

Movement Practice to Strengthen Your Mind-Body Connection | Ido Portal

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SUMMARY

Discipline is essential for personal growth, but it should be approached with playfulness and flexibility, much like using a wall to learn a handstand. In this episode of the Huberman Lab podcast, Andrew Huberman and movement expert Ido Portal discuss the importance of integrating movement, awareness, and emotional intelligence into our daily lives, emphasizing the need for a playful approach to learning and growth.

- Discipline should serve as scaffolding rather than a rigid structure; it should be complemented by playfulness and relaxation.*
- Movement and awareness can enhance cognitive and emotional well-being, allowing for greater self-understanding.*
- The relationship between physical and emotional states is crucial for neuroplasticity and personal transformation.*
- Engaging in micro-practices can lead to significant changes in one's emotional and physical state.*
- The concept of "air sense" in athletes illustrates the ability to navigate and adapt in dynamic environments, emphasizing the importance of adaptability over perfection.*
- Real beauty in movement and art emerges from the interplay of chaos and order, rather than strict adherence to rules.*
- Emotional granularity and the ability to experience complex feelings are vital for personal growth and resilience.*
- Relationships, whether romantic or otherwise, thrive on shared practices and mutual support, fostering an environment for growth and transformation.*

Discipline is very important, but it's similar to the wall in learning to do a handstand. If you use the wall one way where you're all the time pushing yourself off of the wall, try to catch your handstand, you become reliant on the wall. But there is a different approach. We can use the wall but pull off of it which comes from the other end from our hands from the connection to the ground. That does not necessitate the wall. This is the correct way to use discipline. You should use it as a scaffolding as a way to get things going like write that book. But inside the process, you must make sure you don't lean hard into it. You don't leave everything for it to dictate and you bring some playfulness, some relaxation, some deep choice. I want to do this.

Welcome to the Huberman Lab podcast, where we discuss [music] science and science-based tools for everyday life. [music] I'm Andrew Huberman and I'm a professor of neurobiology and ophthalmology at Stanford School of Medicine. My guest today is Ido Portal. Ido Portal is a world-renowned movement teacher and the founder of movement culture, which is an integrative practice for developing the self that combines physical and mental

practice. Today we discuss how anyone can practice movement, deliberate awareness, and even language and other forms of communication in ways that explore and expand your capabilities and your understanding and sense of self.

>> [snorts] >> Now, Ido is not anti-exercise or anti-fitness, but what sets him apart as a movement teacher and why so many professional athletes, dancers, and people around the world continually seek out his teachings is his ability to show people unique ways for how to go about their daily life in ways that truly expand both their mind and their body as well as their athletic performance in the case of athletics. Today, we discuss unique meditation practices, ways to build discipline and access willpower.

And by the way, what the difference between discipline and willpower is and how to use play as an extremely potent way to rewire your default operating systems in everything you do. If you like so many other people typically think about movement practices as for strength or endurance or mobility, well, today you're in for a surprise because Ido explains how the transitions between brain states and physical states are linked and are fertile ground for extremely rapid neuroplasticity and that they can help you truly understand how your mind and body are organized and can function better. Today's conversation is a truly special one. I have to be clear.

It's not philosophical. It's not theoretical. It's a practical exploration of movement, awareness, language, and cognition that is rooted in science and has real world implications for all of us. Ido is a truly unique human being, teacher, and friend. And it was an honor to host him again. So, prepare to learn. Before we begin, I'd like to emphasize that this podcast is separate from my teaching and research roles at Stanford. It is however part of my desire and effort to bring zero cost to consumer information about science and science related tools to the general public. In keeping with that theme, today's episode does include sponsors. And now for my discussion with Ido Portal. Ido Portal, welcome back.

>> Thank you. >> So happy to see you again, my friend. >> Good to see you. >> You've aged backwards, so doing something right now. You haven't aged at all. What have you been up to lately? I have many questions but I want to know what what what's been your first thought on waking most consistently over the last you know year or so the same thing always the same thing the most important thing that exists that there is that that's how my system operates but getting that that change that deep transformation in people in myself Why? Why are we missing it? What is what is required that's always been there and changes its face, but it's the same one.

When you wake up, do you open your eyes right away or do you ever spend some time in that liminal state between [clears throat] asleep and awake? >> I'm sometimes spend some time there. I experienced also sleep paralysis before and various inbetweens >> where you're wide awake but the body is still paralyzed. Yeah. >> Yeah. When you sit a lot when you meditate a lot and and other practices and somatic practices again you get to know the territory and you can stabilize fragile states more easily. So crossing into that boundary of the sleep it becomes a slow-mo journey that you can pause that you can you know spend time at any point in interesting I do yoga nidra non-sleep deep rest and there are moments where I can feel myself falling asleep and it literally feels like falling and then you can kind of catch yourself in these liminal states. Rick Rubin once said to me, he said, "If uh if you wake up from a like a bad dream, a nightmare, just move your body and look around

the room. If you wake up from a dream you were really enjoying and you want to go back in, keep your eyes closed." And I think what he's talking about is more or less what you're talking about, the ability to kind of forward and reverse out of these transition states. Usually the the common way that people live and the common person has a very simplified perception of these states of this the granularity.

>> Mhm. >> So they're difficult to stabilize. So it becomes very binary black white sleep you know like you you relax someone they fall asleep. That's what happens when there is not a lot of experience. Everything is immediately going there. But there is a lot of benefit in heading to sleep and taking a sharp left just before. >> Tell me about that and how one might um practice that. >> Well, the sleep there is a kind of a way where we can inverse the relationship.

This is the sleeping state which is discussed in various authors and the waking sleep and then the sleep has a benefit because there is an openness towards something else. So heading directly to sleep and then navigating from there is very powerful to reset the system to change the schemes these rigid schemes that we sometimes have the rigid schemas the models that we're running when they become too rigid when they're surrounded by a hard membrane when they oversimplify and there is this bas basian reduction um you got to pop out of it somehow. So psychedelics is one way and there are other ways but the sleep every day is key because it's a a very different status and way of being and way of experiencing which we experience daily and uh we can use that transition part and the thing itself as well. Do you ever intentionally get up in the middle of the night to just experience being mostly awake but somewhat asleep just to experience what that what that's like?

>> Yeah, I did before. Various practices use that kind of instruction. Uh people uh some people might be familiar with the lucid dreaming or the the dream yoga or the sleep yoga what is called various practices and waking up in the middle of the night also allows you to appreciate something else something different. Sometimes it happens and you can manipulate it into somewhere and sometimes you can do it on purpose. Nowadays with all the longevity talk and all this direction we we sometimes don't capitalize on such things but uh sometimes there is more to be gained with a bad night's sleep than with a good night's sleep.

>> Uh in [clears throat] 2015 to 20 I would say 2018 I was uh very busy but I was mourning the death of my graduate adviser. was very close with her um unusually close for a graduate adviser and student >> [clears throat] >> um very maternal her to me relationship knew her kids I'm friends with her husband and kids still and um she died in 2014 and I was really distraught about it and someone recommended to me uh that I set an alarm for the middle of the night somewhere between 3:00 and 4:00 a.m. and I just get up and and try grieving then. And at first I thought like that sounds like the worst thing to do. I'm like no I have no protection then you know my forebrain is shut down. I'm that's when I normally would be entering more REM sleep. And I tried it. It was very interesting. It definitely allowed for more intense morning but it had a very interesting effect where I no longer had the challenge of like falling asleep and waking up. I had this like designated period in my sleep. did a lot of crying between 3:00 am and 5:00 am and in many ways I I feel like it worked. Who knows in some cultures it's like the veil of suppression is is pulled back. Our defenses are way way down in those hours.

>> That's the point. >> Yeah. these membranes that are surrounding various systems inside of us and and models

that we are running that are protecting them. This uh marov blankets the this filters that can rigidify and and don't allow a lot in to simplify things for the model so we can survive so we can do things. And then in when you change when you go into those times to those change the scenario radically, you increase your chances of opening up of recalculating of allowing the model to recalibrate.

