

## ADVENTURES IN BEHAVIOUR CHANGE - JASON HREHA (Katie Elliott & Jason Hreha)

My guest today is Jason Hreha, neuroscientist, behavioural designer and founder of Dopamine, Silicon Valley's first applied behavioural science consulting firm. At the time of our conversation, he was Global Head of Behavioural Sciences at Walmart. He has now moved on and is publishing a new book...

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So on today's show, I'm delighted to welcome Jason Hreha. Hi Jason!

Hey Katie. Thanks for having me on.

I've just been reading on your website and you've got some great articles on there, including one about your grandmother - how your grandmother's wisdom may be more useful than your average behavioural scientist's. Can you elaborate a little bit?

Yeah. So you know, I originally come from academic background and in the academic world the name of the game is like, especially in the social sciences, is come up with surprising findings that kind of blow your mind and make you think differently about everything. And so for many, many years I was kind of really obsessed with like all the newest academic literature and you would learn that like, oh actually you're, you're less rational than you think or that like people have this bias or that bias or whatever. And so the kind of the academic literature really teaches you to like distrust your own mind and your own common sense. And the funny thing is that like when I got into the working world and I started really testing all of this stuff and applying it in practical circumstances, what I found was that actually a lot of this stuff just didn't really replicate, or a lot of this stuff just wasn't all that powerful. And right after this period of time where I started to question this stuff we had the replication crisis happen, where we saw that actually across the psychological or behavioural sciences, the replication rate is roughly like 36% - so fewer than half of the studies that have been published are able to be replicated. And so it just turns out that actually a lot of these wacky, wild findings that cause you to question everything turn out to not be all that true. And so actually whenever I hear of a new study that comes out that's kind of surprising or weird, I kind of discount it and say it's probably not true. Like if something dramatically contradicts my common sense or my lived experience and it comes from the social or behavioural sciences, chances are it's not true. And so that whole article is just really talking about how if you just kind of eat up all this academic literature and all this behavioural science stuff, hook, line and sinker, and you don't really question it,

chances are you're actually going to make worse decisions or be dumber than just your common sensical relative or grandma.

So I'm coming from completely the opposite direction.

Yeah.

So I have no background in neuroscience and no training in behaviour design and all that kind of stuff.

Yeah.

I come from the place of experimenting in my own life - so the more kind of common sense approach, if you like. And why I find it really helpful to read some of these books, and I know that not all of the studies replicate, but sometimes there are things which are common sense or I feel like I've always known about them or maybe my dad would tell me something and finding that there is evidence that suggests that there's good science behind that, that there's a way of understanding what's going on in the brain can help me to take seriously things which, otherwise, could just sound a bit fuzzy. Does that make sense?

Yeah.

So like when I was growing up, my dad would always say, "Take deep breaths, just take some deep breaths", you know? And I used to get so cross with him saying 'take deep breaths' as if that was the answer to something. And then more recently, you know, I've read around the subject and I can see that taking deep breaths actually can have quite a powerful effect on your physiology. So there are ways now that I can understand that there might be validity in that where I found it more difficult just having somebody tell me that because it sounded a bit ridiculous somehow. Does that make sense?

Yeah, that makes complete sense. Yeah. And you know, at the end of the day, like I'm a very practical person. I kind of come from the point of view of like whatever works. So yeah, I mean, let's say you just decided to originally listen to your dad and it works for you. That's great. If it takes some academic research to kind of convince you that it's valid and you therefore do it and it helps you, that's great too. So, yeah, I'm a total pragmatist when it comes to stuff.

So it seems to me that there's loads of stuff that we understand about how human beings work.

Yeah.

And that that is often being applied within industry, within advertising, within games design, whatever it might be. But people themselves, like ordinary people like me don't necessarily know about how that works. And I'm really interested in how we can kind of take the power of that and start using it for ourselves. So what I'm hearing when you talk about these studies and these books that are maybe based on things that can't be replicated and maybe they sound too good to be true or surprising and that when people believe them, that's not very helpful - underlying that, I'm getting a message that you should really kind of trust your instincts and your common sense a bit more.

