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# MBS (<u>00:00</u>):

I read recently that the number of people going to university to study the arts and literature, in particular, is dropping. It's just not practical. Look, I know literature is not science and textile practical, but I did an undergraduate and a master's degree in literature, and I know that that study influences who I am and how I see the world every day. As part of that, in my undergraduate years, I studied a course on autobiography, people writing the stories of their own life. And there's a few things that I learned from that. First, there is not static sense of who you are. I mean, even physically, most of the body completely regenerates itself over seven years or so. I mean so, if every cell of you is different than it was from seven years ago, are you still you? (00:54):

But perhaps even more so than the physical regeneration, we become who we are through the stories we tell ourselves about who we are, our relationship to



the world puts us at its center. The main actor and scriptwriter and director and editor. The Oscars have just happened and Everything, Everywhere, All At Once totally cleaned up. And on the surface, it's another multiverse movie, kind of a quirkier version of the Marvel worlds. But I think the movie is most interesting as a [inaudible 00:01:32] to the stories we tell ourselves about ourselves. And what's intriguing to me as I figure out those stories for myself is trying to figure out what aspects of who I am it's helpful to be certain about, to commit to it hard. And where and when the adventure is actually in letting in ambiguity and variation and uncertainties and really different adventures, different elements of who I might be. Sometimes it turns out wisdom is not increased certainty, but actually a willingness to recognize all that is uncertain.

#### (02:16):

Welcome to 2 Pages with MBS, the podcast where brilliant people read the best two pages from a favorite book, a book that has moved them, a book that has shaped them. Anil Seth is Professor of Cognitive and Computational Neuroscience at the University of Essex. He's the author of a wonderful book called Being You. And he's also the creator of the Perception Census, which is a new study to help understand how we actually experience the world. And in the interview, and actually at the end of the interview as well, I'm going to give you a link to that so you can be part of that if you'd like to be. To put it simply Anil studies our consciousness, which is truly one of the great frontiers of the unknown. How do we perceive who we are? How do we perceive the world? And how do those two things play together? But I have to start a conversation about consciousness by just asking, what is it?

# Anil (<u>03:13</u>):

One way to think about consciousness is it's kind of a story that the brain tells itself. At least for certain aspects of consciousness, the sense of personal identity can be thought of that way. So my own story is as just someone who's



been always curious about this thing that we call the self, and this thing that we call, this phenomenon that we call consciousness.

#### MBS (03:34):

We rely on our memories to guide us every single day. And our early lives of course, are just this deep, deep immersion in learning, learning and learning. But these memories from our past, I mean, how reliable are they? For better or for worse.

#### Anil (03:50):

Like all early memories, the more often I try and recollect it, the more unreliable it no doubt becomes. I mean that's a funny fact about human memory. It does have this malleable characteristic that we remember, every act of memory is an act of recreation and rewriting and reshaping.

### MBS (<u>04:07</u>):

So all memories are malleable, but that doesn't mean a memory can't have great weight and gravitas. And for Anil, one of those happened when he was just seven years old.

# Anil (04:19):

I do have this vivid memory of looking in the mirror and seeing myself and realizing that at some points I would die. It's kind of maybe a bit of a morbid thought to be having, but I think this recognition of mortality, I mean there must be a point for each of us where we have that thought for the first time.

# MBS (<u>04:39</u>):

I'm not sure I remember the moment for me where I realized I would die, but I do remember the moment where I suddenly understood or began to grasp how big time and space were, and how my life is just the smallest of small flashes of



light in all that darkness. And that leads to the same questions. Why am I here? What's the point? What's a life well lived?

### Anil (05:05):

Most of the time we get educated out of asking questions like this and into more sensible things that we can get a job with and so on. And it's not that I was fixated on these questions for the whole of my childhood in life. No, I kind of meandered around a bit too. But they never went away. And while I was studying, I started with physics and then psychology and then computer science and AI, at graduate school. I never kind of gave up on this curiosity. And I was very lucky because at the time, at the early two thousands when I finished my, was finishing my PhD, consciousness science did this challenge of understanding how this electrified pate inside our skulls can be the basis of everything that there is for us. It's where the sense of self comes from. It's where our experience of the world comes from.