And again, people nowadays that they use extreme means, it doesn't necessarily mean that it works. Sometimes sometimes you need the micro dosages [clears throat] >> and a practice around it. repetition, not a huge event of intensity, but a a repeating mellow event, gentle event. I can relate to I started a prayer practice before sleep over two and a half years ago, and I'm haven't been missed a single night. Um, and some nights I fall asleep while I'm praying and wake up and continue. And um I tell myself that the consistency is like worth something on those nights cuz I I feel sort of badly like my mind's drifting and then okay but I haven't missed you know it's it's all in the if I fall asleep get out of bed and and do it and then get back in bed. With respect to these microp practices micro doing as it were uh I know you're a proponent of med meditation um people often will talk about how long they meditate. Do you have a practice where you will just stop for a moment or two or a minute or or is it for you a meditation practice a long extended thing and how often are you doing that?

Oh, I think there are advantages to to both ends of the spectrum cuz the the long meditation thing, the the retreats, the strong determination seats, many hours or you know many days, they definitely [sighs] load the trampoline and and and create an effect. But also you become dependent on it and it's hard later to drag this into other areas of life which is not often discussed and mentioned in relation to meditation.

I didn't start to meditate because I wanted to sit. I wanted to take the state and to apply it into my life. So that is a moment where you can integrate. You can take the depth and you can take also very short periods of practice and apply this micro dosages and try to get a change in the defaults of this your state and your way of being.

Eventually people ask me why I practice so much is because I'm aiming for 24 hours a day. So if you're practicing 8 hours a day or 10 hours a day, this is the unofficial side of the practice. And this micro practices are very helpful for that. A good practice to do is not to take your mind off of something like a problem that you have to solve. to walk around and try to remember that thing. Try to keep it in front of you as much as you can.

Which means the only thing you can be blamed for is if you caught yourself >> not focusing on that and you didn't bring yourself back to the problem at hand. Then you are to be blamed. Anything else is fine. [clears throat] >> And that is a very powerful practice. We we can solve incredibly difficult problems, overcome obstacles, transform ourselves. And we've moved away from such ways of doing and ways of being. It's an unfortunate reality, but tap water often contains contaminants that negatively impact our health. In fact, a 2020 study by the Environmental Working Group estimated that more than 200 million Americans are exposed to PAS chemicals, also known as forever chemicals, through drinking of tap water. These forever chemicals are linked to serious health issues such as hormone disruption, gut microbiome disruption, fertility issues, and many other health problems. The Environmental Working Group has also shown that over 122 million Americans drink tap water with high levels of chemicals known to cause cancer. It's for all these reasons that I'm thrilled to have Rora as a sponsor of this podcast. I've been using the Aurora countertop system for almost a year now.

Rurora's filtration technology removes harmful substances, including endocrine disruptors and disinfection byproducts, while preserving beneficial minerals like magnesium and calcium. It requires no installation or plumbing. It's built from medical grade stainless steel. And its sleek design fits beautifully on your countertop. In fact, I consider it a welcome addition to my kitchen. It looks great and the water is delicious.

If you'd like to try Rora, you can go to roora.com/huberman and get an exclusive discount. Again, that's roora.com/huberman. Today's episode is also brought to us by ROA. I'm excited to share that Roka and I recently teamed up to create a new pair of red lens glasses. These red lens glasses are meant to be worn in the evening after the sun goes down. They filter out shortwavelength light that comes from screens and from LED lights, which are the most common indoor lighting nowadays. I want to emphasize Roka Red Lens glasses are not traditional blue blockers. They do filter out blue light, but they filter out a lot more than just blue light. In fact, they filter out the full range of shortwavelength light that suppresses the hormone melatonin. By the way, you want melatonin high in the evening and at night. Makes it easy to fall and stay asleep. And those short wavelengths trigger increases in cortisol. Increases in cortisol are great in the early part of the day, but you do not want increases in cortisol in the evening and at night. These Roka Red Lens glasses ensure normal, healthy increases in melatonin and that your cortisol levels stay low, which is again what you want in the evening and at night. If you'd like to try ROA, go to roka.com. That's roka.com and enter the code `hubman` to save 20% off your first order. Again, that's roa.com and enter the code `hubman` at checkout. We've done a few episodes in the last year on or that touched on meditation. Uh we had Richie Davidson who's one of the like real pioneers of studying the neuroscience of meditation and he said that when people start a meditation practice traditional sitting meditation close their eyes focus on third eye center breathing etc redirect attention that they see a statistically significant increase in anxiety across that early phase and in some ways he said that's a real value of the practice. It's really about stress inoculation, the stress that comes from forcing oneself to sit still. But eventually it does seem to give way if people practice regularly to some other kind of uh channel of consciousness that is very useful to apply in the rest of one's life.

>> Sounds [clears throat] like that second channel is the one that you're after. >> Yeah. this anxiety, this under reduced state in a way, the failure to adjust the membrane, this protective membrane around the model, whatever model it is, if it's the body scheme, if it's the emotional schema or or the conceptual schema, you're in an underreduced state. So everything bombards you and you're bleeding resources metabolically, right?

And that's anxiety. That's why all almost always anxiety over a long duration will turn into depression. You're bleeding resources. So adjusting simplifying that's a critical moment. Of course lowering the bar of the task is a very important tool. Microtasks and I'm not just talking about the classical sitting meditation. I'm using everything. For me, it's all the same tasks with tennis balls, with a with a stick. I'll use anything because my intention is not to get the success in the specifics, is to get the transformation much deeper. So, it's almost irrelevant.

I'll use whatever I need to use to get that going. And so I think meditation many ways sometimes becomes too dogmatic in that sense. >> Yeah, we've already touched on sort of liinal states transition from sleep to waking or waking to sleep and trying to just catch oneself and pause in those like you said maybe reverse maybe pause

there hover there. I'm fascinated by this peculiar place we are with science where we know a lot more about sleeping states can describe phase one phase two phase three slow wave deep sleep REM sleep the fraction that you get depending on the night before vivid dreams versus non vivid dreams we know barely anything scientifically about waking states in comparison to sleeping states I mean we talk alpha waves beta waves theta waves but It's very rudimentary. Like right now, I assure you there's no scientific paper that could describe the state that we're in. We could say, oh, the these alpha waves or these, you know, percentage of activity in one brain area or another. I think that the definition of different waking states is going to come into science from outside of science. someone will study it. But I've been waiting for somebody to say like this is uh like are we in stage one of focused attention right now? Stage four. Nobody can ex um point to this which is should bother people. Like we're we're really far behind even a descriptive understanding of where we're at. Like I feel calm right now despite drinking caf so much caffeine. You're clearly externally calm. I imagine you're internally calm.

But what would you describe like your state? How should people start to peel back the layers and get a better understanding of the state they're in? Because I think there's real value to this in waking states. And I don't have a language for it, but you've spent a lot more time thinking about mindbody states than I have. I think there is a a a m a mistake or a direction that we took asking who we are instead of asking what we are which can really serve this. There is a need of almost a a rudimentary map of what is what is needed what is here how do I map this what am I observing even you can't refine what you can't define but not in the sense of this verbal definition but some kind of an internal definition some kind of a boundary drawn some kind of a selection the selected thing the selected state the differentiation without this what am I seeing when I look inside listen to your body I don't believe in that >> portal doesn't believe in listen to your body right what do you listen to >> what are you listening >> your heartbeat your what does that mean >> it's corrupted you're too corrupted to listen to your body >> those are the most corrupted people usually >> the people who are saying listen to your body.

>> Yes. I think it that whole verbiage comes from this notion and the quite pioneering although I would say somewhat outof-date book the body keeps the score I think is it was an important book best title of any book you could imagine in the psychology space because it's so catchy um and I want to give proper respect to um Bessel [clears throat] for doing that book and it was early but I think that embedded in people's minds that like experiences we have live as pain, discomfort or blockages and that the [clears throat] solutions come from releasing that pain, discomfort and blockage. Erggo, if I'm feeling good, things are moving through. I'm making progress. I'm moving away from that historical bad thing. And if I'm feeling it again, it's still alive in me and it needs to be released. That's the kind of premise.

