ideas that, we'll do a vote or some editing from the senior folks as to what we think has more potential, and then we'll look for who's really passionate around trying to make that come to life. And that might be one person pointing, if it's a robotics person, we got that person on our team, they're gonna be really jazzed about that. If it's some type of fashion doll and it's gotta be beautiful and all this, we've got that kind of person. So we'll have people at different points, but other folks, then, will come in and help, because they're excited about learning on something.

That's really neat about any organization if it's framed up the right way, if it's a learning organization, 'cause personally, you wanna learn something new, a new skill, a new talent. We have that sort of mindset around learning. You think you're in school and once you're out, you're done learning. It should be, you should always have that appetite to keep learning, because it's more creatively satisfying. - So, I know that you're really passionate also about space, and how the physical space affects the way you think, the way you behave. Can you describe the space that you guys have designed? I know it's gone through lots of iterations, so maybe you can share a little bit about how the space has been designed and how it's changed over time and why? - Yeah, space is, for those who almost own companies or already do, it's one of the most under-utilized resources for innovation, because people just lay it out and they don't think about it or what looks cool or what's cost-effective. So it doesn't have to be expensive, it just has to help your behavior. So we have a lot of space in the Toy Lab or at IDEO or at the d.School what we call the we space, how do we work together better? So a lot of project spaces, versus the me space, which is my office, I want it quiet, I want a view. That's not important to us. All the action for our new folks is not about an office.

In fact, there's almost no offices. They are about, where's my project space, what are my tools, who's on my team? So we wanna have tons of interesting project spaces. We had a team working for Fender Guitar at IDEO, and they were worried that the musicians would be too cool, so they brainstormed and they thought, and they found a old Airstream down in Santa Barbara, so they drove down there and got it, brought it up, gutted it, and made it into their project space. That looks really cool now. (laughing) - It fit the bill. - That fit the bill. Yeah, so in the Toy Lab, it's definitely a maker's space. There are these super-cool project Toy Lab benches that's got every toy you need there, there's a little mini shop there, even though the big shop's 200 yards away, and then our digital team sits right there in that space too, our Design For Play team sits right in that space, so it's a lot of action happening there. - What about prototyping materials, do you have any? - Yeah, we have a wall, I think I've got $15,000 of Container Store drawers there of all different stuff, all labeled by materials, mechanisms... Literally, we have this, 'cause we're working a lot on Barbie: there's super good Barbies, there's good Barbies, there's distressed Barbies, and there's Barbie parts.

(audience laughs) And it's not her mental stage. - That's so funny, because when I was a kid, my uncle worked in a toy store, and he used to bring us bags of Barbie heads (laughs). - Oh, that's scary. - (laughs) I could loan them to you. So you have all these parts, do you use them for inspiration? - We use them for tinkering, so you have stuff. So you can grab something and make something, make one of those low-fidelity, rough-and-rapid models. You don't wanna be wasting a lot of your time going out finding stuff when you can collect it. - I know you're teaching a class here that you've taught for many years, on play to innovation. Maybe you can tell us a little bit about how you teach this, and maybe some folks in the room will get inspired to try some of these ideas. - Thank you; it's in the Spring. It's in the d.School, this class is about 35, that's about the biggest class we can take.

Oh, and a few years ago, I started setting the class each day in a circle, I think you might do the same. So if you think back to kindergarten, you were in a circle, and I discovered this way, everyone's in the front row and there's no checking out in the back. There's eye contact with everyone, it's really hard to be on your device checking that out. So that's what kindergartner teachers do. And then you can reconfigure if you're doing projects and other things like that. You wanna know about the class?

The class overall is this intersection of play and innovation and how important that is, and play sort of has a PR problem. Most adults think play is frivolous or they think it's for kids; most companies think, at best, play is break time, Foosball, ping-pong table. Those are great, nothing wrong with Foosball, ping-pong, a break, but for me, play is engagement. It's, are you focused, are you excited, and we talked about this just in the beginning, it's intrinsic, it's built into us, we want this satisfaction. The two biggest reason we come to work are purpose and play, and there's now a lot of science happening around play, kinda where the science of sleep was 30 years ago, about how important sleep is now and no one doubts the science of sleep.

