

# Creating a Brain Healthy Workplace with Upali Nanda (Transcript)

## PODCAST

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 Listen to: **Creating a Brain Healthy Workplace with Upali Nanda (Transcript)**

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**Chris Congdon:** You may not be aware of it, but the spaces where we live and work actually communicate a lot about how we're supposed to behave. If you think about a library, when you walk into it, it tells you that you're supposed to have a hushed voice. Or if you go into a conference room and all the chairs are lined up facing forward, it pretty much tells you that you're supposed to be sitting down and listening. And our guest today has done a lot of work in understanding how space shapes behavior in this intersection between architecture and human behavior and cognition. She's thinking a lot about how to design spaces that actually help our brains be healthier.

Welcome to Work better, a Steelcase podcast where we think about work and ways to make it better. I'm your host, Chris Congdon, and I'm here today with our producer Rebecca Charbauski.

**Rebecca Charbauski:** Hi Chris.

**CC:** Hi Rebecca. Can you tell everyone a little bit more about our guest today?

**RC:** Yes. Dr. Ali Nanda actually presented her team's work at the United Nations General Assembly Brain Capital Alliance, and that summit was hosted at our Steelcase, New York City work life where we first got exposed to her work. We were so fascinated, we wanted to share it. She is global practice director of research and a partner at HKS. She was awarded the Woman in Architecture Innovator Award and she sits on the board of the Academy of Neuroscience for Architecture,

**CC:** Which is also really impressive.

**RC:** Yes, she knows her stuff.

**CC:** And, now we actually have a Brain Healthy Workplace poster hanging up in our work area.

**RC:** We do. If you're interested about brain health and you like this conversation with Dr. Nanda, we'd really love for you to share it with somebody so they can learn more about healthy brains at work.

**CC:** Thanks so much, Rebecca. We're really glad to have Dr. Upali Nanda here with us today on Work Better. Dr. Upali Nanda, welcome to Work Better today.

**Upali Nanda:** Thank you so much for having me, Chris.

**CC:** I want to start out by talking about this intersection of architecture and neuroscience because for many people they wouldn't think of these as two fields that go together now for some of our audience. They know that there's been work going on in this space for decades. I don't actually really know when it started, but I remember reading early on about work at the SOC Institute and others, other places. So can you tell us why you feel like these two fields really go together and what drew you to this area of work?

**UN:** Absolutely. Chris, you have hit on a passion spot for me. It came from a love of human perception and that love of human perception goes back to my design training in school and I was always one of those students who wasn't able to fully represent visually what I was conceiving from a very human centered approach. And I didn't have the words for it. I felt like when I was putting my drawings or my proposals or something missing, it was flat. It wasn't talking about how I could conceive what people were feeling or seeing or thinking, but I couldn't represent it. And it got me really interested in how people see and feel and think about the things we are creating. How do we know how they see or feel or think about the things we are creating? And that started a love affair with human perception and human science.

And I got into environmental psychology, cognitive sciences, and started looking at synthetics, which is my doctoral work that is published, which is very much around sensory design. And I almost stumbled into neuroscience and why I call it a stumble is until that time I thought we all knew how to do sensory design. We just designed all the sensors. We just think about what you touch and how you design texture and color and acoustics. And we just bring that all together. In one of my psychology classes, I learned that the brain is a wonderfully complex organ that makes sense of fragments of information in very unexpected ways. And I learned that to really understand how someone perceives, you have to understand the brain, you have to understand the trade off. It makes the fact that it's a very plastic organ that is multisensory something we use all the time is a bit of a myth.

It's really a trade off between how we are giving attention to our different senses based on the experience that we are crafting. And these nuances of perception only become evident when you dig deep into the level of neuroscience. So my approach over time has become to think about anthropology or culture, psychology or behavior, and then neuroscience and neurology, which is really about the brain and how it reacts. And getting to that level of depth has then allowed us to explore in new ways. And I remember when the Academy of Neuroscience for Architecture was formed almost two decades ago, and I was a naive graduate student who was a pioneer student at that time, and now I sit on the board. So this field has really grown over time and this intersection has so much potential that we are yet to unpack because eventually anything that we design, unless it is perceived as intended, it doesn't really have the impact that we want.