### (<u>06:00</u>):

All our joys and sorrows, all our thoughts and feelings and beliefs are all dependent on this wetware in some unknown way. And for a long time, this question had been treated as a primarily philosophical or even a spiritual or religious question, but it was coming to be recognized again as the central question in the mind and brain sciences. And so I was sort of along for the ride and I've been very lucky to be part of the journey. Where we can use, deploy all the tools of modern science, neuroscience, psychology and physics, math and computer modeling, to try and understand this mystery. So I mean that's part of me, but there are other parts too. This is something that I do, but I feel very fortunate to work with, there's a number of brilliant people pursuing this question.



#### MBS (<u>06:57</u>):

When you told your story about how you got here, and it was through math and through physics and through AI, how important has it been to have those diverse experiences before centering in on the science of it all?

#### Anil (07:16):

I think very important. And by the way, it wasn't just the quantitative, the so-called hard sciences. When I was at school, I was really torn because certainly in the UK and at that time in the eighties, we had to choose. You could only do three subjects at A level when I was 16 or 15, I remember having to choose. And I was equally enamored by the arts and by writing and reading, I just couldn't do both. But as time has gone on, I mean my work is equally now all about writing, all about philosophy as much as it is about neuroscience. And this interdisciplinarity, also working with artists, working with all sorts of people has been fundamental. And I think more so than many other questions, consciousness is intrinsically interdisciplinary. I mean, the disciplines that we have in academia they're made up. I mean nature, nature doesn't, it doesn't carve itself at the joints that we find in our school curriculum. These disciplines are inventions to make teaching relatively easy and marking easy, well, "easy".

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MBS (<u>08:26</u>):
Easy-ish.

Anil (<u>08:27</u>):
The world doesn't work like that.

MBS (<u>08:28</u>):
Right.
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#### Anil (08:29):

So the fact that when we confront a deep mystery that we need to bring multiple perspectives to it, shouldn't be a surprise. And it's also a great reward because as a scientist now, it means that I keep learning. Because of course it's impossible to be expert in well in any discipline let alone in multiple ones. And what I feel my job mainly is now is trying to connect different people, different insights, different methods together. And that means continually trying to grapple with whole areas where I feel a great sense of naivety.

#### MBS (09:06):

It feels like there's somehow a meta experience of you grappling across different disciplines to kind of find the story in the same way a brain is making a thousand million, billion connections to tell its own story as well.

#### Anil (09:21):

It's very funny, there's all these parallels. One of the primary ideas I talk about in my book and that I've been working on is, the brain is a kind of prediction machine always testing its predictions against reality. And the idea is that's how we perceive things. And of course that's also an analogy for what scientists do. We test our ideas by doing experiments. The brain is doing exactly the same thing, or something that's interestingly analogous, even if it's not exactly the same.

# MBS (09:50):

Knowing that consciousness is both a biological function, but also something that is affected as we tell our own stories about ourselves. What's changed in the way you tell your own story, do you think?

# Anil (10:08):

This is a very good question. It's almost impossible to know because I don't have the alternative version of me that did something else.



MBS (10:18):

Yeah.

Anil (10:19):

I can only say that it feels important to me, not just in the historical matter of fact narrative of where I live and what I do during the day, but in terms of how I experience my life unfolding. It adds a different perspective, I think, to every experience. Because we're conscious all the time that we're aware of things. I mean, that's what the word means, so every moment of lived experience is a moment of consciousness.

MBS (<u>10:19</u>):

Yes.

Anil (10:51):

And it's interesting to go through life with the first person perspective on it all. It's just like me as being me, looking out the window and I'm looking out the window. Now I can see it's dusk, but I can see a tree with golden leaves on it outside the window.