>> Yeah. And there a lot of data to support that chronic stress can harm the body and so forth. So those things those ideas sort of took off. But I also agree they sort of they've kind of hit a wall in um 2020 or so. We go well what like what do you mean? Well it's in the fascia really like is it in the fascia or are we just like talking about fascia? And and I love all of that stuff as an exploration but I think we are at a place where we really need to ask better questions.

>> Yeah. Yeah. It's a it's it it sounds very corrupted again. And we know so much about the framing of things, excitement versus, you know, very negative states that it's so similar. It's so close that it cannot make sense. We

cannot work from that place. And and also working from our likes and dislikes. What do I want to do? We just watch this thing. You just need to do what you want to do. I believe that's the last thing for you to do.

>> Right. Um, you know, I was referring to before we came in here, we watched two short films. The first one is a one that was u put out in 2014 about this guy, real life guy slow-mo. uh we'll put a link to it who uh guy who essentially gave up his life as a physician and say rollerblades very slowly on one leg down the boardwalk in Pacific Beach San Diego to touch into what he describes as a mild euphoria and altered state he's totally sober clearly very very smart and the other film we'll talk about several times uh which hopefully will be out in the not too distant future so we can all see a beautiful film that's being made about IDO and movement culture called the architecture of practice. Correct.

>> Internal architecture. >> The internal architecture of practice. Excuse me. Um trust me folks, you want to see this when it comes out. It's it's visually beautiful and content uh rich. It's it's spectacular. >> Thank you. >> There's something really special there. Uh for sure. But I wrote down actually play versus discipline. I think for some people it would be helpful to try and uh operationalize a bit of what we're going to go to today. And I know you're not a fan of like morning routine or this or that, but I can imagine walking toward a practice of any kind, a workout of any kind, making scrambled eggs as either I'm going to approach approach this from a with a sense of play or I'm going to approach this with a sense of discipline. I'm going to try and find some friction, some edges that force me to rewire something. Now, play can help rewire, discipline can help rewire, but of your waking hours, what percentage of time do you spend in kind of a playful explorative state, like kind of keep it light and loose versus, you know, I know you're also a believer in like there's really value to putting up mental or physical or both corridors so that your system, your whole system improves because at those friction points is where plasticity can be triggered. I think both of these things and also the relation to motivation in in both of them are required scaffoldings that we have to use at certain points in time but are not the essential will that connection to what we we don't know nothing about that we have researched that deeply in v various spheres but often we just replace pure will with discipline or with motivation but once I motivated myself I don't need will anymore and if I dis if I discipline myself into doing something I also hijack the opportunity playfulness it brings a direction and a flavor of something else a different way to interact with something. How do we start to look at that? What is the basic requirement? I don't want to do this.

Without this requirement, I can't research will now if I hijack it, if I take the process and I distort it, I use discipline, then again, I'm out of the game. Or if I motivate myself, same problem. Playfulness try to walk a different path a little bit. Maybe it's not it quite. It's not the will that search for a will that you know many authors and and practitioners have looked for because it's so elusive.

But it's definitely something to cultivate and we've talked about it the last time we met and it brings about so many positive things. I think people should first develop discipline and use motivation and also research playfulness which is a lot more tricky for people uh these days. It brings with it incredible benefits. The aesthetic intensities that are missing from our lives, awe, curiosity, this deep sense of curiosity, these things can allow us to totally transform the emotional schema which is stuck rigid.

This model of ourselves that is often times rigidifies all the way to depression. The most tricky situation of all the total bankruptcy of that budget of those resources. So something like awe which happens also in psychedelics. Isn't this a huge part of the psychedelic thing? What about experiencing all regularly in a directed targeted and practiced way?

It can be cold showers and hot shower an experience on the sensory level. It can be something that is more related to the environment like sky gazing. Incredible practice. 10 minutes a day. Your eyes cannot grab onto things. So and it can be and very important conceptual or reading poetry or certain types of stories or literature touches that so all of this comes along with playfulness our interaction with things I treat this as a playful thing >> so if I think about it it's almost always present because it allows me not to rigidify myself in front of the challenge. I'm working with athletes or work in cinema or do some project or work with a government body or or a military organization. I bring playfulness.

Playfulness allows me to go much further, much deeper. My discipline wouldn't get me there. >> It got me certain places. Who got there to that place? I discovered that it wasn't me because I use discipline. So, it's often leaving you kind of out the totality of you. >> I am very very intrigued by this play versus discipline uh thing. So many years spent I wouldn't say punching the clock but you know there just things you have to do because experiments have to be done in this time in this way. one can develop a a real sense of an ability to push through and to do things and beautiful stuff can come out of what I call chop wood carry water. It's just like phase is like okay we're just going to chop wood carry water but this play thing is really powerful. I had this experience when I lived in San Diego. My lab started there and I I used to commute really far to work cuz I my home was um in an area that I really liked and that I could afford far from campus and the traffic was just brutal. Anyone that's ever driven in San Diego, these big wide eight lane freeways and and I like listening to music, so I would drive and I remember one morning just being so frustrated with the drive even though traffic was moving. And I've only had this experience once and I just decided I'm gonna just [clears throat] slalom the car to work. And I wasn't speeding. I'm like slaloming the car.

I'm listening to music and I'm like this is the way to go to work. I can remember this one commute is a real standout experience in my life of like and I thought why don't I do this all the time? >> The old frog crosses the street video game. >> Right. Exactly. Exactly. So, I'm just, you know, and I get to work and I do thing and and this was one instance. I don't think I've ever done it again. And I like to drive, but I never deliberately turn on like I'm going to take an ordinary experience that I do every single day that usually is kind of like loathe or mildly irritated at traffic. I'm just going to enjoy this experience. I think now that it would be so great to just be able to apply that to all these different little transitions. Oddly enough, I also have flashbulb like memories of being in Yusede where I've spent a lot of time.

I've hiked a lot of the peaks in Yusede. I love it. I live lived and worked up there when I was in college and I just adore. You know what? I remember the great vistas and great peas that I had urinating in the woods. I like have like flashb memories of like and there's something there. I think it's just the calm and relaxation like oh like I'm just a creature peeing in the woods, you know. And uh as one does, you know, when you when you count just thinking like this is awesome. I have these like my life is great. It's so weird that these micro experiences that

occupy like 10 to 15 seconds or a minute depending on how much water you drink, right? One commute could grab like real mental real estate in our brain. There's something there.

And I know people are probably like, "This is crazy." But I think most people would probably describe like kind of odd flashbulb memories that they have of things that are kind of trivial. >> Did you notice that the the quality of those memories >> cuz you recall them and it they it has a flavor and a texture and a resolution which is different than other things which sometimes are should have been a lot more detailed. And it comes and goes, but we can become a lot more deliberate about it. And it represents a certain presence in that specific scenario of a heightened it's a heightened presence thing. Why? Those are questions. But playfulness opens the door for that.

Some of my best seats, my best meditations were using a playful approach. Similarly to how you navigate the traffic, [gasps] you can use it writing your book. >> I tried that. It was very diff I will tell you it was very difficult because there's aspects of the book that are very technical. There are aspects that I really want to get communicate things in a certain way. I definitely tried to relax myself. Um Cal Newport who's a sort of a guy who's a big proponent of of deep work uh staying away from technology to you know writing by hand, typewriter, this kind of thing. He said uh and I tried this. He said to approach work with um kind of a languid intentionality kind of relaxed but with a direction. I tried it. I have to scruff myself and bring myself to it even though I want to do it and I just like have to like like I imagine I'm like doing this >> but that deep belief >> Yeah.

>> is already a self-fulfilling prophecy cuz you perceive yourself as that person. This is the way for you to do things. >> Mhm. And I'm similar but I've glimpsed something else. Yes, I I also I'm the disciplinary person. I'm a person of great work ethic and this is how I came about. But then I discovered it doesn't matter because how you write that book using that approach it leaks into your words and it's a different way of doing things. you're not going to write doniote in this way. So I appreciate that and I also want to say come back to that thing this scaffolding the the fact that we have used discipline for such a long time is very positive we need that first thing is to get things done I'm the practice person I'm the met person you do it or you talk about it so discipline is very important but it's similar to the wall in learning to do a handstand if you Use the wall one way where you're all the time pushing yourself off of the wall. Try to catch your handstand.