Yeah, absolutely. Yeah. I mean well, so, I mean if you think about it like the most important things in life are... let's just say that evolution built us to be very good at making a lot of the most important decisions. Certain things that are kind of like evolutionarily bizarre, weird or new such as like dealing with money, which is like a fairly recent invention or like doing longterm investing where it's like you're thinking about like how should I allocate this abstract thing - money - for over the next 50 years in order to get the best return? In certain dimensions like that, I think that we can make some pretty big errors but in all the most important things in life around like human stuff, or like romance or family, I think that most of the time we're very well equipped just with our natural mental modules just to make the best decisions. It was very evolutionarily important, for example, for us to be able to read other people, to understand how they're feeling, to empathise. You know, we're equipped with kind of like all these other mental modules like attraction for example. We don't have to consciously think about anything in order to be attracted to somebody, that's our bodies sensing different chemicals and sensing the visual cues and all these things like that and bringing them all together in order to give us like an overall like yes or no on a person. It would take months or years of kind of analysis for a single person consciously to go through all the different checklists that we just do automatically just with our inbuilt mental modules. So I guess what I'm just trying to say in a kind of a nerdy, rambling way is, for just a lot of the most important things in life, I think that we're very well equipped just out of the box to make great decisions- to make better decisions than we would if we were to sit down and get all nerdy or analytical about it.

So we've got a bizarre situation where in order to trust ourselves, we may need science to tell us that it's a good idea to trust ourselves. Do you see what I mean? I think we've got a bit of a kind of expert-focused culture now where we can think that we need to listen to someone who's an expert on a particular subject in order to know what's true. And I think particularly, you know, I have an interest in the area of mental health and I think very often people are looking for someone or something external to tell them who they are and what's wrong with them and what they need

to do. Personally, I'm a great believer in people learning how to listen to their own wisdom and their own insight because I think we tend to be pretty good actually at knowing what we need and how to get that, and that a lot of the problems we experience are down to the fact that we're not trusting ourselves and that we doubt those instincts.

Could not agree more. I could not agree more. I think that we look externally too much and I think in general we overthink things, especially in our personal lives, but in a lot of different areas. Like, you know, I've done technology product design for many, many, many, many years. And yes, you can sit down and analyse a product all day and look at every single button and run all these different kinds of analyses of user flows through the product. And that's very helpful and that's a great way of approaching product design. But another great way of approaching product design is giving it to people or just playing around with it yourself and saying, "Is this fun? Is it enjoyable? You know, when I give this product to a person and watch them use it, do they smile?" Right? That's just much more common sense. It's much more, um, I guess you could say intuitive or off the cuff, but it works really well as well. So I think that we raise up the analytical part of our minds too much in our society. And I think we over worship individuals who are overly kind of system two or analytical about things as well.

It's so interesting. So, just in terms of the work that you've done in the past and the work that you're doing now...

Yeah.

Can you just give us a bit of insight into what you've done and what you're excited about in the work that you're doing?

Yeah, definitely. So, just a little bit of background - so I studied neuroscience at Stanford and as soon as I left Stanford, I actually joined a lab at Stanford. I left the academic program officially, but then I joined this lab called the Stanford Persuasive Technology Lab. So BJ Fogg, who was the head of the lab - he's like a well known behaviour designer - he was kind of the one who really kind of started the behavioural science revolution in Silicon Valley. He was the person that was doing it long, long, long before everyone else. And so I worked with him and so he and I were very close and we did a lot of work together and I decided to kind of leave his lab after a little while and started what was actually the first applied behavioural science consulting firm in Silicon Valley. And so BJ had been doing it independently, but I created a firm, that was called Dopamine, and so what we did was we did different behaviour design projects or app design projects at different companies, but I was kind of like the lone person other than BJ at the time in the valley really

talking about this stuff and doing this stuff. And then over the years what I've done is I've either joined different companies as the Head of Product or I've started my own companies and now I'm at Walmart applying all this applied behavioural science stuff to the biggest company in the world. So that's just been absolutely wonderful. And in general, my work is all about using deep scientific understanding of behavioural science in order to better understand users, what they want, how they think and everything so that we can build the best experiences possible so that people come back time and time again and love our stuff.

That's great. So can you give us a practical example of something that you might do?