**CC:** Yeah. I don't have your degree of background at all, but I share your passion and fascination with this. And even just for those of us who don't have the in-depth understanding you do, I was just struck noticing how places can seem to communicate what kind of behavior is expected of us. If you walk into a cathedral, it causes you to experience a sense of awe and to have hushed voices or a different kind of posture. And so that's that kind of connection that you've been studying over all these years.

**UN:** And I'll give you a word for it, Chris. That's what we call an affordance. And affordance is the quality of the environment that is projected in a way that is perceived by the user. So the affordance of awe in the cathedral due to the volume and the light and the size and the form is what makes me look up. And when I look up, I get that sense of awe and that is the affordance that you're trying to create. The affordance of a niche is exactly the opposite. The affordance of a good chair is exactly. It's very different. We really look at this concept of affordances because you're really thinking about what's the affordance of an environment that incites those behaviors and those emotions in the person interacting with it.

**CC:** Well, let's talk about something probably maybe more mundane than a cathedral, but kind of the day-to-day life. And you've been doing a project in Atlanta, right? That's with the Center for Brain Health and you've created a living lab. I'm dying to hear about this because I think the concept of training people to work differently isn't something that I ever thought about before. So I was wondering if you could just tell us a little bit, maybe for starters before we get into this, let's get some basics. Like the affordance word was really helpful and when you talk about things like neuroplasticity, et cetera, maybe if you could just talk about what you think brain health is and what you started learning in this Center for Brain Health in that experiment.

**UN:** Thank you for asking that question, Chris. And the WHO definition of brain health is a state of brain functioning across cognitive, sensory, social, emotional, behavioral and motor domains. And the intent is that brain health allows a person to realize their full potential over their life. This concept of full potential is very, very key to what we are talking about here. In some ways, to me at least, I translate the amount of emphasis we have in society towards physical health or physical fitness is to keep us from having physical diseases. The concept of brain health gets us to cognitive fitness that can also stave off things like mental health disorders, dementia, chronic stress, acute stress, depression, but we are not preventive about mental health the same way that we are preventive about physical health. We don't have the vocabulary, we don't have the tools and our journey to a brain healthy workplace started from there.

We were always interested in this intersection between neuroscience and architecture. We did work on neurogenesis for example, like how enriched environments can generate new connections in the brain. For older adults, we looked at social emotional learning in educational environments, but when it came to the workplace, we really started engaging deeply in this concept of brain health. During Covid, we dug deep into it because we were really trying to, in theory, we had this ultra convenience suddenly of complete hybrid work. In theory, we should have been taking more walks, getting more rest, being giving. All of that time that we gained back to the things in life that we felt we were missing. And yet we kept seeing this increased challenge of mental health. We started seeing more people asking for mental health, leaves of absence, more mental health sabbaticals. So we knew something was going on.

And so we partnered with the Center for Brain Health and it was very intentional to say it doesn't feel like we are fixing the problem. If you're putting a Bandaid on something after a mental health issue has happened, we really need to be proactive about it. And the approach of the center was the brain, just like your body needs fitness, it can be trained, it can be empowered to do its maximum potential work. And so we embarked on this pilot project for the Brain Healthy Workplace where we did three things. One, 200 employees took the brain health training. They really took training on how to build strategic attention, how to build integrated reasoning, how to build innovation and thinking. And there were these nine strategies that the center has that we trained this cohort in.

**CC:** Can I ask you to pause just a second because I think this is so important that I want to go back and make sure that we're all tracking with you. So I mean, most of us have never thought about training our brains in the sense that you're talking about, we think about, as you said, training for a marathon or training for a physical event, and we certainly think about learning, but can you talk about the difference between just the learning that would normally do as part of our work or our education and this notion of training the brain? I just think that's really fascinating.

**UN:** Absolutely, and I would really differ from my colleagues in the Center for Brain Health for more in depth insight on it. But the distinction was that you're not just doing it for learning. In fact, learning is a way of training the brain to be more fit. Learning is one of the things that actually keeps our brain healthy. So what they did through the different strategies that they have, they helped us with little training modules on how do you build strategic attention? How do you improve strategic attention?