So the science of play, I'm not a scientist but Dr. Stuart Brown, who's a leader in this area, he helps teach the class and has been studying play, from the science point of view, his whole life. And then different behaviors. We use a lot of role-playing when we're interviewing people or pretending where it's something that a lot of role-playing. We use a lot of exploratory play for ideation, and then we use a lot of constructive play when we're prototyping. So those behaviors are enjoyable for us, we wanna keep doing it. And then, you can think of play as your playground, is this a safe place to innovate in? Is it okay to take a risk and have a terrible idea that you don't know is a terrible idea, but you're not gonna get chewed out? - What kind of projects? - Oh, oh. So, in my class, we always try to get some corporate partners. We have some really great ones. We had Anheuser-Busch, how to make the designated-driver role the fun role, or the cool role, that was really interesting. - That's a great one (laughs).

- It turned out, a lot of people want to be the designated driver, in some of the insights, but they were afraid to admit it, 'cause then they weren't cool, right? So that was cool. One team had a fabulous solution, or at least I thought so. You buy a 24-pack and they're just color-coded four colors. One of the colors is non-alcoholic. So you're playing a game and you have to figure out who's not drunk, and that person's trying to act drunk. (audience laughs) "You're done!" "No, you are!" (Tina laughing) We had a really delightful one with Scholastic and how to make lifelong readers. If you think about books and how few books, everyone's reading pads and other things, I kinda think the last real book will be a kid's book. And there's some great insights on that project around so many parents stop reading to their kids once their kid can start reading. 'Cause hey, kid can read, I don't need to read to them anymore, versus it is really a beneficial to keep reading for as long as that kid will let you read, and you can discuss and change the content out to something higher. We had Visa all around how to, I didn't even know they had a term for it, but I've approached them about making budgeting more playful, and they said, "Oh yeah, "we have a financial literacy department." That doesn't sound playful, right? So that was interesting.

So it's that type of real-world projects. - But isn't that so interesting, the idea that you can make anything fun, right? - You can make it engaging, right? So if it's more engaging, you'll have better loyal customers. If it's interesting and you wanna come back for it. It's all around that, does this pull you in, is it delightful, is it surprising, is there something there that makes you wanna keep doing it? - Great. In a couple minutes, I'm gonna open up questions to the audience, so you can start thinking about the fun questions that you have. I also love the book you wrote with John Cassidy about, basically, invention. Can you talk a little bit about that? - Yeah, John Cass is helping in the class too, he's awesome. He's the founder of Klutz, and a lot of you guys probably grew up with Klutz books. He kinds invented this concept of books plus: books plus juggling, books plus other stuff, and Cass and I wrote this book called The Klutz Book Of Inventions, and it was all around this concept, to get brilliant ideas, you have to be really comfortable with ridiculous ones. So the guy who first invented the wheel, probably people thought, "That's stupid, "what do we need that for?" So, we brainstormed thousands of ideas, we prototyped 162 of them, and then photographed them and put them in the book.

So we built all these crazy things, and the front of the book talks about how to think like an inventor, and the last couple pages talk about process, and it's perfect if you're 10 years old or you like to feel like you're 10 years old, because you're 10 years old, you have enough life experience so you kinda know what's going on, but you're still very optimistic. You want flying cars and other things in the future. There's one of my favorites for the 10-year-olds, there's a pull-down, kinda like a blind, but it's got a perfect photograph of your room completely made up and looking perfect, (Tina laughs) so Mom walks by, "Hey!" it looks good. For adults, there's one. If you've ever gotten a parking ticket at Stanford, no one's ever gotten that, right? (audience titters) How do you put some delight back into a parking ticket? So we came up with this idea of a scratch-off parking ticket. (Tina laughs) So it's like, "We owe you the fine." (audience laughs) So you can take a little risk in there. Double the fine, right? (audience laughs) Someone from City Municipality came up to me after a talk and said, "You know, that would probably work. "If you do the math, people give enough discounts," 'cause people from out of town throw away tickets and it's hard to collect. We had one, if you've ever had a broken arm or a sling, it had a pictogram of a shark biting you or falling off a ladder. So yeah, and then we had all these things built and when people would walk through on tours of IDEO, they'd think, "What the heck, this is crazy." But again, folks who have had brilliant ideas and gone and started amazing companies will tell you stories how folks said it was ridiculous.