You become reliant on the wall. Notice what I said. You push yourself off of the wall. But there is a different approach. We can use the wall but pull off of it. Not quite push oursel off of it but pull off of it which comes from the other end from our hands from the connection to the ground. that does not necessitate a wall. So I can pull myself when I feel myself falling forward later on. This is the correct way to use discipline. You should use it as a scaffolding as a way to get things going like write that book. But inside the process, you must make sure you don't lean hard into it. You don't leave everything for it to dictate. And you bring some playfulness, some relaxation, some deep choice. I want to do this.

It's so elusive. It's so tiny. Our life didn't leave any room for it anymore. We don't even recognize when will come to visit us. And here is the big shocker. It was for me that I discovered one does not develop the will. The

will never gets developed. It's only get exposed. Discipline gets developed. That's what we mistaken will for. We call it will will power etc.

But when a child is born with a problem, when you're facing such a situation, discipline might not be enough for you to do what is necessary. or when a child is born normal and you simply don't feel love for that child that occurs a lot what do I do now do I discipline myself I need a different quality and I need to research it and I need to open up space for it in my life space to practice it because it's not going to come from somewhere else and the practice will not develop it but it will expose an invisible thread it's a sequentiality I always do what I said I'm going to do, but not by disciplinary action, but by having a beautiful evasive sequence like you moving around the traffic, finding your way there. You never stopped looking for the best route. It's a very different approach than just pushing the gas pedal forward.

>> Yeah. What's interesting is the traffic example, while trivial, it hopefully describes a process that people could relate to. Not only did I not lose energy from it, but I might have even picked up some energy. >> Beautiful. >> And the commute was exactly the same. So there's something in that experience and I and you're explaining it beautifully. This distinction between the will, willpower, the expression of the will and then discipline. Maybe we can define the difference a little bit more so that I can understand when I'm in discipline mode versus um exposing willpower. You said you can build discipline, you can't build the will.

The will is a is a fixed unit but a hidden one, a very elusive one. [snorts] uh we can discuss it more and we will expose some things but we will not be successful in a binary fashion. We won't get it. The only way to get even a critical mess with that concept is self practice looking for that quality in your life and I already mentioned that the first requirement is to do things you don't want to do which you're also a big believer in from a variety of reasons.

All of them are not as important as this because they go to serve this layer, this corrupted self, this success in this area. This is not important. What is important is you not all those things. And will is actually that representation of you. The totality, the harmonious combination of all that you are comes together and hence you can be reliable. You have a sequence. You found a way. You cannot push this forward. You cannot force this. So you need first a situation which you cannot you don't want to do. So I tell people here is the first requirement of this new practice practice of will.

You have to wait for a moment. You don't want to do the task. That's the first thing. Not to go to the ice bath now. This is a different process and will get you somewhere else. Come up with a task that only sometimes you don't want to do. It's a crucial difference. And wait for that moment. In that moment, catch yourself. And there you have to investigate. There there is a very fine little game. It comes back to that playfulness that we have to play. Do not force into it. Don't jailbreak it. Don't push hard into it. Second problem, do not motivate yourself to do it. Don't put any YouTube clips. Don't mention slogans.

Relax yourself. Essential component. Do not rigidify in front of the task. If you do, lower the bar. Find the task that has this right dosage and build up gradually and slowly. I like to use things like difficult physical postures

like holding your arms out for 5 minutes. It's enough. Just straight arms out. Some people can take it further or 3 minutes or doing a horse stance and then wait for a critical moment when I'm tired. A lot of these things are very useful. So I've grown to practice those things before I at the end of the day when I'm checking out that is the moment where I bring it about. And then you have to research and you have to find a thread, a way to get this going again and again and again with this gentle quality, this playfulness, this softness and slowly increase the bar. What will you discover? Your will is sufficient is like a mosquito's fart. That's the power of our will. Even incredibly powerful people because they only use discipline.

So their will is totally they don't know how to identify it. They don't know how to put it together. So you got to do stuff that is so easy relatively easy that you're not interested in doing it. And that's why we don't develop will. So these are some of the discoveries that I had with myself and trying to bring about this quality because like you I did a lot of stuff with powering through. I think the value of a physical practice um is probably obvious to people or more intuitive like okay um for some people ex exercise working out movement practice perhaps there'll be days when they want to do it there'll be days when they don't want to do it if I understand correctly the idea is to get right up to that edge and then instead of throwing oneself across that threshold or getting enough caffeine in yourself to get across cross that threshold or doing hyper cyclic hyperventilation breathing to get all the things to kick up adrenaline talking about getting right there relaxing and almost letting yourself sort of drift across but am I pushing a little bit am I giving myself a nudge like to keep going okay so I don't expect myself to just default into it okay do you still have to do that I mean you've been doing movement practice many years are there days when you feel that resistance And you have to kind of nudge yourself course if I don't feel the resistance I don't have will. I don't develop will and I don't have will. The whole point of will is that it only comes to visit and it's only necessary when there is a resistance.

>> So you see those as opportunities >> as well. >> Mhm. >> As well. But this is this is the trick. But the to answer your question, my answer might be a bit trickier than what most people assume. They want the remove of the the removal of the problem and will that's the whole point of will >> right not to remove the problem and not to also jailbreak it and you've described it beautifully and imagine even that clip that you saw or over the last years things that you saw me you see me do they're not impressive anymore I can still kick up here and do a one-arm and stand in the center of the room.

My body looks different by choice and how I move is different because I discovered this is not going anywhere. I've already been there. I've already done that. I've used motivation, discipline, this quality. I'm looking for something much more powerful, but much more gentle as well. So I had to go back to baby steps and to play that game that you just mentioned beautifully, the edge. Stand at the edge and it has to be an edge. You're almost not sure if you choose that task whether it's difficult enough or not. It's not the only practice. It's just another flavor that is important for us to practice. I still practice my discipline. I still practice extremely difficult things. But it's an important flavor that I missed.

>> Mhm. >> And I think most people are missing it. They have no interest in doing it. It's too easy. They don't understand the point is not in the task at all. The point is in the quality that develops, the attribute that develops inside of us, which is one of the most important basic attributes. I want to know when I'm going to war

with you, whatever war that is, that you're reliable to have a word.

And that cannot rely on caffeine or on discipline. And and you can play this game. I'm right now extremely jet-lagged. So I'm I'm very tired. So I play this game with myself. I I have this little internal smile here in my jaw inside. I I I play I pay attention to what is going on in the internal realm, this interceptive thing and I play a game. Before I used to kind of push against it, harden against it and push through whatever needs to be done and so this way of practicing taught me a lot.

>> I'd like to take a quick break and acknowledge our sponsor AG1. AG1 is a vitamin mineral probiotic drink that also includes prebiotics and adaptogens. I discovered AG1 way back in 2012, long before I ever had a podcast, and I've been taking it every day since. The reason I started taking AG1, and the reason I still take it every day, is because AG1 is, to my knowledge, the highest quality and most comprehensive of the foundational nutritional supplements on the market. AG1 is designed to support things like gut health, immune health, and overall energy. And it does so by helping to fill any gaps that you might have in your daily nutrition. I get asked pretty much all the time, if I could only take one supplement, what should that supplement be? And my answer is always AG1. It has just been so helpful for supporting all aspects of physical health, mental health, and performance.