**CC:** What is that? Improving focus and prioritizing important information? Which we're probably really bad at as a society.

**UN:** So much, Chris. I mean, I'll share with you one of the things we realized in terms of our current stage was the amount of multitasking we do and we think it makes us do more in less time. In fact, it makes us do less in more time. So I think training around how do you focus? They had this fascinating strategy called elephants and rabbits dividing your task. I loved it. We have little cards everywhere with elephants and rabbits on them, but rabbits were like 15 minute tusks and elephants were 45 minute focus desks, and it was really simple, right? That's a very simple strategy that somebody can do to say, think of your day. What are your elephants? What are your rabbits? You probably can't do more than two good elephants in a day.

**CC:** I love that so much. That's so funny.

**UN:** Are you a morning person? Are you an evening person? When do you want to really focus on the things that are really important? So it's things like that, a lot of strategies on how to work better and smarter. Same thing with innovation, like zooming in, zooming out, zooming deep and wide, they really taught us about how to address a problem from different ways and what that does for the brain and how it builds plasticity, integrated reasoning, which is more about recall and process. And again, really thinking about strategies to do that. So to your point, I mean I would've had the same bias. I was like, what do you mean train the brain? But it is just paying attention to how you engage with the world and being very intentional in that cognitive engagement.

**CC:** Okay. So Upali, if I'm understanding correctly, this project that you did was a combination of both the brain training, but it was also there were some spatial interventions or spatial.

**UN:** Absolutely. So the three things that I said we kind of focused on, so if I go back to those, there was the brain training, which were the strategies of training the brain, really focusing on one thing, knowing what your elephants and rabbits are, and taking the time to take breaks intentionally, very intentionally. So there were some of these very core strategies. The second part was workplace affordances. So we combined that with workplace affordances and workplace affordances were a combination of place, process and technology. So an affordance that was facial, absolutely that the space gave that affordance. But without process and technology working in concert, the affordance really isn't a real affordance anymore. So we worked on five affordances and then we had three workplace habits that part of what we learned is you can train your brain, you can create these workplaces with the affordances, but if you don't have the habits, if you don't indulge in not just your brain training habits, but the workplace habits, which I feel is so critical today, then it doesn't work.

None of it is going to work. So we had this 9, 5, 3 strategies, nine strategies for brain training, five workplace affordances, and three workplace habits, which get you to brain health. That was our equation, A nine plus five plus three. The key component for the habits itself, which I feel was probably a most significant insight, was aligning intent and environment. We called it the ABCs. And A was to align your intent with the environment. What do you want to do? Which you learn from the brain training, where should you do it, which is the workplace avoidance and how do you build a habit that you go to the place where you can do the best work for your intent and the affordance.

**CC:** Okay, so let's play this out a little bit. So let's say hypothetically I have an elephant project. I have a lot of elephants, a lot of elephants in the room, but I have an elephant project, and so now I've gone through brain training. So I've understood those strategies, but then how would I begin this habit of thinking, I just go to work, I sit at my workstation or my table or my desk. How would I begin to think differently about, well, I have this elephant to tackle and I need a new habit that I need to embrace. How would I do that differently?

**UN:** I love that question in so many ways, Chris, because it's so foundational. One of the things my colleague Casey Lindbergh always talks about is experiential blindness, the blindness we have because of our experiences in some ways, right? Because we just can't see the idea of work being anywhere outside of the workstation. One of the things you'll see in the report, which is fascinating, is that our work is distributed, we spend 40, 45% on focus work. Then we do collaborative work, social connection, et cetera, et cetera. But we spend 70% of our time on the workstation. Why? Our takeaway was that it's not just that we are multitasking. Our workstations are multitasking. Our places are trying to do too much that they were not intended to do, and it's creating cognitive chaos. It's making it really confusing. And they gave a talk recently, the workplace team in KC on, we are addicted to workstations.