Let me just first talk about how we work generally. Then I'll give you a specific example. So we're brought into the most important strategic projects the company's working on. Usually from the very beginning, to kind of infuse this behavioural way of thinking into the project. And then I work with the teams in order to design experiments for us to test core behavioral assumptions so that we can actually build something that accomplishes what we want to accomplish. And so just to give you a specific example of that: s,o there are a couple of really great public projects that our team was heavily involved in. So I don't know if you know Sam's Club? Sam's Club is kind of Walmart's bulk membership warehouse, I guess other people would be familiar also with Costco?

Yeah.

Costco is kind of a similar company. And so what you do at Sam's Club is you sign up for a membership and after you pay your yearly fee for your membership, then that allows you to go to the store and purchase items that are low price in bulk. And so one of the projects that we did was creating kind of an onboarding experience. So currently, you know whenever you sign up for something like Sam's Club or Costco, you're not really taught anything of like, here's how you should shop the club, here's how it works, go to this part of the store and you can see this, go to that part of the store and you can see that. People don't really have mental models, they don't really have cognitive scripts if they haven't used a discount bulk warehouse club before. So what we did is, over a period of many, many months, we created a new member treasure hunt where, when somebody signs up, what happens is they're given a link to go to a digital site that kind of leads them around the store and gives them a tour and gives them rewards at each part of the process. So like, let's say, we'll tell you first to go to the prepared food section and kind of see like all the different prepared foods there and we encourage you to pick one and you get like let's say \$2 off that one that you pick and then we encourage you to go to the next section and the next section. So it's a just like really wonderful experience that

kind of leads people through the club in a way where they kind of build a proper mental model and it's a really nice experience because they're rewarded all along the way. And the specific parts of the club that we brought them to and the way that we structured the rewards, it's all very data-backed and was based upon what we understand about how to best get users to understand the value and kind of really love the club. And so that was kind of a cool experience that we did. So that's rolled out at Sam's club stores nationwide. Another project that we worked on, actually at Sam's Club as well, was we just actually introduced a new store in the Dallas market not too long ago. And what that store is, it's a cashier-less store. So there are no checkouts. You pretty much use your phone and an app on your phone in order to scan each item and you check yourself out. And so our group was heavily involved in that because that's a big behaviour change, right? Having people come into a store, use their phone in order to check out, instead of going to a cashier, everything about the store is just very different in the way that you shop it, etc. And so we were very involved in figuring out like when people come into the store, what should the experience be like? How do we make it very clear how they should use this? How do we actually make this transition good? We don't want to be heavy-handed in the way that we educate, we want to be elegant about it, but we also don't want people to not understand it so they get flustered and leave in an upset way. And then also just kind of with the exit experience, how do we make the exit experience very clean, make it really good of course, prevent against shrink and theft while also just giving individuals just like a wonderful, nice experience? We help the teams think about the behavioural blockers or the things preventing the behaviour that we want to see in this situation. And then we come up with hypotheses for why we think the behaviour might not get done or the experience might not happen the way that we want it to happen. And then we design experiments and then we run them in as lean away as possible, collect the data, analyse it and see whether or not we got the results that we wanted to see. And then we just kind of iterate and go back around, back around, back around until we truly understand the behaviour space of whatever area we're involved in. Does that make sense?

Yeah, that absolutely makes sense. And what I'm really hearing, particularly with the Sam's Club example, where you talked about the treasure hunt - it just made me think how much as adults we still like to play.

Totally. Yeah. Yeah.

Cos that sounds kind of childlike, that experience. And I can see how it's a win on both sides because going shopping can be quite dull.

Yeah.

And learning new things also can be quite off-putting. I think we very often don't really want to expose ourselves to change and to things that are different. We like to stay within familiar models, don't we, so getting people to shop in a new way I guess can be challenging. People will very often revert to what they already know, even if it's not ideal.