There are amazing stories around that. - So this is really important. You come up with all these ideas, really crazy ideas; at what point do you say it's actually not so crazy? - Well, we said that in the book. We said if you take any of these, send us some money. (audience laughs) It's up to you, we don't care. No, literally, the book did really well, it was like 300,000 copies or something, but we got hundreds and hundreds of drawings of inventions from kids of these really cool, delightful things, so

they're thinking and they're drawing, I love that they're physically drawing, 'cause I think that's just a trait of creative people. They don't have to draw wonderfully, but they just like to draw, the back of the napkin stuff. So inspiring some of the next generation around inventors is really great. - Great. Well let's see what inspiring questions we have.

Who has a question? Yes. - [Audience Member] How do you deal with being stuck? - So the question is, how do you deal with being stuck? - Yeah... I think there's a lot for me, and I encourage in my team, is this mind-body connection; so go for a run, go for a walk. But we're built to move, and there's something about not moving enough that I think doesn't help. Folks who are fidgeters like to fidget and they like to move. So getting out and going for a walk, or we have our friend Fern who, her meeting is basically walking the Dish. Getting that movement, I think, helps getting unstuck. - [Tina] Great. Yes. - [Audience Member] I have a kid.

I'm curious about how both you and the toy manufacturers balance the play and the fun with parental goals like fostering non-cognitive skills or encouraging little girls to go into science. - Yeah. I love when people buy toys, trust me, and I'll argue a toy is a tool, but I will coach any parent to go get a giant refrigerator box and play and spend time with your kid, be with your kid and do stuff you enjoy. They'll sense your enjoyment and get that passion and figure out, "Oh, that's neat, "I wanna do something like that." Whether it's that exact thing, but they'll sense what you like. Versus trying to give them all these different things, like, "I gotta put them in everything." Stuart Brown, Dr. Brown, he says it's something, a twinkle in the eye, that kids recognize and they sense that engagement, that passion. That's all I can say. - You could just sell refrigerator boxes. (laughing) Great. - [Audience Member] Similar to that question, how do you simultaneously get product market fit with the child who's going to be using the toy and with the parent who's gonna be buying it, and are those always aligned-- - No.

- I'm gonna repeat the question, just so everyone hears it. So, your customer's both the kid and the parent, right? And so the question is, who are you really selling to, the kid or the parent, and are they different? - Yeah, it depends so much on age. People try to lump kids into all age; like an eight-year-old to a four-year-old, eight-year-old's twice as much life. When a three-year-old says, "I'm 3 1/2," that's a big deal. (audience laughs) A forty-year-old doesn't say, "I'm 44 1/2," right? (audience laughs) Woo! So understanding what age range is in there. So for preschoolers, you're really targeting the mom and the dad. And then when they get a little bit older, then that kid has so much more say, and they want that, they want that. When they get a little bit older, they're making car choices. We've seen tweens making the car choice, telling, "We want this one." So, it really depends on the age of the child, and then it also depends on, is it the first child or second child, too, because there's so many different dynamics happening in that. But understanding those forces, we have what we call the SpongeBob effect on some things.

Mom doesn't really know what it is but she knows it's not terrible, (audience laughs) but the kid really wants it 'cause it's kinda edgy, right. So that SpongeBob effect just sorta keeps going up. And then Mom starts to get more and more nervous, depending on what age it's at. Good question. - Great. - Yes. - [Audience Member] You mention that you document all the ideas and use a great glut of ideas. How do you manage that, and do you have a mechanism to revisit an idea? - Great, so I'm gonna repeat it. - Okay, please. - You get all these ideas, how do you capture them, how do you store them, how do you manage, basically, your entire collection of ideas? - Great question. So, say we do a brainstorm and we have 100 ideas.

