Design Notes Episode 10 - Alexandra Lange

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Liam Spradlin: Design Notes is a show from Google Design about creative work and what it teaches us. I'm your host, Liam Spradlin. Each episode, we talk with people from unique creative field to discover what inspires and unites us in our practice.

Alexandra Lange: I think that digital play and digital learning really rest on a foundation of this physical play - of block play - that then they can use as their interface.

Liam: That was Alexandra Lange, Architecture Critic and Author of The Design of Childhood. In the interview, Lange and guest host Amber Bravo explore how design changes childhood, discussing everything from the way street design led to the first playgrounds to what makes building blocks a good toy and how cardboard serves as both an ideal adaptive material and an inviting canvas for creative exploration. Let's get started.

Amber Bravo: I wanted to start off just to talk a little bit about your background. This is obviously a really specific-

Alexandra: (laughs)

Amber: ... sort of subject area and it's about kids, but your work in general is actually much more far ranging. So, I wanted to just get a little bit of background about your work in architecture and design criticism.

Alexandra: I always kind of describe myself as a magpie, because it's hard for me to focus on one topic within the large topic of design. And I think if you look at all of the things that I've written about, that's really reflected (laughs) in the list. So, I'm the Architecture Critic for Curbed, but we decided at Curbed that that could really incorporate all kinds of things that weren't necessarily architecture. Last fall, I wrote about the Museum of Ice Cream and how it was not actually fun.

Amber: You mean the Instagram Museum, right? (laughs)

Alexandra: (laughs) Yeah, the Instagram Museum, exactly. And over the years, I've written a lot about architecture history. I do building reviews. I recently reviewed the exhibition at the Cooper Hewitt about design for accessibility. In the past, I've written books about architecture criticism and also about one of the first modern design stores in America, which was called Design Research. So, I feel like design really incorporates all aspects of life, all ages of people, all kinds of activities, and I try as much as I can to write about all of those things and not just about buildings by famous architects, or in the case of my book, not just about design for children.

Amber: It's a little bit like when you've trained your brain to sort of look at the visual or material world critically, you can't really turn it off.

Alexandra: Yeah. (laughs)

Amber: So, was there, like, a level when you became a mom that suddenly you were exposed to all of this stuff and then you couldn't stop thinking about it from a critical lens?

Alexandra: Yeah, that's exactly what happened. Basically, I was a design critic and then I became a mom. And as you say, I couldn't turn it off. My husband's an architect too, so we got like five different sets of blocks as gifts. I was sitting there playing with my son (laughs), and I couldn't help thinking, "How is this one different than that one? Like, what is this one supposed to teach as opposed to that one? Is there a difference, or is it just marketing?" As you know when you have a kid, you don't just get stuff the first time, you get stuff basically in three month waves. As the child gets bigger, you have to get new clothes, you have to get a different stroller, you have to get a different car seat.

Alexandra: American parenting is very, very filled with stuff. So, each new wave of things brought more questions. Each new wave of activities that he was able to do brought more questions. And that is really what caused me to want to write this book because I felt like most of the things that I was reading either about designer toys or then about child development wasn't really talking about the area in-between where the design of this toy affects child development how. It was just like, "Buy things in primary colors." (laughs)

I felt like there was research out there, but it wasn't put together in a way that I thought was accessible and I thought, you know, answered the questions that I had.

Amber: So, you kind of go back to this early stage of Friedrich Fröbel-

Alexandra: Yes.

Amber: Am I say his name right? He's sort of the father of kindergarten-

Alexandra: Yes.

Amber: ... or the concept of kindergarten.

Alexandra: Yes, exactly.

Amber: Those early years, or the preschool years, um, the pedagogy has always been a little bit more focused on the environment or how kids experience environment. In the book, you go through this really interesting exploration of the block and what it means and how it's changed over time. So, I'm curious when you look at the origins of kindergarten and the block, like, what were some of the things that both struck you and also made you feel like, "Is this just a variation on a theme? Is this changing based on social context, or is there like an underpinning that is truly essential about why kids need blocks?"

Alexandra: Yeah. When I first conceived of the book, I thought it was going to be about the 20th Century. And then I found that everything in the 20th Century actually started in the 19th Century.

Amber: (laughs)

Alexandra: And so, I kept going back and back. (laughs) Um, and Fröbel is a great case. He was a Naturalist and a Mineralogist. And he kind of fell into teaching, and he created a system of wooden blocks that he felt would allow children, just by manipulating the blocks, to understand the natural world. One of the first things I found out about wooden blocks is that they can basically go in all of these different directions. They're not a dumb toy. They're not an inert thing that's just sitting there in a chest for your child, but in fact, lots of different people have had lots of different ideas about them.