**CC:** It is a habit.

**UN:** We can't break that addiction. That's our habit. We just go and we park ourselves there. So in Atlanta, one of the things we did was, we don't call it workstations anymore. We don't have enough workstations for the number of people. We actually have 80 different work points for the 80 people in the office, but only 40 of them look like what a traditional workstation might have with dual screens. And our workplace team did that very deliberately because we wanted to get out of this narrative that we have been stuck in for decades on. I just go to one place, I park myself and I spend the day there. You don't do one kind of work throughout the day, then why are you going to that one place which is not the most conducive? So to the question about focus that real estate reclaimed from the traditional workstation is what has resulted in focus rooms, niches, what we are calling brain boxes.

We have tried to change the lexicon of what places are called and are really trying to get our employees to think about designing their time before they decide on a place. So design your time. What is your day going to look like? What do you want to achieve? What do you want to walk away with? What gives you joy at the end of the day? How do you want to thrive? And then go there instead of thinking that you'll stay in one place and all of those experiences will come to you. One single workstation doesn't have the affordances of all the things you want to have for a balanced work and life.

**CC:** Yeah. So what I'm taking away from this is it sounds like there's a mental advantage to moving around a space and taking advantage of different affordances within this space. Am I tracking with you on this?

**UN:** Absolutely. In fact, we actually do see it. The data reflects it too, that those who do move around to different places do report a higher level of mental satisfaction. So there's something there that's really worth unpacking more. And I'll give you a really simple example. When you go to the eye doctor, have you ever heard the 20 20 20 rule?

**CC:** I've heard the 20, 20, but not the 20, 20, 20.

**UN:** It says every 20 minutes look for 20 seconds, 20 feet away.

**CC:** Oh, interesting. I didn't know that.

**UN:** I'd never heard that before. Some of this is like the 20 20, 20 rule for the brain. You can only do focused work for this much time. Understand what it is, do it then take a complete break, move away. Take your break. When you want to do collaborative work, set yourself, reset your cognitive expectations. Go to the place that has the affordance of collaboration or ideation so that you can do the best collaborative work. Right now, we are multitasking. Our workstations are multitasking, and the effect is neither productive nor effective and is draining us and taking away some of the flourishing that we really want from coming to work because we are passionate about it.

**CC:** Yeah. I have so many questions I am dying to ask you, but one of the things I just want to make sure and touch on is you talk about enriched environments. I think you mentioned it earlier, particularly related to maybe an aging population, but just enriched environments. If people listening to this are thinking, well, what would I do differently with my workplace or the designs that I offer my clients? What would an enriched environment be like?

**UN:** Chris, I would encourage you to look up enriched environments in neuroscience just for fun. Okay. After this call, I will. Because some of the early work that happened around an enriched environment was experiments with rats in the lab, literally neurophysiologically experiments, and they found that rats that actually lived in environmentally deprived environments, which means it was just a cage. It had nothing in it compared to those that lived in an enriched environment defined by four factors, motor or movement, sensory, something for each of the sensors, social interaction and cognitive, something for the brain to engage with. So motor, sensory, social and cognitive, those are the four elements. And for those that got an enriched environment, and what they did in the cage was they got play equipment in and we got food in, got other rats in, and they saw new connections in the brain physiologically. So new synapses, firing in the brain, fired simply by changing the environment. Transformative concept, right? Yeah. Environmental enrichment can change your brain physiologically and more work has happened a lot with early childhood, with aging adults to say, we can do through environments. So to your question about the workplace, the identified five workplace affordances, you need to focus. You need to socially connect, you need to collaborate, you need to ideate and you need to rest. And for each of those affordances, you can think of the environmental enrichment framework and think about what it means for movement, for all of the sensors, for the sensory component, the social component, and the cognitive component. And I'll stress the cognitive component because we sometimes forget how good it is for the brain to do slightly difficult things. We enjoy puzzles, we enjoy figuring things out. And sometimes when we try to make things too easy, that's not what people are looking for.

**CC:** Yeah, that's not fun, right?

**UN:** It's not fun. And fun comes out of some difficulty that you solve and you're like, that was amazing. And that variety is good for the brain as well.