# (11:08):

And then there's this other perspective, which is what's happening in my brain to generate that experience and how does it relate to what's actually there and what's actually in here inside my skull. When I make a voluntary reaction, pick up this mug of tea, feels like an exercise of free will, but there's this slightly disorienting perspective where I think, what does that actually mean? What's happening? Is my brain just post-hoc reinterpreting that actions and labeling them as freely willed. I mean what? And to try and hold both of these things in mind at once, it's almost impossible. It's a bit bistable. But I think it is, for me, it's enriching. It's maybe a bit like the insights... It's not the same as, but people who've spent thousands of hours meditating often report that they have this



detachment from their experiences, which is productive. I don't claim to have anything like that, but it takes you out of the present moment, I think in a useful way.

#### MBS (12:05):

I mean, it's interesting that connection to meditation and how brain scans of longtime meditators have a different wiring in their brain. Are there any disciplines like meditation or journaling or gratitude practices, there's a lot of stuff that's out there in the kind of self-development, self-help world that you've brought into your own practice with that awareness of what it means to develop a consciousness, or continue to refine a consciousness?

#### Anil (<u>12:39</u>):

Well, I think meditation is a very beneficial practice. I have meditated, I do meditate, but I don't do it as regularly as, with as much dedication as I know I ought to.

### MBS (12:54):

So says 98.3% of all humans on the planet. Should meditate a little bit more.

# Anil (13:00):

Yeah. But no, I'm definitely way down the scale of people who do meditate. But I think it is very helpful. I think it's the kind of practice that can be helpful in most walks of life apart from when you are already in a lot of distress. Because if you start meditating at the wrong time, then I think it can be quite difficult, quite dangerous even. But besides that, I'm not really sure. So there are no other sort of regular practices that I do. I just find walking around the world thinking about these things is a kind of walking meditation if you like.

# MBS (<u>13:40</u>):

Yes.



Anil (<u>13:41</u>):

That's helpful.

MBS (13:43):

It is. Anil, what's the book you've chosen to read for us?

Anil (13:48):

So I thought about this for quite a lot and I settled on the obvious choice in the end for me, which is a book by a philosopher called Daniel Dennett. Dan Dennett has been an inspiration of mine and more lately a mentor of mine since I was first really reading deeply into consciousness as an undergraduate, as sort of 18, 19 year old. He published a book called "Consciousness Explained" in I think 1991, so more than 30 years ago. And I remember reading it as an undergraduate, first year, and realizing that, hold on. This consciousness, there's something to be done here, there's work to be done, there are ideas that make sense. It's not all just old philosophy or woo woo, neo-spiritual nonsense. There's solid reasoning. And what's more, it was counterintuitive. It was leading me to think about consciousness in new ways. Now, a lot of people bristled at the title, "Consciousness Explained". It's very provocative, right? And a lot of people call it ha, it's consciousness explained away. He doesn't really explain it. (15:04):

But returning to this book years later now, I still found it to be incredibly rich, kind of embarrassing that a lot of the things that I later thought that, "Oh, this is a new idea that either I've had or read about." It's like, no, it was there in Dennett's book, 30 years ago. And he's still kind of benevolent grandfather to the field, keeping us all on track. And while I may not agree with him about everything, I've learned so much from him as a person and specifically from this book, which has inspired not just me, but so many others in this area.



#### MBS (15:41):

Well, I was excited to see that you had chosen it because I think this is the first book on consciousness that I read, probably 30 years ago, and barely understood it, but just felt that this is pointing at something that was significant and mysterious and important. It was kind of my first glimmer of interest in this world. How did you end up choosing the two pages? Because the problem with a rich book, like this is there's like a lot of due pages.