We'll quickly vote on the ones that we think have merit, so that might be five to 10. The rest of the ideas, we're not gonna capture, we're literally are gonna let them fall to the floor. They're not important to us, 'cause we can do another brainstorm and those ideas will be more relevant than keeping all the old ideas. It's just too much. And they're really just an inkling of an idea, they're more like a headline. You're gonna have to push those further. Once they become something that we're gonna prototype, then we're gonna capture it and we have a database and videos and photographs, all that kinda stuff. But people treat all ideas as equal, and they're not. They're just like, quickly decide which ones you need to elevate, which are rising, and let the rest fall. - Great.

Yep. - [Audience Member] In addition to just observing children as you mentioned, what ways do you get in the mindset of young children or what they're interested in and what they would like to do. - Yeah, so it's interesting. You want to repeat it? - Yes, I need to for the podcast. So, how do you get into the right mindset, the kids' mindset, to get ready to design for them? - We did a product a while back with Fisher-Price called Jumperoo. For parents, it took the one that hung in the doorframe and made it a free-standing one. 'Cause the doorframe one was great, my son used it, but moms thought the thing was gonna fall down; if you lived in a small apartment it actually blocked a key pathway. This is a while, this is over 10 years ago, maybe more, and YouTube was just coming online. I thought it'd be interesting to search Jumperoo, and there were something like 12,000 individual Jumperoo videos, 'cause parents were so excited to see their kid jumping up and down. So that was like, wow, we can do some insights work just by looking online, which was interesting.

But the mindset is to constantly keep a heartbeat of seeing, we have a database of kid testers, which we gotta keep current, 'cause kids get older and they're out of the database. So keeping current with that, keeping time in homes relevant. We find a lot of parents think they're experts on kids, but what they are experts on their kids, 'cause they don't spend enough time. So I have a lot of folks in the Toy Lab who don't have kids, but they are experts on kids, 'cause they're spending a lot of time

and they have a sense of what's happening. - Great. Yes. - [Audience Member] So, just wondering, because you said play is an engagement and I think it's very encouraging to be in that kind of environment so you get to create stuff, and I understand that's a part of IDEO's culture. However, in this summer, I had a chance to teach some of the students from China, and then one challenge I faced is, 'cause I heard some of the students' complaints as, "Okay, I enjoy this environment a lot, but when I go back, "a lot of teachers might just pull me down "and say, 'Hey, there's black and white.'" I'm just wondering from you, how would you encourage that. - Really good question, really challenging. We see this in company cultures.

We come over here and we get to do all this stuff, and then we go back there and it's not. So, one is to either try to change that, and we encourage to try little experiments and do things, or get out of that. Go find somewhere else, if you're in a culture that just won't accept it and that's not a fit for you and you don't want that. For students, I think it's just like... Sometimes, if you're the only creative person, you might shine a little bit more, but that's a really tough challenge and I'm not sure I know how to handle that, except have them come to Stanford more often, I don't know. (audience laughs) - Great. Back there. - [Audience Member] To your point about the mind-body connection and stuckness, have you explored just like physical environments, ways that people could actually be physically moving in the moment to get out of stuckness? - So the question is, are there very specific things you can do physically in the moment to get unstuck? - Physically? Yeah, you can hold your hands like this, everyone do this. (Tina chuckles) And then you can make a big figure eight. For our podcast, we're clasping our hands and we're making a big figure eight, so you can do this online.

- [Tina] You should make a video. - We're not gonna do it that long. (audience laughs) I've been told this connects your right and left brain together, 'cause you're circling across. So if there are any scientists in the room who wanna prove that, you can... - [Tina] That's a good question, we'll do a CAT scan when you do it. - I had a former TA who came into my class. She's repeating someone else's work but she gave a real simple brainstorm topic and teams of two came up with ideas, and then she made everyone run around the d.School, then we did a similar topic and it was like 23% more ideas or something. It's not the perfect case but she's trying to illustrate, and people felt a little more, some type of burst in making it acceptable in the culture. So it's like, you know... - What are your favorite, besides figure eights, what are your favorite warm-up activities? - This one's really good, I make my students do this one.