If you would like to try AG1, you can go to drinkag1.com/huberman to get a special offer. For a limited time, AG1 is giving away a free bottle of their new Omega-3 co-enzyme Q10 product. Omega-3 and co-enzyme Q10 are known to support cardiovascular health, cellular health and energy, generally, brain health, and much more. I personally take them both every day. Again, go to drinkag1.com/huberman to get a free bottle of the new Omega-3 co-enzyme Q10 with your first AG1 subscription. Yeah, I'm I'm very intrigued by this this notion of of play because I do think that it's energy conserving if not energy building. And it's kind of incredible, right? I mean, we know that neuroplasticity is triggered by friction points, you know, some level of autonomic arousal. How why else would the nervous system change if it can do what it needs to do? You need a change in the milieu, the chemical environment. But if one can get it from play, that's awesome because the other thing takes literally adrenaline, norepinephrine. Yes, we love dopamine, but that little cocktail of catecholamines as we call them, that is energy. That's chi. That's the It's energetically costly to be in that state. Play is a different cocktail. It includes some of those, but it includes some other stuff, too. We know this neurochemically. So, I'm not just speaking in metaphors. And it does seem to open something up. And it's a sounds so subtle. I'm going to be playful about this really important thing, this challenging thing versus I'm going to just, you know, I'm going to just drill into this. the rigidity that comes about is almost instantaneous >> and it's more representative of you in the way that I see this word you self I because again that that the use of that cocktail that the jailbreaking is a very it removes something from engaging it it numbs something. So here this is the most crucial point. We get to transform ourselves by choosing to do something deeply saying I want to do this in the moment that you don't want to do this to find that paradoxical thing. It's a multistability. You have to be able to glimpse these two things to feel this emotional contradiction and to remain functional without collapsing to remain functional and moving forward leaning forward into the direction. This is a critical way of doing this is a a big passion of mine in the last years cuz I realized it's so crucial such a missing component and having listened to you and and various people that you brought along really helped me helped me see it to understand it to look at the scientific side and the anatomy and the and the way that we are constructing these models and to see if that match

matches my experience and what exactly is missing and where am I lying to myself in that sense. So it turned out to be a valuable insight.

>> It's come up before on a few podcasts and you may have heard this but I'll just briefly describe we have a finally thanks to the work largely of my colleague Joe Parveves at Stanford. We have a neurological understanding of tenacity and willpower and the plasticity that is this anterior midline singular cortex that gets activated when we don't want to do something and we force ourselves to do it and that structure enlarges and it becomes easier to access and so we know in that sense the discipline piece really can be built up >> definitely >> the recognition that oh I don't want to do this feels a lot like the I don't want to do that and I was able to do that that anterior midline cortex can go to work on a number of things it's a real thing. We don't yet have the corollary structure for the play piece.

>> Definitely >> and it may be distributed, right? We always want to think there's a structure, the amygdala, fear, anterior midline cortex, tenacity, but these are circuit phenomena. But but it would be so nice to be able to find a neural corollary because there does seem to be something very special about people in their 70s, 80s, 90s who >> they're in the longevity game clearly and they're taking great care of their bodies and their minds, but there's a playful spirit in there that is never discussed in this whole longevity thing, but it's clearly very very crucial. Hard to research that of course from obvious reasons it's much more easier to research this discipline right >> to be playful I want to give something positive we all meet this quality even many of us believe I never am in this state investigate >> investigate into your past like you mentioned this moment of driving but I want to tell you something.

Investigate yesterday. It was also there for moments. For brief moments, you can always and by studying this, you would help yourself because it is always present. It's almost guaranteed to be there even in extremely depressed people. Part of the problem of depression is this rigidity to change to to recognize these positive moments, right? and to to to transform the model. So we don't end up harvesting it but it's there. It's an important thing because without learning the flavor and the texture of that we have no chance of approaching that developing this playfulness this will this softness about things that can do a lot. There's a third bin which I think people default to including myself right I think about discipline will or laziness sloth and wasting time. Right now we're talking about using discipline or a mode of play to do something. These days it seems a lot of having a good life is about not doing certain things.

mostly for most people not having your consciousness and your body pulled into algorithms. You know, I'm a fan of social media. I learn there. I [clears throat] see you there. I try and teach there. But there is a way in which our body shape, our mental shape can be structured around this wheel of infinite stimuli. That's how I think about it now. Now when I go into uh social media, I think about it as a wheel of infinite stimuli. Like a rat in an experiment. If I want to keep that rat engaged, just give it this, give it that. Doesn't like this, give it that. I mean, that's the algorithm. I try and see myself in it so that I can navigate it with some intentionality like, oh, this is interesting. I'm actually quite inspired. I'm not just saying this by the content you've put up over the years. I really think hard about the I've gone and looked up authors. You know, your philosophers and many things I don't know. So I follow up on those.

In the domain of strength training, there's this guy Tom Havland. I think he was used to be Australian special forces. He only posts from the back. He doesn't disclose his identity. Very large guy. Um doing zer squats, you know, where the bar is in the crook of the elbow with, you know, 500 plus pounds with pauses and it's very, you know, if you really impressive feats of strength. So I see and learn and inspired by things I see in social media. Sends me down the path of learning. I didn't even know what a zer squat was until recently. It's kind of cool. Like I know the crooks of elbows could hold that much. And the core bracing is really interesting. But a lot of my life these days is about no this is not a stimulus space I want to spend time in. I'm 50 now. I don't know how long I'll live. Hopefully a long time.

But allocation of energy is like 90% of the game of life, right? Maybe more. So when you think about practices for resisting doing something, the no-go as we say in neuroscience, not go tasks, but no go. How do you think about pulling back in a playful way? That's a little bit harder. Beautiful question and very important thing to look at to examine and I I can offer my my personal experiences that's the only thing that I can but again the pullback deleting the app you know take something off throwing your phone on the rooftop >> done it done it >> that's why I mentioned it cuz you told me last time we met >> yeah when I used to have to write grants I would either give my phone to my students early days and I'd say if I asked for that back before 5:00 p.m.

today, everyone in lab gets a \$100 bill. I didn't have the money to do that. I didn't ask for it back by 5 or throw it on the roof and go get it later. And this action, I'm not against it. May maybe it sounds like it's jailbreaking something, but it's a required moment. One of the first thing with will is the recognition that we're not in contact with it that we don't possess and we should verify it for ourselves by trying to do things which are definitely possible and we can't we can't do them.

>> Mhm. [clears throat] How do I pull back in this way? Isn't this good to delete the app? It's a way of paying upfront. It's painful and it's costly. It's expensive. It's a required thing. Part of me say I'm not sure I'll be here in a few more moments. I'm going to take this action. It reminds me of I have great fear of heights.

>> You? >> Yeah. It reminds me when I went to bungee jump the first time with friends decades ago in Greece and I'm climbing up there and I'm watching down this tiny swimming pool from the crane and I realized in that moment there is no way I'm jumping down and the other part of me realized there is no way I'm climbing down the girl screaming down there you know and I I just stood there and I just I just kind of threw myself forward. I jailbreed it years after I've I redone it with a different quality.

I softened into it. >> Mhm. [clears throat] >> And I found a way to come down feeling this great pain, physical pain, and at the same time the multi-stability feel a softness, a wave of softness passing through me as tiny as it was. So when I'm pulling back it's very important that I interact with this action also in that way that I don't force myself in a sad mazoistic way that I don't do this action from that place maybe it's the beginning of the process maybe it's something that is a required stepping stone something that you have to do but later you learn to soften into it and eventually you can leave the app you don't delete it and it's there and you keep on softening as it jumps calling you back again and again and again and you've developed this feedback. You've changed, you've transformed your model and there is a new reaction to that stimulus and you relax. When when the

stimulus calls your name, you recognize it, note it, and the first thing that you do, you soften yourself, you relax, you put a little smile on, and only then do you go back to the task at hand. You change the way instead of saying no, I don't want to go back into social media now. I want to work on my book and forcing yourself back. You take another extra step.

Oh, it's calling my name again. I note it. I recognized it. I soften myself. And only then do I go back to the task at hand. The outcome would be totally different. Millions of times forward. Done again and again. you would be amazed by the difference. >> I absolutely get what you're saying that there's something about paying attention to the subtle trans subtle ripples like they're these ripples and that language of the subtle ripples of consciousness makes it sound like I'm trying to be poetic, but I I really can't find a better language than these like subtle ripples. It's the same thing, I believe, as noticing the transition between asleep and awake. Just a little bit more each day. Maybe some days you miss it.