## Anil (16:10):

It's so difficult. Well, I'm first going to just read the first two pages and then I read your guidance for the podcast and it said, "Don't read the first two pages." So that, okay, I can't do that then. I'm going to have to think about this slightly differently. So I settled on a chapter, it's about halfway through and it's a chapter where he's really undermining and highlighting one of the common assumptions that was made at the time in people thinking about consciousness, and that still is made and that we still fall into these same traps. And he calls it the Cartesian Theater. And what I've done is, I hope this is okay, I don't know quite what the rules are, but I've kind of cobbled together two pages worth of paragraphs. I think it makes sense. But please don't take this as literal two pages. There are other bits in between.

# MBS (17:04):

Well, Anil, I'm excited. Let me introduce you formally; Anil Seth, author of the wonderful book Being You, reading Dan Dennett's book, Consciousness Explained. Over to you Anil.

# Anil (<u>17:24</u>):

"The point of view of the observer. There is no cell or group of cells in the brain of such anatomical or functional preeminence as to appear to be the keystone or the center of gravity of the whole system." - William James, 1890.



#### (17:39):

Wherever there is a conscious mind, there is a point of view. This is one of the most fundamental ideas we have about minds or about consciousness. Conscious mind is an observer who takes in a limited subset of all the information there is. An observer takes in information that is available at a particular, roughly continuous, sequence of times and places in the universe. For most practical purposes, we can consider the point of view of a particular conscious subject to be just that; a point, moving through space time. What happens though when we close in on the observer and try to locate the observer's point of view more precisely, as a point within the individual? The simple assumptions that work so well on larger scales begin to break down. (18:29):

There is no single point in the brain where all information funnels in. And this fact has some far from obvious, indeed, quite counterintuitive consequences. Descartes, one of the first to think seriously about what must happen once we look closely inside the body of the observer, elaborated an idea that is so superficially natural and appealing that it's permeated our thinking about consciousness ever since. As we saw in chapter two, Descartes decided that the brain did have a center, the pineal gland, which served as the gateway to the conscious mind. The pineal gland is the only organ in the brain that is in the midline rather than paired with left and right versions. Smaller than a pea, it sits in splendid isolation on its stalk, attached to the rest of the nervous system just about in the middle of the back of the brain. Since its function was guite inscrutable, it is still unclear what the pineal gland actually does, Descartes proposed a role for it. In order for a person to be conscious of something, traffic from the census had to arrive at this station where it thereupon caused a special, indeed magical, transaction to occur between the person's material brain and their immaterial mind.

# (19:48):



That idea, Cartesian dualism, is hopelessly wrong as we saw in chapter two. But while materialism of one sort or another is now a received opinion approaching unanimity, even the most sophisticated materialists today often forget that once Descartes' ghostly res cogitans is discarded, there is no longer a role for a centralized gateway or indeed for any functional center to the brain. The pineal gland is not only not the fax machine to the soul, it is also not the Oval Office of the brain, and neither are any of the other portions of the brain. The brain is headquarters, the place where the ultimate observer is, but there is no reason to believe that the brain itself has any deeper headquarters, any inner sanctum, arrival at which is the necessary or sufficient condition for conscious experience. In short, there is no observer in the brain.

#### MBS (20:45):

That's great. He has such a lovely tone of phrase. The fax machine to the soul and the Oval Office to the brain. That's wonderful.

### Anil (20:51):

It's great. Kind of dates it doesn't it as well?

# MBS (20:54):

Wait, what's a fax machine again? What is it about that that struck such a deep chord with you?

# Anil (<u>21:02</u>):

It's this idea of undermining assumptions that we still have even when we think we've got rid of the really problematic assumptions. So a lot of conversations about consciousness often start off with Descartes and this enlightenment philosopher who divided the universe into matter stuff, rez extensa, the stuff that tables and chairs and brains and bodies are made of. And res cogitans, the phrase that cropped up in that excerpt, which is the stuff of thoughts, of feelings. The stuff of consciousness. And once you split the universe into two



like this, it becomes very hard to figure out how they go together again. And that was Descartes' perspective of dualism, that you have these two separate realms, the mental and the physical, and the problem is explaining how they interact.