Put both feet on the ground flat and then take your right foot and circle it in a clockwise manner. Everyone play along, keep circling in a clockwise manner. Take your right hand, hold it up high, and then draw a big number six. Keep circling clockwise. (audience laughs) This is from John Cassidy's book of immaturity. Alright, stop doing it now. (audience laughs) What I tell my students is, if you think you can multitask, you can't, 'cause you do two things worse. So, you can do one of these, I can do this, but you try to do them together, so that's my lesson out of it. (Tina laughs) I'm trying to get people not to screen-time. - Well that loosened us up.

Great. More ideas? Great. - [Audience Member] When you were talking about brainstorming, one of the things that I thought was interesting was that once you start brainstorming, you don't assign ideas to any one person, they belong to the group. But there are also times in a career, especially earlier on, when you wanna be recognized for good ideas that you're coming up with. So how should a young professional balance being a team player and being creative with getting credit for what they're coming up with? - So the question is, that balance between being a team player and getting credit for the work. If you're constantly giving everyone else credit, how do you get recognition for your ideas? - That's a really good question. There's a book I read called the Art Of Possibilities, which is by a couple... - [Tina] Zander. - Yeah, Zander is the awesome Philharmonic, Benjamin Zander, the conductor, and his wife who's a psychiatrist, and he has one chapter in there about contribution, and it's just like, if you're gonna contribute, contribute, contribute, it's gonna come back to you. Somehow; it just doesn't feel like it will, but it will.

So if you get in that mindset or in that mode and you're known as the person who's helping everyone else out, I think it's gonna come back to you. Or you're gonna get such a good idea, you're just gonna start your own company, you won't need credit. (Tina laughs) So you'll be giving everyone else credit. I think that's a lot of what Stanford coaches, is, we make great employers, right? But I find that it's just more enjoyable. Or hopefully, you got a business lead who's looking out for you and that kinda stuff. - Great. Yes. - [Audience Member] How do you toe the line between ridiculousness and feasibility? - How do you toe the line between ridiculousness and feasibility? - Yeah, at some point, you can converge and then you can have a manufacturing engineer in the room, you can have all sorts of folks, any type of adult in the room who can say, "This is not possible," and then, either someone who's really excited about it is gonna push back and make it possible or it'll fall to the floor. But the risk is not being in that realm and just playing it safe too much. You won't get to something that's interesting. - So, knowing that you're going to have to build it, does it ever inhibit your ideas? - Sometimes it will, but sometimes, people will want the challenge, 'cause they're comfortable in building something they thought they couldn't build before, and they want that feeling again.

Or it seeks them out to ask some other help, some other expert. So sometimes, if it's too much, like this is gonna be a transporter, we can't build that yet. But yeah, it's challenging. It's a really good question, where do we put our resources?

'Cause everything we're working on, we haven't sold, we have no guarantees. So are we gonna invest heavy into this or are we gonna pull back? - Cool. Yes. - [Audience Member] You mentioned the short lifespan of toys in general, which probably translates to a lot of toys ending up in landfills or being thrown away once they've been played with for a year or two. How do you think about the waste you're creating, potentially, and do you ever think about trying to design for longer lifespans? The same applies for certain gadgets for adults, I think this is a big issue now. - So the question is, okay, these toys have a really short lifespan and they end up in the landfills. How do you think about the responsibility of basically adding to the piles of junk? - Really great question.

Do you still have any of your favorite toys? - [Audience Member] Maybe a couple stuffed animals... - Okay. I'm curious if any Legos have actually ever gotten thrown out. (audience laughs) So I had to stop asking my class, "What's your favorite toy?" 'cause I knew it was gonna be Lego, so I had to go to the second one. I think a lot of toys actually get saved or passed down. They go fast just because the marketplace is hungry to sell something different. It's like a movie, there's always new movies, we don't just keep watching the same movie. So it's some of that. My hope is we're building playthings that are going to last, but yeah, sometimes stuff isn't... The companies who actually have high quality, they're making a lot of good stuff; I get depressed when I walk into a CVS and I see these junky toys that are basically, we call them plastic by the pound, and that's not stuff we work on.