So, I would say that all of those ideas about blocks have to do with, what would now be called object oriented learning, that children have to touch things, and feel things, and figure out things for themselves in a physical environment to learn the basics of things like gravity, and multiplication,

and addition. So, that is common across a lot of different sets of blocks. But then Fröbel's pedagogy based on blocks was actually quite rigid. He had 20, he called them gifts, 20 gifts. And many of them were blocks, and you didn't get to play with the next set until you were done learning what he thought you needed to learn with the first set. (laughs)

Amber: (laughs)

Alexandra: We think about blocks and object oriented learning as being very progressive, but already from the origins of kindergarten, there's actually this rigid system. The person whose blocks I really like (laughs)-

Amber: (laughs)

Alexandra: ... um, is this woman named Caroline Pratt, who founded the City and Country School, which is still in existence in Manhattan over 100 years later. And she created what are called the Unit Blocks, which I feel like I've seen in pretty much every kindergarten in America. The, the basic Unit Block is kind of a brick shape. And in fact, at City and Country, they call it a Brickey. They have these cute names for all of the blocks so they can talk about them with the children.

Amber: Right.

Alexandra: So, you have the Unit Block, and then you have halves of the Unit Block, diagonally, vertically, horizontally. And at City and Country School, they have just shelves and shelves filled with those blocks. And even, like, in my kid's public school, they have a block corner in kindergarten and they have those blocks. Those can be used and were meant to be used in a much more freeform way. Like kids at City and Country, kids in kindergarten are just allowed to take out the blocks and play with them. And so, while a teacher can come over and create a lesson around them, there's also a sense the children should just be allowed to build and good things come from just that creative activity.

Amber: Right. It's interesting because there's a whole section, obviously we would be remiss not to talk about Lego.

Alexandra: (laughs) I think now often when people talk about Lego, there's a nostalgia for a time when Lego was more free. Um, in the book, I talk about this one ad of a little girl holding this kind of crazy multi-colored Lego creation in the ad. I think it's from 1982. And the tagline is, "What it

is is beautiful," because it's as if (laughs) the parent wants to ask her what it is but realizes that that's not the right question.

Amber: (laughs)

Alexandra: Like, that's kind of a suppressive question in a sense.

Amber: (laughs) Yeah.

Alexandra: So, like, whatever it is, it's beautiful. That ad went viral a few years ago when people were like, "Oh my God, when I was little, Lego was so free. I just had a big trunk of blocks. And now it's all Star Wars Lego, and Ninjago, and all of these other, like, made-up things." I own it all at my house, so-

Amber: (laughs)

Alexandra: But the truth is that, yes, Lego in its origins in the 1950s was essentially free blocks, so it wasn't until they made into a system that it really took off as a toy. It was as if maybe there was a failure of imagination on parents' part to understand what their kids could do with Lego until they made it more pictorial and gave you a starting point.

Amber: Mm-hmm (affirmative).

Alexandra: And of course, built into that is the idea that once you start building your town, you (laughs), you'll never stop building your town, so then you get a new set every Christmas. So, it leads to more shopping. It leads to being able to do Holiday sets and all of that. So, I just felt like this nostalgia for the simpler time of Lego was actually a little bit misplaced. And something I think is fascinating is, one of the few places now you do see giant bins of one color Lego is often in art installations.

Amber: Right.

Alexandra: Olafur Eliasson has this amazing project called The Collectivity Project, which is just (laughs) hundreds of thousands of pieces of white Lego. And when they installed it on the High Line a few years ago, I sort of scoffed. I was like, "Why would a bunch of grownups stand around in the middle of the High Line doing Lego?" (laughs)

Amber: (laughs)

Alexandra: And then I went, and trust me, my family was there for 45 minutes standing around on the High Line doing Lego. And they'd created this skyscraper city. And there were people from all over the world just standing there adding, and subtracting, and doing things to this skyscraper city. So, it was a collective moment.

Amber: One thing that I thought was interesting too was the parallel between these sort of development or engineering programs for younger children and the things that they're adopting from block play, and Lego, and how they're using that to teach basic writing scripts and understanding how you manipulate an object. And I was wondering if you could talk a little bit about just how natural that feels, or, or some of the research that you did around what is the most effective way to do this at a younger age for children.