#### (21:54):

Now that's a view that most, but not all people working today find, challenging. It doesn't really, it's hard to see how that would work. And so it was very easy to say that "No, no, we reject dualism. We are good materialists. We think consciousness is a property of physical stuff organized somehow, and we'll figure out how that is." But there's another aspect, and this is what Dennett is getting at in this passage, which is that there's still this latent idea of a place where it all comes together. A little mini-me inside my skull, a little self-

#### MBS (<u>22:35</u>):

There's pictures of a little person in the brain kind of operating the machine.

# Anil (22:39):

And this is a much more pernicious idea to get rid of. Dennett, he spends a lot of time in the book pointing at exactly why that idea can't work, and why there can't be a boundary or a single finish line where things magically become conscious. It gets presented, there's another beautiful quote where he says, "The idea that things are presented to consciousness, like what does that mean? Presented to what? Presented to the Queen,? Like what does it mean?" So he deconstructs a lot of this stuff. And I remember about five years ago I was giving Ted Talk, and it was a terrifying experience because these things are, but it was particularly terrifying because Dan Dennett was in the audience. And of all the 3000 people there, he was the one I was worried about. And he came up to me afterwards and was very, very kind about it. But he pointed out, of course, he pointed out the one line with total perspicuity, what I'd fallen into exactly this trap. Because in the Ted Talk, and you can still watch it and discover this error for



yourself, I talk about an inner movie screen. I talk about this kind of multimodal, multisensory, inner movie of conscious experience. But of course that is precisely how this-

MBS (23:57):

So seductive.

#### Anil (23:58):

Metaphor gets back in, you start thinking that way and okay. It's a screen, who's watching the screen? And the fact that I thought I wasn't susceptible to this, Cartesian thinking anymore, but there it was. It still slipped in there. So that's what appeals to me about Dennett's book. He also talked about many other things, tries to make the case that we think about the whole problem of consciousness in the wrong way. Which is also very challenging. But his ability to gently persuade us of the kind of unseen edifices on which we erect our theories are just crumbling away or insubstantial or just not even there. He does that so beautifully.

# MBS (24:45):

There's so much I want to ask you around this, but perhaps it's this. Is there a language or metaphor that you use today? Because as you say, your Ted Talk's three or four years old now, maybe five years old, that is most helpful? In part to move away from that default we go to, which is it's all showing up somewhere, somehow, and something's being observed and processed about it.

# Anil (25:10):

It's very hard. We rely on metaphors in science, but we inevitably get misled by them.

MBS (25:17):



Yes.

#### Anil (25:17):

I mean that's just before I give you my preferred one. Another metaphor that's so easy to slip into is the brain as a computer. And the history of biology has always been a history of thinking about the brain in terms of the dominant technology of the day, whether it's a system of plumbing or a telephone network or now a computer or possibly now the internet, who knows? And you'll find a lot of people who now reject that and say, "Oh no, no, I don't believe, of course, I don't believe the brain is literally a computer." But then they'll still happily talk about information processing in the brain and, which is, I think a very parallel thing. It's like you think you've got ridden, got rid of something, but it's still, the ghost of it is still there. Now the metaphor that I prefer to use, and it's really a description rather than a metaphor, is that the brain is a prediction machine.

### (<u>26:13</u>):

And I use that because I think it's, well, I use it because I think it's in some important sense on the right track, and it's non-committal about what kind of, what other kind of machine it is. It's not saying the brain is a computer. It's not saying that you could build a robot that is conscious or anything like that. It's looking at the problems that brains need to solve, which are problems about interpreting the sensory information that comes in, and controlling and regulating the body. And the brain is primarily for keeping the body and therefore itself alive. And thinking of the brain as constantly sending out predictions, either to figure out what's there or to control something, because when you can predict something you can control it. Is for me a very helpful way of understanding under a common framework, all the different aspects of our conscious experience. Everything we experience, whether it's visual, seeing out there in the world or an emotion in the body, or an experience of free will. All



for me, are different kinds of perceptual predictions that the brain is making and updating.