So I'm with you on that. That's where I'd rather not have a toy in that case, go do something else. - Great. - [Audience Member] In a culture that's comfortable with failure, what do you do with people with teams that aren't performing, or is that not something... - Great, so in a culture that is comfortable with failure, how do you actually deal with teams that are not performing? - Yeah, I think then they need to reevaluate what their goals are, what their objectives are, are they working together? Basically, we want to help that team, because other teams might remember when they had some humble times. What's wrong is kinda like fixing a sports team, what are you gonna do to make it better versus letting them go or something. I think it's a lot around training and a lot around best practices. I'd have to dive in deeper to see exactly, but my guess is it's around training and best practices. - Great. - [Audience Member] So, I'm 23 years old, maybe I'm a Stanford undergrad or maybe I went to Michigan State, came here and got my Master's. (Brendan chortles) How would you evaluate whether I was a good fit for IDEO? - So the question is, I've just come out of school, how does IDEO decide if someone's a good fit for their firm? - Yeah, well-- - [Audience Member] Well actually, a little more specifically, how would you, Brendan, evaluate whether... (audience chuckles) - How would I evaluate myself? How would I evaluate myself? - [Audience Member] No, how would you evaluate-- - A candidate, how do you evaluate candidates? - [Audience Member] Undergraduate.

- Yeah, well, undergrads are becoming better and better here, it's just amazing. D.School's supposed to be grads only, but I try to sneak in undergrads; don't tell anyone, if you're an undergrad. But for me, it's really hard for me to interview someone that hasn't been a student. The student's one thing, but the other thing we do is when we have that 23-year-old come over, we'll put them with the team for a day and put them in a brainstorm and have them make something. Then the team starts to see, is there potential here, can we apprentice this person along, and that type of thing. - So it is really an apprenticeship, when someone comes in, they get brought up to speed? - Oh yeah. Definitely, they're gonna be paired with one of the more senior toy inventors and they're gonna teach them some of these techniques and show them the ropes and that kinda stuff. - Great, super. Yes. - [Audience Member] When you think of someone who isn't naturally creative, how do foster creativity? - Yeah.

So, who thinks you're naturally creative, raise your hand. Alright, it's something funny. If I said, who thinks you're a really good driver, people go, "Yeah, I'm awesome!" But there's something around creativity where we feel a little bit humble, even if we feel like we're creative, 'cause we might lose it. So, creativity, for us, isn't like you're born with it. We think it's a muscle, and if you're a tennis player and you keep practicing, you'll get better at it; you may not be world-class but you could get pretty good. So we think people feel they're not creative because they haven't been practicing it. And usually what happens, you're in the fourth, fifth grade and you're pretty good at drawing and your teacher says, "You're really creative!" And then you start to feel creative, and then that keeps building. So, this is what's really fun at the d.School, when people get there, they start to realize, "I am creative. "It wasn't I wasn't, it was just blocked." So helping people realize that and giving them tools and allowing them to practice that muscle. - I'm gonna build on that by asking the final question.

Imagine, flashback, you're now sitting in this classroom. You're a graduate student or an undergrad. What advice do you wish someone had given you when you were that age? - I'd say... Wow, that's a great question. I'd say, get really good at your craft, at the I in your T shape, but be interested in everything else. But figure out what you can get in the door with, 'cause you're really good at this, but be interested in the outside. I love when people tell us about their hobbies, because their hobbies start to really say where their interests are, and they're secret resources for us, what people's hobbies are. So IDEO's really interested in everyone's hobby, 'cause they'll find out, "Oh, you're interested in that? "We'll put you on that kinda project." But figure out what that craft is and understand it, and then if you're interested in an industry or an area, go deep on the history and understand it, not just that company you're interviewing today. What's this industry's history? - Well, this was incredibly inspiring. Please join me in thanking Brendan.

- Thank you guys. (audience applauds)