**CC:** We've observed in our work as well, just the role as you were mentioning, movement. If you're trying to get a group of people to ideate how just sitting in one posture can kind of have people lean back and be more passive, but getting people where they're moving or standing up has a huge impact in terms of their ability to generate new ideas. That's what you're talking about. So I want to talk about other people that are involved in doing something like this. If people wanted to do an experiment, and so I'm thinking about the employee, the human being themselves, who's coming to work every day, and then kind of a leadership mindset. So leaders in our most recent research prioritized wellbeing as one of the biggest issues that they feel like they need to be working on behalf of employees. And yet I can envision a conversation where if I were trying to talk to a business leader and saying, you really need to change your space and your training and a lot of different factors to help with brain health, how would you have that conversation with a leader to say, this is really important, you need to do this.

**UN:** Who's our biggest sponsor for this project? Chris? No, it's our CFO, our chief financial officer.

**CC:** That's interesting.

**UN:** He is our biggest sponsor.

**CC:** That's so ironic.

**UN:** And I feel like it's because he understands that brain health is linked to brain capital, and brain capital is our biggest capital. The concept of brain capital is brain health and brain skills coming together. And if you are a knowledge worker, then human capital is the key capital. And what is that organ that the human relies the most on the brain? It's the fundamental Lego block. So I would argue that we have done ourselves a disservice in talking about wellbeing in terms of yoga and respite. It's become a very narrow definition, whereas it's really a broader definition that for me to thrive, to flourish, to be the best, to utilize my maximum potential, which is the definition of brain health, to lift your maximum potential. I have to invest in my headquarters and my cognitive headquarters is my brain. That's where it all comes from. So it was interesting to really work with our CFO on this because he understood that the business case of having flourishing brains, flourishing bodies, and flourishing communities at work is a very clear one.

**CC:** I love that.

**UN:** And I think that the duality is so false, right? Wouldn't you be invested in your investment?

**CC:** It makes so much sense. I'm sold. But now let's talk about human behavior because that's really hard to change. I mean, how many habits do we all have that we have a difficult time changing our bad habits, or we have difficulty establishing a new really positive habit? So if we are talking to employees and making the case for why do you want to be intentional about getting up and moving away from your workstation, for example? I mean, I see people now who not only are they're doing kind of their own work, but if they're collaborating with remote colleagues, staying at their desk to be able to have those conversations, even if maybe that colleague, well, some of the colleagues are in a room just down the hallway, people are sitting and just staying in that one place. So how might we talk to people to say, you need to think about the way you're using your workplace differently.

**UN:** Again, love that prompt. Chris. One thing I'll say as a personal bias, I feel like the design problem of our times is the design of time. I mean, outlook teams zoom. We gave away time, and we are trying to catch up with all those components. Some of the things that were so basic that we realized is that the commute was built in threshold time. It was stressful, but was in between. There was a time in between. And I went from one meeting room to another meeting.

All of that in-between time went away. We gave away time, we distributed time, we made it possible to be in three places at once. That was never a possibility before. So I want to be empathetic to the fact that the change that has happened in the last few years is, and so first of all, accepting that we are all in this experiment together. We are all learning together and we are all going to find out and fail and rise up together is key. I don't think anybody has the answers because the change has been exponential. The digital workplace has exploded in ways we never anticipated. Some of our rituals that we relied on have just disappeared, and they haven't been replaced with new rituals, which is why this idea of going back and just saying, okay, I've been taking my brain for granted all my life.



What does it need? What does it need now in terms of the environments we are in and the habits, new habits that I create, but we have to step back and to have these conversations. It's so important that these conversations are co-created and crafted. It feels like everybody is telling us what to do and what's going to be solved. And we've realized in the Atlanta Living Lab, for example, that once you have a frame, once you can step back and say, what does your brain need? What are the choices in your environment? What do you want to do? Having those conversations and co-creating or co-authoring approaches is very, very important because the narrative around the workplace, it's a little exhausting right now. So I think stepping back and saying, let's think about this. Let's think about the stresses you are really experiencing today, and these are all real, but let's get to the root of it.