#### MBS (27:29):

And to what extent, I mean if our brain is helping to predict our future because that keeps us alive, because if we can predict it, we can probably manage around it and control it. To what extent do I have a shared reality or shared perceptions with other people?

#### Anil (27:48):

Oh, this is a terrific question. I think we radically, or at least to some non-trivial degree overestimate that. Now, there is a real world out there, it's not that all our perceptual experiences are completely different from each other and arbitrary. You know if we're both trying to cross the roads and you see a car coming, then I'll probably see a car coming too. And neither of us should walk in front of the car because it's really there. And we're going to get hurt. But if we ask ourselves what color the car is.

### MBS (28:19):

Right.

# Anil (28:20):

Or what it sounds like. We might still use the same words. Like maybe it's a red car, but perhaps your experience of red is different from my experience of red. Or your experience of the sound it makes, or the time it seems to take, might be different from mine. And I think we do underestimate this diversity in our perceptual worlds.

# (28:40):

And there's two reasons for that. The first is that unlike differences on the outside, and we all differ in skin color and height and body shape and so on, where even small differences are at least visible, even if we ignore them.



Differences on the inside in our subjective experience are by their nature private and hidden. And it's only when they become sufficiently large that people start behaving differently and speaking differently and we give them names, like this person has maybe autism or or ADHD or synesthesia. But if it's a smaller difference, we just don't see it. And the other reason is that it seems to us, and this is the key reason, it seems to us that we experience the world as it really is. It doesn't seem like it's dependent on our brains. It seems like "No, sure, that that red car is really there in a mind independent way." But it isn't. The way we experience it is dependent on our brains.

(29:33):

So these two observations conspire to make us underestimate the differences in our inner worlds. And one of our projects, actually, the project we're doing right now is called the Perception Census. And it's a first large scale attempt to try and map out this hidden landscape of perceptual differences. So it's a little plug if I might for it, sir? It's a big citizen science project. So we're trying to get as many people to take part as possible. All you need is your own computer, laptop, desktop. And there's a series of fun, engaging (we hope), little illusions, interactive illusions and brain-teasers and simple experiments. That probe different aspects of how you perceive the world. And if enough people take part, I think we can really rewrite our understanding of this important aspect of human nature. And if you do take part, apart from the warm glow of having helped advance research, you'll learn about perception too. You'll learn about how it works in general, and you'll also learn about how it works for you in particular. So we've already had about 16,000 people take part.

MBS (29:33):
Brilliant.

Anil (30:41):
We're hoping for many more and it's-



MBS (<u>30:44</u>):

Where can people find that? Share the URL if you wouldn't mind.

Anil (30:47):

I'll the URL is PerceptionCensus.dreammachine.world

MBS (30:57):

Perfect.

Anil (30:57):

There's a dream machine in there, or you can easily find it just by looking at my webpage, which is AnilSeth.com. And there's a link straight to the perception census there.

MBS (<u>31:06</u>):

That's right. And we'll put both of those links in the show notes so people can access that there. Yeah, I had been thinking about that, not through the rigor of the test that you're providing through your perception census, but through a sense of humor, and how people's sense of humor differ. A very, very small number of people find me funny. Vast numbers of people don't find me funny, and I can only put it down to a different sense of perception in the world as to what humor is, and how they see the world.

Anil (31:38):

And I think that's right. There are the domains like that. It's very natural to think that we have different experiences. You know, you go to a comedy show, you don't expect everybody to find the same things funny. You go to a Shakespeare play, you don't expect everyone to have the same reaction at a play, or looking at a work of art. But somehow in our everyday lived experience, we do sort of assume that. And I think this has important social ramifications as well, because if we can cultivate a bit more humility about our own way of seeing, recognizing



that the way we see things is not necessarily the way they are, or the way somebody else sees things. I think that's really helpful to build a sort of platform for empathy and communication with other people. Because these perceptual echo chambers we live in. They kind of ramify all the way up to the belief echo chambers, the social media echo chambers that we're all too familiar with now. And it can be very hard to understand why somebody believes something so contrary to our own politics sometimes. And it's a very useful exercise to recognize, well, the same exact dynamic can play out in perception too. Remember that photo of the dress that half the world saw as-