Yeah, definitely. I think you're 100% right. I mean like in general, like we're certainty-seeking creatures. But I mean actually it's funny because like, not just related to shopping but in every areas of our lives, most of us do seek out certainty, but I do think that there are huge individual differences there. And I do think that we like to speak in kind of very broad terms, but actually one of the biggest flaws in the behavioural sciences in general is that we don't really control for things like personality. Uh, you were just mentioning that people in general just are kind of creatures of habit they like to get ingrained in kind of their systems. Well, I actually think that there's a ton of variability there that psychology hasn't really studied enough. Personality science is probably like my main expertise in the behavioural sciences actually. And there's a trait in the Big Five Personality Inventory, which is the main model of personality that's kind of accepted academically, called neuroticism, which more or less just measures the sensitivity of a person's threat detection or fear system. And so individuals that are very high in neuroticism are much more likely to, let's say, like read negativity or danger into social cues. So they're much more likely to have social anxiety. They're much more likely to be hypochondriacs. They're much more likely to have anxiety disorders, etc. Right. And like there's a trait called openness, which measures, I guess like the crude way of putting it is like, creativity or like novelty seeking. Like how much people like encountering new ideas or learning about new things, etc, exploring new things, how much they like kind of creative or wacky new stuff. And there's another trait called conscientiousness. You can really break that one down into two sub traits. One's called industriousness, one's called orderliness. So people that are very conscientious and are very orderly can be really routine- or schedule-based. Right? And so I think that people that are lower and openness and higher in conscientiousness, particularly this orderliness sub trait, they're going to be very routine, habit-based people. It's a decent chunk of the population that has that kind of signature, but there's just as many people that don't have that signature in the population. So, as you and I both know, there are lots of people that like love just going out without a plan and exploring stuff and trying new things. And then there are other people that are much more habit based and every Sunday they go to the farmer's market and they do this and they do that. So yeah, I think a lot of people are very like routine-based, but I think a ton are just not very routine-based. And that latter group, if you have an interesting, cool new experience that you've built, whether or not it's an app or whether or not it's like a cool new piece of music or whatever, it is much easier to get those people on board.

Yeah, and presumably the people who are quite routine-based, the way that you designed that experience at Sam's Club, it was familiar enough, like some of the concepts you were talking about like the the treasure hunt and the way you were communicating with people, those were familiar enough that people could grab onto that without it being overwhelmingly new?

Yeah.

So you're trying to find something that will appeal to a broad cross-section of people, even though you know that their personality is going to have a significant impact on how they respond?

Definitely. We didn't have any specific personality science or thinking go into that experience. But I agree. I think that if I was to do it over again today, I would probably look a little bit more at the personality stuff.

And something I'd really like to know about the personality side of things - so you're talking about neuroticism and the fact that people will be more sensitive to threat, maybe more likely to perceive negative things in their environment, whatever that might be. So, my personal experience is that I'm pretty certain that I changed in that regard. So I would say that I would score much lower now on neuroticism than I would have done three years ago when I was quite unwell with serious mental health problems and I was perceiving everything as a threat, to be honest. So what's your view on personality traits being changeable over time?

Yeah, so traits don't really change very much over time. So there are kind of longitudinal changes that occur over the lifespan. So people tend to, for example, get less neurotic as the years go by. The change is not massive. But if you just look across the population, like in general, people's neuroticism tends to go down over the lifespan. The way that I like to think about traits, personality traits is like, they're almost like thresholds to behaviour, or thresholds to emotions. So with neuroticism, if somebody is very high in neuroticism, it just means that their threshold to getting fearful or engaging in like fear-diminishing behaviours is very low. But so if you are somebody who's very neurotic and you're in a very chaotic, crazy or a dangerous environment, you're gonna go above threshold and kind of get triggered into these emotions much more often than if you're in a more calm, less dangerous, more predictable environment. Right? And so I would highly doubt that your, that your personality changed. But I think that maybe your context changed so you're just pushed above threshold less often. But it's an important distinction to think about cause a lot of self help, a lot of personal development stuff focuses on like changing yourself. And the fact of the matter is that the research is quite clear at this point.

Like we have decades of research showing that we don't know how to reliably change anybody. So it turns out that the research is very clear on that, parenting, for example, has no discernible effect on the personalities or really even the outcomes of children. I'd say in the positive direction that's true. If you as a parent are very abusive or you starve your children or do kind of very extreme negative things, you can negatively influence your kids very easily. To positively push them up - we don't really have much evidence that it's really possible to do that.

The conclusion I've come to as a non expert person who's just been doing a lot of living and trying to make sense of it is....For me, I think the thing that's been really helpful has been to get to know myself and then to work with what I've got. So if I know that I'm someone who's maybe relatively high in neuroticism, you know, I'm quite likely to be sensitive to things - learning how to manage that aspect of myself rather than thinking that I should not be like that. I've found that thinking that I should not be the way I am hasn't been very helpful. Accepting the way I am and then trying to figure out things that can be helpful for someone like me has been much more useful as a strategy. I'm wondering how that sounds to you with all of your background?