Alexandra: It was really interesting to me because I did a lot of the research on blocks and Legos before I came to the digital realm, because that just made sense chronologically. And then one day, my son came home from school and he had, what they call, a media literacy class in its library. And he was being taught how to use Scratch. And I didn't know what Scratch was, so I looked it up and I'm like, "Oh, okay." Scratch and ScratchJr are programs developed by the MIT Media Lab to teach kids programming. And this was in third grade.

Alexandra: So, he started showing me how he could do it and make these little animations just incredibly quickly. And I looked at the interface, and I realized that it was basically a bin of Legos but digital Legos. And the way Scratch works is the, the child just drags, and drops, and quote unquote, "clicks" together different colored pieces on the screen, and each color corresponds to a different kind of command or a different kind of accessory that you can introduce into your sequence. So, it was very natural for him to, like, click a green one over to start and then add four blue ones so that his character would run three clicks, or whatever. So, his knowledge of Lego was supporting him understanding how you could put together a run sequence in this computer game.

Alexandra: And it struck me that people talk about physical play and digital play as somehow being in conflict, but in fact I think that digital play and digital learning really rest on a foundation of this physical play of block play, because that has become almost a universal language of childhood. So, the creators of programs like Scratch and ScratchJr can assume a familiarity with little plastic pieces clicking together that then they can use as their interface.

Amber: Right. It's really interesting to think of this idea of object oriented learning and even just as something as simple as, like, designing interfaces, or ... You think about people who are using new technology, or if every app you go to is a new experience, there's sort of these basic ideas that you need to know to be true, or this shared language of manipulation and interaction, that is completely important to have some foundation or basis in. And I think that maybe there is, like, (laughs) a little bit of toddler mentality-

Alexandra: (laughs)

Amber: ... in all of us when you get into a new environment. So, I do think that's a really interesting idea of manipulating a surface and knowing the things that it's supposed to do or it might do because of the way we know materials or objects to work.

Alexandra: It's funny though. I mean, we walked by the Lego Wall here at Google when we were coming. So, it's like, I think that people at Google might be more, (laughs) more familiar with Lego as adults than your average person.

Amber: (laughs)

Alexandra: One of the things that was really fun for me once I had kids was getting back into a bunch of crafts and making and building activities that I hadn't done since I was a kid. It felt very rusty at building Lego sets, for example, (laughs) and, you know, following the isometric directions, which when you're a kid when you're into it, it's just like second nature to do that. So, I almost feel like kids have this common language, and then as you grow older, you might lose that a little because most people aren't making things and building things in their jobs.

Amber: Yeah.

Alexandra: I think it's still in there, you can bring it back, but for some people it might seem at first a little bit awkward, because as adults, you're used to word commands rather than physical or visual commands.

Amber: One thing that also struck me about the way that you structured the book, so you talk about these canonical objects or spaces that kids inhabit. Of course, the two that probably pertain the most to adults are, aside from the stuff that we have to have in our space-

Alexandra: (laughs) Yeah.

Amber: ... when, when kids are around us are the idea of the home or the living space-

Alexandra: Mm-hmm (affirmative).

Amber: ... and the city, or the playground, or sort of the civic spaces. And you sort of have this argument that a lot of the things that we do in the service of children are actually good for us universally. And I was wondering if you could talk a little bit about some of those observations or some of the things that we might take for granted that are actually, like, geared towards helping a younger person but actually help us all.

Alexandra: I mostly talk about that in my last chapter, which is about the city, where I really tried to open up the idea of family life and talk about it in the context of urban planning, because I feel like a lot of discussion of parents in the US right now is really focused on parents of means and, like, what parents of means can do for their particular child. But if you start to talk about urban planning, you're talking about making the city more usable and more playful for a much wider variety of kids. And it's not just about your kids, it's about all kids.

And so, if you start thinking about what makes cities better for children, what makes cities better for families, you immediately run into things like a park within a ten minute walk of your house. You run into things like traffic calming measures so that even if your child is two and wants to walk themselves and it takes you a little longer to walk across the street, you're not threatened by cars. You talk about pedestrians, and also bicycles, and basically streets being created so that the car isn't dominant. You don't want to stuff everyone in the car to do errands. So, you want things within walking distance, so you get mixed use neighborhoods.

So, the idea of creating mixed use neighborhoods with open spaces, with connected and possibly car-free spaces with shopping, creating, like, a city that's a bunch of little neighborhoods rather than a city that is, like, housing here and offices there, and, like, never the twain shall meet is a desire of more than just families but would also serve families really well.

Amber: Right. Also, at a certain point in the early 20th Century, kids had much more free range.