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MBS (32:50):
Yeah, blue and gold.
Anil (32:52):
Blue and black or white and gold.
MBS (32:53):
Yeah, yeah.
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And I thought that was so fascinating because you had a situation here where it was suddenly very apparent to people that, "Oh my God, for the exact same situation, we can have radically different experiences." And that recognition is something that if we can really build in to society in general, I think it will, this is me being hopelessly idealistic, I think it can diffuse at least some of the dynamics of polarization that we're struggling with.

# MBS (33:25):

Anil (32:54):

Yeah. I mean Daniel Kahneman has done something with that around our thinking, through the cognitive biases and understanding how irrational we are



most of the time in thinking. This feels like a similar project, but at a deeper ongoing kind of input level around what we perceive.

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Anil (33:48):
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No, that's absolutely right. A lot of these concepts about bias, the really devious thing about biases is usually we don't know we have them.

MBS (33:56):

Right.

Anil (33:58):

And when it comes to perception, it's not only that we are biased and that there would be some absolutely accurate way of experiencing the world, if only we could get rid of bias. It's even more problematic than that. There is no absolutely accurate way of perceiving the world.

MBS (34:17):

Biases all the way down.

Anil (<u>34:17</u>):

Biases all the way down. Exactly.

MBS (34:19):

Yeah. Anil, what does it mean to grow wise?

Anil (<u>34:25</u>):

I'm not so sure you're asking the right person this question.

MBS (34:28):

In theory, obviously not in practice, but in theory.



#### Anil (34:32):

Oh goodness, goodness me. What does it mean to grow wise? I mean, maybe it is partly this cultivation of a bit of humility. And being able to assess the validity of our own beliefs in better ways. To know, not merely to know things, but to know things about the things that we know. And to know what's reliable, what's unreliable, and who else we can learn from. I think, and there's probably a ton of articulate quotes about this, but there seems to be something about wisdom that it correlates with the amount of recognized ignorance. A wise person is much more aware of all the things they don't know.

### MBS (35:25):

I love that. You know, you've brought together all sorts of people in your institute. Mathematicians, psychologists, a psychiatrist, neuroscientists, brain imagers. And I know in your book you're talking about, we're still really early on in consciousness. Glimmerings are beginning to appear around that. I'm wondering what if anything's been most confronting about what you're discovering about consciousness?

# Anil (36:00):

I think how fragile it is. And maybe this is just getting older and there's a recognition of the precarity of our physical bodies. There's a precarity of our psychological lives as well. And when we open our eyes and look around, it seems incredibly robust. I just see the world, it's there, it's always going to be there. My ability to experience it, to feel emotions, it seems, we take it for granted. Until we get ill or something else happens. So this loss of faith in the robustness of our bodies, but also of our minds is something each of us encounters throughout life. But studying the mechanisms involved in consciousness, I think just really highlight that. Highlights just what an everyday miracle it is that we have these conscious experiences of the world, and the self, and how little it takes for those to change in fundamentally life altering ways.



#### MBS (<u>37:10</u>):

I know this has been such a lovely conversation. I've got a final question for you. What needs to be said that hasn't yet been said in this conversation between you and me?

### Anil (37:21):

Oh, what needs to be said that hasn't yet been said? This has really put me on the spot here. I should, this is where I should have listened to some of your previous interviews-

### MBS (37:32):

You're welcome to say nothing at all. My work here is done. You can drop the mic and walk off the stage.