You just pop up and go into the day and then you I missed I missed the there were these ripples in between. But catching them, this is one of the most important attributes also in the physical body that I believe is totally missing from our physical modern movement, culture, physical practice. Granularity. I call it bodily resolution in the application to the body. Notice I'm not talking about mobility or definitely not about flexibility. There is a certain refinement and with it a certain complexity that if it's not challenged by novelty and by certain qualities of attention, there is a deterioration of the model.

There is a simplification. There is a hardening of the body schema. It becomes more black and whitish and living in this physical form becomes hell. [snorts] The same thing happens in the emotional schema in the emotional model of ourselves. And the same thing happens on the conceptual or intellectual abstraction model. The same thing happen in the social schema. The same thing happen on the spatial schema. If you don't continue to make it detailed and to appreciate the details, you will have a deterioration.

You're moving up or down. There is no status quo that it's never stable. Hence, guess what? Most people going to the gym, doing these runs, they totally lost something and they don't even know. They're not as they were as children. They don't look like that. Kung Fu master in Beijing, 5:00 am at the park walking with the stout of a a child. We like to mention blue zones, but we don't you don't look like the blue zones. We like to mention the importance of muscle mass for longevity, but which muscle mass are you talking about? Not that muscle mass. It's a different quantity.

So we kind of moved away from those fine things and the refinement of them is very very important emotionally the emotional granularity to recognize it's so important. Depression puts everything into the black and white thing. So it's the extreme and then the other side is very high resolution of emotional appreciation and perception that can turn against you but only when the conceptual layer comes and manipulates that information. But as long as it stays within the nondiscursive the the raw Yeah. the raw thing coming from this allostostatic system. The the the the way that we define our state like poetry. That's why also reading poetry helps and and reading literature helps in this way. It makes you a lot more complex. And now you discover it's not a good or bad thing anymore, but you're playing a different game. And here is the playfulness back. Mhm.

Because I'm even playing game with that.

Oh, I'm I feel bad. I feel good. I feel neutral. That thing starts to open up. I abandon this and I go back to the body. And that's why I like to send people back to the body. The eye is a lot more this than what we think it is, especially meditators, etc. is not up here. And of course they're talking about it the way of the heart and you know the har the danten etc. But you can see when somebody is embodied there are signs there are cues to it in the way that people move in the way that they are here. [snorts] And I I often don't see those those those clues and then there is a great deterioration. So I I don't care so much about structures these days about muscle mass about you know the joint protective things the connective tissue or whatever because I believe the model deteriorates way before and the consequences come after once the model has degraded the simulation now we are in trouble and now the the the structural effects are just following that years forward decades forward and then we discover it it's too late words are dangerous like the spinal column. Do you know how many spines this destroyed?

Countless. It's not a column. And treating it like a column destroys our spine. It's the way that I model myself. Even in my words, I can I can sense that I can feel that different languages have different words for those things and clues are there. the lack of appreciation of fine micro actions inside the torso in between the ribs, we don't appreciate it. The way that we distribute pressure in the body practices that I engage with, that I teach, that I work with, they're very powerful, but we don't leave room for that. We want to go, we want to do something quickly, crudely, and we deteriorate.

And then we go to the protocols. We go to the help help me and and yeah there is some help the there is definitely some help there but to lift it into a meaningful healing is not often done. I I believe because the practice is missing the notion of high resolution versus low resolution language movement and awareness. Maybe we just kind of grab those three and I know there there are others. I think about this a lot. Uh let's start with language. Lisa Feldman Barrett, who's a psychologist, I would also consider somewhat of a neuroscientist because she collaborates with neuroscientists and is studies emotion. And she's been very clear and it's absolutely true that in cultures where there's many words to describe different aspects of sadness, aspects of happiness, even some extremely specific circumstances. is like there's a Japanese word, forgive me, I don't remember, for the the sadness one feels after a bad haircut.

The more nuance and specificity, the less likely people are going to default to I'm sad, I'm depressed, just kind of like throw themselves in the broad bin. And uh I refer to it as the emojification of >> mental life. I'm happy. I'm sad. I'm depressed. I do think that it's nice to have a range of language ability so you can talk to people of different backgrounds. Some people are more hypervocal than others. a colleague of mine at uh NYU um Tony Mauvshin who runs the center for neuroscience. He's he described an intellectual beautifully and you certainly uh fit this description which is an intellectual is somebody who can talk about and work with a concept or something at multiple levels of granularity that are appropriate for the conversation. like we're going pretty deep today peeling back layers looking you know if you have three minutes you know it's a different conversation but I think as you said this is the advantage of reading more challenging books at times or kids books which are very simple in essence but deliver the message in with in very succinctly >> generally right so I

think there's real value to working up and down the ladder in language and having that at one's disposal >> and here is Another practice we go back to being pragmatic, ambiguity, incompleteness.

Do you bring it about? >> Not having to have everything resolved. >> No. >> And not only in the terms of problem solving or or or or a physical what we call kinetic coins. This is great. This develops movement intelligence. Something that I work with a lot. reading puzzling symbolic texts, parallels, difficult to resolve things and maybe never resolve things or movies, watch Tarovski, Hodorovski, it's a very different experience than Hollywood or watching contemporary dance that is contemporary in the sense that I can't define it. It's happening right now and I'm not sure what I'm even watching here. I've been taken to some contemporary dance where I thought I don't know what I'm watching.

>> Yeah. And the first time I went to wash, I said, "I don't like it." Yes. >> And I'm gonna come back. [laughter]
>> That was the distinguishing factor between you and me. But I've since developed a real appreciation uh for uh there are some forms of dance that um Eric Jarvis was a guest on the podcast neuroscientist who was uh going to be part of the Alvin Dance Company took a hard left turn into neuroscience and studies language and will say this will be a relevant tangent.

The species of birds that can talk are also the ones that can dance. And he thinks bodily movement based on the genetics. He studies the genetics of language and the same genes that are in these speech areas are strongly expressed in very similar motifs >> in the areas of movement. So he thinks bodily movement is the fundamental language. I'll just leave it at that. I need to get you two in the same room at some point and then I won't just want to be there listening. If everything depends on language, we also have to be careful because then the granularity of language will be the limiting factor and it's huge pieces. So this like playing with play the the not Lego, you know, there was technical Lego, the small little bits. I love this.

>> There was a normal Lego and then there was a the the big one, the big chunks that you started from. So, it's like you're working with these words are corrupted and they're corrupting us and they're supposed to be containers, but they don't they're not containers. They're more pointers, but we've lost what they're pointing at. The simulacrum versus the simulation. Simulation is something that creates a model of something real. simulacrum is now disconnected. There is not anymore that real thing. When I investigated this deeply with myself, I don't believe there is an inherent difference between these two, but there is definitely critical masses that can be achieved. For example, the sensory thing, sensor, sensory motor thing is a lot less corrupted than the conceptual schema. Even that is not reality. The senses don't bring reality.

They model reality. They are simulation machines. >> Everything we experience is an abstraction of what our senses are pulling into our brain. >> Which means ignoring uniqueness, erasing differences for the sake of communicating it to the system even on the level of sensation because it would be overwhelming. We would be crushed by reality if the band wage is opened fully.

>> Certainly if it was opened all at once. I mean I'm um >> this is also what happens with psychedelics by the way. Sometimes >> too much pours in. Yeah. >> There there is a bandage expansion >> too much cross talk. I

mean we should acknowledge this you know so in the studies of psilocybin and it's um where it has been shown to improve major depression the typical outcome is you know scan before I should mention this is you know therapy assisted psychedelic um experience not just recreational therapy therapy therapy therapy with psychedelics therapy therapy therapy therapy with psychedelic we're talking about psilocybin here therapy Y therapy therapy therapy therapy. Not just head into the woods, eat a bunch of mushrooms, talk to your friends. The most consistent observation in the brain is a lot more connectivity between areas that weren't communicating prior to that, which can offer new opportunities for insight, new opportunities for um it's literal integration and the unmasking of connections that were there but were more or less suppressed. This can be a really good thing. It can also be a really bad thing. One of the hallmark definitions of psychosis is clang associations where people with schizophrenia or other forms of psychosis will say, you know, this is a really cool cup up. So everything's moving up or stock market, you know, and they they just follow the language in a meaningless way that any non-sychotic person says all they're doing is following the rhyming of the words.