Alexandra: Yeah. So, in the early part of the 20th Century, basically pre-cars or when there weren't nearly as many cars on the streets, children in cities played in the streets. And at a certain point, the volume of traffic was so great that children started being killed all the time in the streets. And Jacob Rees, the great reformer, writes about children being killed in the streets. And so, people from the settlement houses, which were houses that were meant to serve immigrant families - living often in very squalid conditions - and give women a place to go, give them training and all sorts of things, also started being interested in the welfare of children, (laughs) not wanting them to die but also realizing that they needed to have an alternative if they weren't going to be allowed to play on the streets.

So, the first playground in America was built in Boston in the late 19th Century, and it was basically an empty lot in an inner-city neighborhood that the fine ladies of the one of the settlement houses filled with sand in the summer and invited all of the neighborhood kids to come in and play in the sand. And this was a huge hit. It was called a sand garden. And basically, it's like the easiest playground you can make is a big pile of sand, because you can dig in the sand, you can build with the sand, you can create this whole imaginary world either at a small scale or a large scale in the sand.

And so, you know, the first year they had one of these sand gardens, and then the next year they had more and more. And this spread from Boston to other cities, because all of the people that ran the settlement houses were part of a larger progressive movement. And so, these playgrounds were in fact great places for kids to play, but they were the beginning of children spaces being segregated from adult spaces.

Amber: Mm-hmm (affirmative).

Alexandra: So, it's one of these things that is a little bit equivocal. It's great that they had the playground, but it was the beginning of children essentially not having a right to the streets and not being considered when you're designing a street. And so, kids get stuck in playgrounds. And especially when you get to teens and tweens, they're not really satisfied with the playgrounds. They're not really made for those ages and they need to have more independence, but it's hard to give them independence when there are actually safety issues.

Amber: I had a thought too that is maybe a little bit of a loaded thought right now, but just thinking about the idea of keeping kids safe and how we design

them into spaces. Obviously with the current dialogue around the safety of kids going to school and how that might start affecting the design of schools, or even the way we, like, put parameters around the school, or fence them in, or lock them down. You talk about this segregation or, like, containment.

Alexandra: Mm-hmm (affirmative).

Amber: And generally, containment has a negative connotation, but I do think that there is something of this adult need to impede, or contain, or keep safe that is actually very much at odds with the spirit of being a child.

Alexandra: Yeah. The problem is that there's nothing that design can do to keep children 100% safe.

Amber: Right.

Alexandra: And at a certain point, you realize that design is actually hindering children's development, particularly I think as they get to be, as I said before, teens and tweens and they need independence. Like, the same, the same force that means that kids need to manipulate blocks for themselves, like need to figure things out for themself, then becomes like a need to explore, a need to have their own space and make their own discoveries about the world. And if we shut their world down so that they can only explore in these bounded environments, it creates tremendous anxiety. It creates tremendous frustration. There are all kinds of unintended negative consequences.

I mean, there are people designing schools that are more secure. I mean, the best example is the new school that they built in Sandy Hook, which was designed by Svigals and Partners, where there are all of these soft barriers, mostly with landscaping, that make it so there's really only one path to the front door. And the front door has glass so that there is a person there that can see who comes in. And there's kind of a gentle boundary that's difficult to cross. So, there are ways to make security not obtrusive.

Amber: Right.

Alexandra: But it's hard to see that all schools could be designed that way. And really, ultimately, um, (laughs) we need gun control legislation rather than, uh, building out our schools as these soft prisons to protect our children.

Amber: Right.

Alexandra: So, yeah, a lot of it comes back to the roads. I think having a real discussion about how we're building the connective infrastructure of our cities and suburbs and how it needs to be built to give more children - and this also goes for the elderly and people with disabilities - more people of more abilities access to what there is without fear of being hit by a car.

Amber: I really love just this idea that like, actually thinking about design from, like, a more adaptive perspective. And, you know, you bring up a really great point with the playground sort of exhausting the interest of a child at a certain age, because they're just developmentally past that. Also, like, what are the parents doing when they're there? Um, but I think that designing for children, it seems like there's a really interesting connection between accessibility too, and designing for accessibility, and adaptation, and tinkering. There's a whole section where you kind of talk about that.