Why are you feeling exhausted? And then you can point to things like multitasking and saying, did you know that like 43% of your time, you're multitasking? 25% of your meetings you don't need to be at. 70% of the time you're in your workstation, but you're doing seven different things that it was never meant for, and you're doing all of them suboptimally. So it's given us a way of having this conversation really by saying, let's give you time back. Let's give you some time back. Let's give you some joy back. I mean, you and I were talking earlier that some of the things we don't hear in the conversation are about things like joy and awe and wonder. And we want to get some of that back to the conversation about where you spend the maximum hours of your life.

**CC:** Yeah. Well, I definitely feel like joy is not always a word that gets associated with work very often, but just listening to you talk, it makes me feel like it can also be really empowering for people to, maybe there's things in their work experience that they have control over that maybe they haven't thought they haven't learned, that they have a level of control that might actually help them feel deeper sense of wellbeing when they come to work.

**UN:** Absolutely. I mean, a lot of the strategies, the think tanks, the ideas for how to leverage some of these strategies we were learning about came from our people. And workplace innovations came from our employees that we hadn't thought about either. So I think of this idea of a conversation in a new way, which is not about you being more productive or you being better for my bottom line, but saying, if you do good, not just physically, but mentally and cognitively, if I'm getting your best brain, I'm already being more effective. And I think that investment, like I said, you're investing in your investment, and then people start having the conversation and saying, I think I'm a morning person and I do really good focused work in the morning, and this is what I need to do, and this is when I want to take off these tasks in the morning, and this is where I want to do them, and this is when I want to come together. I feel like a dipping energy after lunch. And that's when I want to do my rot tasks, and this is where I want to do them. I actually want to do them in the open office around others because that's my caffeine shot. Yeah, I get it. I'm around the buzz I can be. So I think it's shifting the narrative, both in how we design places, but also in how we have conversations about them and bring that conversation about habits and rituals back, which is where the brain training and workplace affordances meet.

**CC:** We could talk for hours about this because the topic is so fascinating. But I want to ask you one final question, which when we were talking about this notion of joy or awe or wonder, I just like to ask you kind of in closing, if you can tell us a story about an experience, a space, or whatever it is that you've had in your work that really helped you feel a sense of joy and happiness?

**UN:** I thought a lot about this. It's such a good question because I'm a researcher in practice. I love what I do. I love engaging with difficult problems and getting to the why. And I think this, it's tough to do what I do if you don't love it. I think that's true for most of us. I think most of us have to have that level of love and passion for what we do. But the sense of joy that as soon as I thought about it, it came to me, was being in a room with designers and researchers together. And we were doing this ideation session and this concept came out and I'd been talking about something for years, and one of the designers just got up and reframed it in a completely different way. He walked up to the board and wrote this diagram, which reframed what I was thinking fundamentally, and I can still tell you everything about that moment, a big room, lots of light.

It was fall. So I could see this flame of colors and people were all over because we'd been ideating for a while. There were these whiteboards and post-its, and there was a beautiful mess of co-creation. And this one diagram came up that came up from an unexpected person in an unexpected way. And all these legos fell in place for, oh yeah, that's what we mean. And everybody was doing slightly different things. And we just turned around and we looked at that, and then there were high fives and there was this, yeah, that's it. That's what we've been looking for. That moment of just, I don't know, feeling like you've unlocked a new way of thinking, just unlocked something like

**CC:** Literally the light bulb over your head,

**UN:** Literally. Literally the light bulb. And there was this adrenaline rush, and it was joy in this way of feeling connected. And some of these were people that I'd never really spoken to or worked with before. But in that moment, because we had discovered something together, there was a relationship formed that years later we would still talk about it and say, Hey, you remember that? And it was the space, because I don't think we could have done it if it didn't have that range of affordances. It was the people, but mostly I think it was this sense of shared purpose that just when we got there, we were like, alright, it's a cool feeling. And I don't know if we have enough of those anymore where you've just unlocked and you're seeing the world in a new way just for a brief period of time. And I would equate that to this moment in Hawaii looking at the sunrise. That's the cognitive equivalent.

**CC:** Yeah. Well, I hope by sharing some of this really good work, we can help people have more of those moments at work. So Upali, thank you so much for your time. Thank you for joining us here at Work Better.

**UN:** Thank you so much, Chris, for having me.