>> Those are not good connections to follow. If you want to be functional in the world, you might write an interesting book using that tool. consciously, but these people live in that reality. So, the pouring in and the cross connectivity, the plasticity, it's it's not always a good thing. I'd like to take a quick break and acknowledge one of our sponsors, Element. Element is an electrolyte drink that has everything you need and nothing you don't. That means the electrolytes, sodium, magnesium, and potassium, all in the correct ratios, but no sugar. Proper hydration is critical for brain and body function. Even a slight degree of dehydration can diminish your cognitive and physical performance. It's also important that you get adequate electrolytes. The electrolytes, sodium, magnesium, and potassium are vital for the functioning of all cells in your body, especially your neurons or your nerve cells. Drinking element makes it very easy to ensure that you're getting adequate hydration and adequate electrolytes. My days tend to start really fast, meaning I have to jump right into work or right into exercise.

So, to make sure that I'm hydrated and I have sufficient electrolytes, when I first wake up in the morning, I drink 16 to 32 ounces of water with an element packet dissolved in it. I also drink Element dissolved in water during any kind of physical exercise that I'm doing, especially on hot days when I'm sweating a lot and losing water and electrolytes. Element has a bunch of great tasting flavors. In fact, I love them all. I love the watermelon, the raspberry, the citrus, and I really love the lemonade flavor. So, if you'd like to try Element, you can go to drinkelement.com/huberman to claim a free element sample pack with any purchase. Again, that's drinkelement.com/huberman to claim a free sample pack. In terms of movement, I absolutely agree. I think that um people who are not exercising enough, not moving enough, not walking enough are starting to approximate a C-shape internally rotated. We see that if people are taking on an exercise program, which I think is generally healthy, walking more, hopefully doing some movement that gets their heart rate up, hopefully list lifting some objects that are outside their ability so then they get stronger and so forth. Okay, great. Should people do all of that and then start to think about the other syllables and vowels and and uh language of movement and incorporate that into their life or if given the choice should people start with many many forms of movement and the reason I ask this is a very practical one. Many people will say, "Well, this all sounds great, but I got to get up in the morning, make myself breakfast, take my kids to school, do all my things. I get 30 minutes. I need to get my heart rate up. Got to get my zone 3, four. I now have to lift things." You're telling me now I have to pay attention to the subtle ripples of movement, you know?

So, I could see either argument being true that just like check off the boxes. heart health, muscle health, ligaments, fight deterioration, add something on top of that versus no, let's treat the whole system as having a lot more opportunity there and start there no matter where you are. That's that's a practical question embedded in a somewhat intellectual conversation. >> I'll push back. >> Mhm. >> The question is already corrupted.

First, it's a exercise approach to physicality. I have 30 minutes a day and what do you do with the rest of your time? That is the push back. >> Mhm. >> What do we do that is so important that we don't have time to pay attention to the ripples of movement when we are living our lives, cooking, doing? When you're listening to me, are you fully engaged and listening to me? Now we are not using this time well.

Even highly productive people actually those are often the case. They are never using the time well in the sense of that presence. So what I'm suggesting is a paradigm shift in the way that I view my physicality at all. the way that I view my day today, my being when I'm listening to you. I'm not running after these words in my head and I'm also in the physical experience of what is occurring right now and and I developed this through my practice. We need better education and we need better tools and this is the new limiting factor.

Even AI recognizes it more and more and it will I predict become the crucial component. The body the sensory symbols that are popping out when a symbol comes to our mind that that that that impression those impressions that are they are so important without them there is nothing. And we've tried to go down to the the root of it.

I've I've spent a lot of time reading about this and figuring out what is the raw currency of cognition of that ab ob abstraction schema. And I've heard many answers. There is the the primal or primitive semantics this point of view like something that is under language. And there is this um point of view from phenomenology and that this this area or or there is the invariance something that does not change no matter how you look at it that's the most crucial basic element but the best answer that I found is this drawing a boundary selecting which means when I look at you I select you from the environment I create a boundary inside my simulation. This is the most as as George Spencer Brown talks about this in laws of form. This is the the act of differentiation.

This creates the most basic thought matter. It's a thing now. And the unselected state which also represents the the entropy second law of thermodynamics the the soup that wants to pull us back is the other side. So this selection and the unselected state which are codependent of course they are the very root of of things. So when we play this game of paying attention and the quality of it we are interacting underneath the problems with the system.

We are going to the and I'm talking about this open presence pre- language thing that must inform the language formation anyways it doesn't come from anywhere so there must be something underneath and and I'm sure you can teach me a lot about that a lot more than what I researched myself but the experience of it myself is very important to try to find that gentle layer and to try to interact with it. This will transform the body schema and we have to teach it to children when we come about and some cultures maintain it to a larger degree and of course it depends on the language and on other habits. This is below exercise. This is and then I use exercise very efficiently when you have that when the model is addressed. I do this work with athletes.

I do this work with grandmas. I do this work with Alzheimer patients, with musicians. This is very potent. So stop trying to fit me into something corrupted in that sense. I'm telling the world in that physical sense of I got to fit into this fitness practice. I got to fit into this exercise idea because when I'm looking deeper, I don't see a lot of promise there. Those are positive manipulations. They can be definitely, but we need to go further. And we're not because we stay with that 30 minutes a day idea.

And this is everywhere. You don't need to become like me, a practitioner of movement all day. In the official side, it becomes the unofficial practice. Your way of being, your way of doing things. I turn everything into this. the way that I drink from the cup, the way that I sit right now, the way that I'm listening, and it's coming from the official side of my practice. I had to learn it in a structured way and then to pull it back into my life. Much more important than to learn to meditate.

Much more potent because it is meditation in the deep sense of the word. >> You mentioned Alzheimer's. Um, there are more and more scientific findings all the time showing that loss of vision, subtle or severe, loss of hearing, subtle or severe, can either accelerate or maybe even cause some of the um deprivation symptoms of Alzheimer's, memory deprivation, uh, this kind of thing. And it makes good sense, right? Right? It's unfortunate, but it makes good sense.

Meaning, if there are fewer inputs to the system, the system is deprived by definition, and then the system starts working with deprived inputs and it degrades. And in Alzheimer's, they like to mention that the feedback is damaged. >> But they threw the baby with the bathwater. Even when the feedback is damaged, it's not a monochromatic thing, black and white. You got to continue to challenge the system. When I tear a muscle, my rotator cuff, I rehab myself by going back into motion. I don't put a cast on. I treat Alzheimer's in the same way. I practice. And this is incredibly powerful. Like loading the skeleton for osteoporosis.

Forget about the nutritional side of things. Lift something heavy for God's sake. pound the ground in in the right dosages and ways. It it is a lot more potent. >> We have to change our way of looking at things here. This thing here is called practice. This is a school. Life is not for living. Life is for practicing. It is a place. It's a school we came to.

Maybe spiritually you can take it there as well. But I'm talking even neurologically. That's who we are. That's what we are. And viewing yourself in this way is very very potent. And it will not take your life away. You don't need more than 30 minutes a day. It will enrich the current life that you have. But you have to educate yourself and you have to go deeper into these concepts in order to apply it correctly. That's my belief in in regards to this and I've seen it.

>> Beautifully put. I could not agree more. uh we are in a curriculum of life and our nervous system and all the rest of us is being shaped by that and we have agency about what we bring in. Thank you. I see it on you. It's clear to me. It's very clear who's practicing and who's not. On some level when you meet people, if you're practicing yourself, if you're in this practice, if you're under this load, in this conscious interaction, choice, with suffering, with friction, with difficulties, but also with awe, with curiosity, with all those things in a directed

way, not in a way that holds on to who I am. Doesn't matter who I am currently. I'm not interested in that. I am not my friend in that sense. There is a place in me that I recognize this is not my friend.

But it doesn't turn into a beatdown. It doesn't turn into this. It's very important that the the multistability is held and then I can I can become I practice myself into the next day. I practice myself into the next moment. And this is the crucial moment. So when I'm doing podcasts or whatever, I use it. I manipulate the situation for my practice and for the practice of others because I believe it's so important. Our life depends on it. I could not agree more. I you know I brought back to this notion of uh language, movement and awareness.