#### Anil (37:37):

I mean there's absolutely so much more that we could cover. I guess, one of the other central messages that I talk about in my own book is the nature of the self. So not in addition to how we experience the world around us, this idea of what is the self. And here we can circle back to Daniel Dennett. He undercuts nicely this idea of this little homunculus mini-me that's watching the movie projected on the inner screen somewhere behind my forehead. Now that's gone, but what do we replace it with? Dennett has his own theory of this multiple-draft model. But I have another idea, and this is the idea that what the self is, what the experience of self is, is just a set of perceptual predictions. The same principles underlie our experience of self that also underpin our experience of the world. So the self is not the thing that does the perceiving, the self is a perception too, in all its aspects. Whether it's the body, the experience of free will, or the narrative of memories and plans, give us our ever-evolving sense of identity.



#### MBS (39:00):

Well, if I may ask a question that follows on from that. If that's my sense of self, what is my sense of us?

#### Anil (39:13):

The self, I think, has many different levels. Some of them are very basic physiological. I think the most fundamental level of self is this primary primordial feeling of being alive. I think this is absolutely critical and we experience the world with through and because of our living bodies of a deep continuity between our nature as living organisms and our conscious minds. But at a higher, so the different level of self, moving through the body out into the world. Part of our sense of self is co-constructed through the minds of others. Part of what it feels like to be me, is how my brain makes predictions about what others perceive me to be. And I mean that sounds a bit recursive and abstract, but there are very simple examples of it. I have a pretty terrible memory and now I rely on my friends to remember things about my own life, which constitute part of my sense of self.

# (<u>40:17</u>):

So when I'm with them and we are sort of recounting anecdotes from some years ago, I feel that myself is larger, is more whole. I feel more of me, bits get filled in. And so part of my experience of selfhood really is in this dynamic between me and other minds. And I talk about that level as the level of the social self, where our sense of self is refracted through the minds of those around us. And you take that away and you don't abolish the self entirely. But I think we lose something that is very precious to each of us.

# MBS (40:59):

I was pretty delighted when I came up with the question for Anil, what does it mean to grow wise? I love how he kind of wrestled with it. I mean, I love a good question as you know. And this one felt like it landed right in the middle of



science and philosophy and self-development, self-growth, consciousness and everything. Anil said it was being able to assess the validity of our beliefs in better ways. And I've actually used something like that when trying to define emotional intelligence. I think EI is being able to watch yourself in the moment, have some sense of what's pushing and pulling you to behave as you are, and then being able to tweak that behavior if you can think of a different way of interacting that might serve you better. So I'd be curious to ask you, dear listener, how you'd answer the question of what does it mean to grow wise for you?

#### (41:52):

But actually I think I'm more interested in the answers to a different question, which is what wisdom have you gathered? What's now in your bones? I mean, people like you who listen to this podcast are often curious. You're often seekers of knowledge. But sometimes it's good to stop and celebrate what it is you know, what lessons you've finally learned, and what are the most important stories you tell yourself about who you are. If you enjoyed my conversation with Anil, I'm sure you did because he's a very smart man. I've got two related interviews that you might like to go back and check out. One is Will Storr, a writer and philosopher. He wrote about status. He wrote a book called Selfie, which is like how we perceive ourselves. So that interview is called Your Hero Making Brain.

# (<u>42:42</u>):

And then again, another writer philosopher, somebody deep in technology as well, Brian Christian. What's At The Heart Of Being Human? Aren't those two great titles? Your Hero Making Brain and What's At The Heart Of Being human. If you want more information about Anil, his website is AnilSeth.com.

A-N-I-L-S-E-T-H dot com. And there you'll actually find a link to the Perception Census, which we've talked about a few times. I'd encourage you to participate in that. I know Anil would be grateful for your participation as well. Here's the link for that. PerceptionCensus.Dreamachine.World. And Dream Machine is



spelled with just one M. That's why I'm suggesting Anil Seth, as an easier place to access that.

## (43:31):

Thank you for listening. Thank you for being part of this community. Thanks for all the support you give the podcast, whether that's through a review or through stars or through passing a favorite interview along to somebody else who might become one of our listeners. You're awesome. You're doing great.