Alexandra: I was lucky enough to go and visit the Adaptive Design Associates, which is in Manhattan which is run by a woman named Alex Truesdell who won a MacArthur Genius Grant a few years ago. And she works with children with disabilities, and she basically has a cardboard workshop where they create furniture and furniture inserts to help children with disabilities live life with everyone else, essentially, be in a mainstream class, et cetera, even if they can't sit up straight, she will help to design and create, um, a cardboard insert for a school chair that supports their back more, or different kinds of highchairs, seats that rock slightly so if a child or an adult is fidgety, they can take care of their need to move-

Amber: Mm-hmm (affirmative).

Alexandra: ... while still, you know, performing a task. The things that they have there that they've made are really fascinating. And she doesn't even like to talk about the children that her association serves as having disabilities. She really sees it all as a continuum of ability, and everyone has the right to participate as fully as possible.

Amber: Right.

Alexandra: And sometimes it is just a physical insert that makes a difference between being alone, not being able to leave your house, and being able to participate in a classroom. And she says that a lot of people sometimes see the things that ADA makes as somehow lesser, because cardboard is something we throw away a lot or recycle.

Amber: Right.

Alexandra: But in fact, cardboard is this amazing adaptive material, because you can cut it quite easily, it's not that expensive, but once you glue it together and kind of laminate it, it's totally sturdy and will last for years. I also found that there was this whole literature around what's called cardboard carpentry that goes back farther. Alex Truesdell founded in the ADA in the 1980s, but in the 1960s and 70s, there was already this movement around furniture made of cardboard for much the same reasons. And really, I mean, it's an idea about how you're making furniture, how you're helping people live in the world that is literally adaptive and you can work with all the time. I found that very exciting.

Um, another thing that she has also made there are basically trays for toys. So, for example, if a child has low vision, um, you can make a tray sort of like with a border so that the toys are not going to roll off the edge of the table and will be kept contained. But it becomes almost this pallet of toys that the child can just have in front of her, and now she can play. Now there's no problem. Somebody doesn't have to stand there picking up the toys over and over, and it just removes that level of frustration.

Amber: Yeah, it seems to me that things that you do for accessibility are actually universally good.

Alexandra: Right. I mean, it's better if it works for more people.

Amber: Right.

Alexandra: And it's really about a spectrum of ability rather than ability versus disability.

Amber: Right.

Alexandra: I think that is really a powerful way to get designers who are by and large able to think about their products and all the different users.

Amber: So, as we got on the subject of cardboard, it just-

Alexandra: (laughs)

Amber: ... made me realize that (laughs) the opening salvo for the book is really-
Alexandra: (laughs)

Amber: ... about the glory of the cardboard box as a thing-

Alexandra: (laughs) Yes.

Amber: ... to play with. And I really do think that it serves as this like nice anchoring idea for the entire book itself. So, I thought we could talk a little bit about why-

Alexandra: Oh.

Amber: ... (laughs) the cardboard-

Alexandra: Sure.

Amber: ... box is so magical.

Alexandra: Sure. So, the cardboard box is a block, or a grain of sand, or any of these other things. It's just this basic unit that kids can manipulate. And if you have a lot of boxes, they can build something with them. If you have one box, maybe they make it into a house. The great thing about cardboard boxes is you can also draw on them, paint on them, cut into them, destroy them-

Amber: Mm-hmm (affirmative).

Alexandra: ... in a way that you can't necessarily with wooden blocks. So, again, that's where the kind of inexpensiveness and disposability, like, adds a little something extra to the play. But yeah, cardboard boxes have been recognized for a really long time (laughs) as very fun for kids. Doctor Spock writes about them. I've written about the Eames Toys from the 1950s, including one called The Toy, that are essentially based on cardboard box principles. And the cardboard box is actually in the Toy Hall of Fame, which is a creation of the Strong Museum of Play up in Rochester.

So, the first chapter of my book is called Blocks, but it's really (laughs) about construction toys in general and the whole range of things from a tiny Lego to a giant refrigerator box that was the most fun thing in the neighborhood when (laughs) I was little.

Amber: Well, thank you. It's been a pleasure chatting with you about the new book. I'll let you say it this time.

Alexandra: My new book is The Design of Childhood: How the Material World Shapes Independent Kids.

Amber: Great. Thanks, Alexandra.

Alexandra: Thank you.

Liam: Keep an eye on design.google/podcasts so you don't miss our next episode recorded at SPAN 2017 in Pittsburgh. In the episode, guest host Aaron Lammer speaks with the robot tamer and Founder of ATONATON Studios, Madeline Gannon, about how robots can become more lifelike and approachable, interacting in familiar ways as “machinic” creatures, and collaborating with humans in their work. You can subscribe to Design Notes on Google Play, iTunes, Spotify, or wherever you listen to podcasts. Until next time.