Well I could not agree more. I mean it's funny, it's like I almost feel like you've gotten a sneak peek of the book I've been writing because I've been writing a book on this and like that's exactly what I suggest to people is like, hey listen, you can't change who you are. You're great the way you are, actually. There's no such thing as a bad personality. The way to think I think about personality and who you are as a person is you were born with unique mixture of traits, so a unique mixture of characteristics. You are perfect for a certain context, for a certain environment, for a certain niche in life. And it's our job as people to explore throughout our lives and to just constantly try out, like live in different cities, try different jobs, you know, become friends with different people. Like life is this never-ending process of exploration. And hopefully if we do that enough, we find a place that perfectly fits us where our strengths shine and our weaknesses don't really matter all that much. Right?

Yeah.

And the key thing is like nobody's perfect. We all have our areas that are a bit stronger and better and our areas that are a bit weaker, and instead of trying to do the impossible and like get rid of your weaknesses or make them dramatically stronger, I think the best way to think about it is keep exploring, keep moving out, be honest with yourself and be accepting of yourself and find the best soil for you to grow in.

That's really encouraging and very lovely to hear actually given everything that you've studied and everything that you know, I find that really helpful to hear. Have you got a 'Little Challenge' that you could suggest for people listening at home? Do you have any ideas?

Yeah, that's a great question. So when I work with people and whenever people ask me for advice, what I always tell them is the most important thing that you can do - and this kind of piggybacks on what you and I were just talking about - the most important thing you can do is to understand yourself as well as possible and as objectively as possible. We are so good at deceiving ourselves. Right? If you were to ask me, "Hey Jason, like what are your greatest weaknesses?" Yeah, I'll give you some bs answer, but it's so easy for us to just look over the areas of ourselves that are less than perfect. And so what I think the best thing that people can do is, and the most important thing people can do is to gain an objective understanding of themselves. The best ways to do that - there are really two ways... One way is to take a good objective personality test. There are really only two models of personalities that are valid. One's called the Hexaco and the one's called the Big Five Personality Inventory. So these are free assessments. You don't need to pay anything for them. You just type them into Google, like type in Big Five Personality Inventory or Hexaco and you want to take one that's at least 60 questions so that you have like good reliability behind it. And kind of look at your scores there, and the reports that you get from these assessments will show you how you break down all the traits percentile-wise. So you understand in the general population, in the United States population or whatever country you're in, where do I stack up? And so you may consider yourself to be a very conscientious person, but let's say you get the test results back and it turns out that you're like in the 40th or 30th percentile. Well that's a situation where your self-perception doesn't match up to objectively where you actually stand. So, I find it's a very enlightening process to get these test results back and to use them as like a guide for making different decisions in your life. The second thing that I recommend people do is talk to other people. Ask other people, ask friends, ask family, ask people that are even just acquaintances - just ask them about you. Ask them, be like, what was your first perception of me? Like based on what you know about me, like what job would you think I would do? Where do you see me? Um, if you were to tell me to move to any city in the world where would you have me move? Right? Just ask people that aren't you about you. Right? And actually, you know, even ask people that you don't think like you all that much about you and ask them what they think you're good at. Ask them what they think you should improve in. The more we can get that third person perspective on ourselves, the better. And so I think that of course you don't want to be that person going around all the time just asking people about yourself. But I just find that that practice, if you're persistent about doing this, it just gives you an interesting

perspective on who you are. And so I'd say that I think you're dead on, that the best path to building a great life is - step one is self-understanding and these are two methods to do it.

Those are both great and I can't wait to do them. Thank you for those recommendations. Wonderful. And if people would like to find out more about your upcoming book and your other writing and other things that you're doing, where would you recommend they find you?

So I have a website, which is [thebehavioral.scientist.com](http://thebehavioral.scientist.com) and I put everything on there. So all my writing is on there. Any announcements related to anything I'm going to do in the future will be on there. So that's where you can find out everything related to me.

Jason, it's so interesting talking with you. Thank you.

Yeah, it's great talking with you as well. Thanks for having me.