Um and maybe just for sake of of understanding and this will be an incomplete analogy but if people could imagine that um there's levels of coarseness with within each of those let's call it you know neuroscientists would call it like big spatial scale like I can flap my elbows or I can move my fingers more subtly like so subtle motion versus big motion right um in language I can I can [clears throat] grunt I can me you know I can woo you you know, or I can articulate using more sophisticated language if I have knowledge and access to those and you build that up through experience. Yeah, you can go look things up and do that.

In the realm of awareness, it's similar, right? You can grab big pieces of the room all at once. You there, the table, the cameras, producer off to my left, all of it. Or I can home in on a small space, right? But there's also, and I'm obsessed with this, there's also the time domain. How we choose to segment our experience is something that I find so incredible. Can lie back, look at the clouds, and just watch this big cloud move through my visual field over the course of minutes, an hour, or I can watch for every little subtle ripple of a leaf if I choose. And uh Dhacker Kelner who studies awe, he's at UC Berkeley, said everyday awe experiences are very accessible if we allow ourselves to move from fine scale to large scale or large scale to fine scale and back again. It's in the transition between the two in space.

>> Yeah, he said he nailed it. Space and in time. I was like, you know, a lot of things happen on this podcast and useful tools come up and interesting conversations come up, but in talking with Derer and now talking to you, it's like th this is the experience of life that we're getting shaped on and we have control. And so as a last point, my audience is thinking let your guest speak. I but I just want to throw this out because when I think about going online, which is where people spend a significant amount of their conscious awareness now, their time, I ask myself, is this a lowresolution or a highresolution event?

>> And someone once asked me recently, uh, do you have Tik Tok? And I said, I don't like Tik Tok. He said, why not? And I said, I don't like Tik Tok because I don't like that sound at the end. Why? It's low resolution. It feels like a highly pixelated auditory sound. Whereas like a not trying to be poetic here, but like we have these redwing blackbirds in California and in the evening when they get ready to settle down, they make this incredible sound. It's very brief, but it's rich and it's so beautiful. anyone who ever has the chance to hear it is is spectacular. Then I realize all the information on Tik Tok is low resolution.

It's kind of for idiots and if you only look at that, you'll become an idiot. And I realized I'm probably consuming some other sensory input that is disproportionate to what I should be and it's going to make me an idiot. So it

doesn't mean one has to spend time in the deep philosophy of of you know the most intricate philosophers. I mean I listen to punk rock music. I like it because it's raw. I like it. I like three chord Raone songs. But I also love classical music.

I think it's important to step through from coarse to fine. And I feel like what you've been talking about for years in terms of movement is has something perhaps to do with this. Forgive me for going long, but no, I'm happy to see you again. And this is kind of what we do. >> Yeah, this is beautiful. I I I take a lot from it and I like this the the the transition importance. Something makes me think that we talked about the schemas, the these models, but another way to look at it is a a stomach digestive systems. Why? In the sense that they require nutrients.

You got to feed them. And then the quality of those nutrients, the gross, the fine, the micronutrients, the macronutrients. Like for example, emotionally, I don't feel well. Let's say what do I tell people? What are you feeding yourself? What is your emotional food? emotional foods that are important that I bring into the practice of my students of myself. One, discomfort. We've mentioned it. It's important. It's clear why emotional contradiction.

Two, I love you and I hate you. For example, when you work with boxing, when when you let people have this physical and you can point at it, look up. Watch what happened now. I love you and I hate you and I feel it. I can the multistability. Another one is the aesthetic intensity that we talked about bringing moments of awe of curiosity but also of melancholy or or many other intensities that are important.

We've removed this from our lives, from our movies, from our books, definitely online, you know, as you pointed, we took it away. So, of course, we're not feeding ourselves those things. Restraint, stimulating, and requiring restraint, very important quality. All those are practices for me. Those are nutrients that I want to feed my emotional state. The same thing I have for my intellectual faculty, schema, the conceptual, the abstraction. How do I become smarter? What is thought? Is thought just this knee-jerk reactions, these levers, this associative quality?

Is this thought? I refuse to accept it. >> That's not thought. So, you're you're lucky. Uh you're not lucky. you uh you are right to refuse it. Uh we could talk about thoughts and what they are. I actually have a segment in my book. I'm not trying to advertise my book that's all about how to think about thinking so that you can literally control your thinking. Use thinking as a tool, not just have it be this like wherever you go some dynamic attractor states. The neuroscientists say you just kind of fall like a clang association in a psychotic person. Yeah. is just they're they drop into a groove of of thought that is disjointed, makes no sense to the rest of us. Many people, including myself, sometimes we live in those modes of thought that are equally psychotic.

We just don't express it, but they're psychotic because we're taking something as valuable as like a a beautiful vehicle and we're just kind of using it to like >> prop something up at the side of the house. My colleague Carl Dyerth, one of the best neuroscientists alive, maybe ever, um when he told me that every night after he put his five kids to sleep, [laughter] you know, he would go and sit and force himself to think in complete sentences as a

practice.

>> I remember you told me before I was humbled and I thought, >> "Oh, that is the that is hard. That is a smart person. >> He's a very smart person. >> That's an intelligent person. >> He's a very intelligent person. >> That sounds like it. It comes from that place of knowing like, you know, I never I I almost never truly think. It's rare. >> He taught himself to think. >> Yeah. >> Yeah. >> Without realizing it, without realizing that you're just playing a different game in that sense that it's it's hard to develop it. And again what are the practices that we engage with you know we need those things nutrients so it's stomachs the emotional faculty is a stomach it's digestion and it asks you feed me >> and you got to take care of it there is metabolism involved there is a protection layer there is immunity to it right there is the marov boundary around it the membrane there is a model to it simulates things out but so it's also a very important way to Look at it. And of course the body movement nutrients. What is the quality of that? If you look at those gym practices, those weightlifting, they're of very very low quality in terms of movement. Every dancer will tell you that. Every athlete of a high level will tell you that.

Where did we move to a ridiculous situation where our athletes are learning and are inspired by the fitness people instead of the fitness people be learning and be inspired by the the athletes the the movement people. >> Uh tell me more because I I certainly like if I love to watch track and field during the Olympics um and it's amazing to see these athletes move and their different shapes and their different personalities like the sprinters. This is I still marvel at these races boil down to sometimes hundredths of a second and they'll wear flashy jewelry [laughter] without question slows them down. This is the least aerodynamic thing you could possibly do.

>> There are more important things than that >> and they're willing to do give up the potential time advantage to show their bravado. Now the distance runners where typically it doesn't get down to hundredths of a second. It can typically the margins between first, second, and third place are wider. They're not wearing any jewelry. There's no And their personalities are much more subdued. Fascinating.

>> You're telling me that the athletes are paying attention to the fitness people? >> Yeah, of course. >> That seems crazy. Why? That's Do you don't you see it? Boxers training like fitness people. They're fitness athletes. They're not boxers these days. Why social media? Why? What is there approachable calls the attention? I don't know why you brought me in today, but it might be one of the less times if not the last time as it becomes less and less what the attention calls for.

>> I don't know. I think I believe that the the system that is human curiosity which drives a lot of social media, not all of it. I do think that when you have a lot of low resolution stuff, the signal to noise becomes people our senses I almost said this earlier but our sensory apparatus whether or not it's our skin or our smell or our vision or our hearing as you know has levels of granularity. The receptive fields as we call them go from very fine to uh to very coarse. We love the feeling of a hug with somebody we love. We also love the feeling of a light caress, you know, or just a hand on ours. These things matter and they're part of our experience. And even without being aware of that desire for it, we have it's it's it's a drive. I think I do think people like to learn and they like to think.

Some people perhaps not. They're lazy. But I believe that the sorts of things that you talk about and do, the real effort, like the movie that you showed earlier of you, this incredible movie, like the amount of care that went into that right now relatively brief. It might be longer going forward. The amount of care is what makes that high signal to noise. >> Thank you for that calming and and and positive words. They are important and they they touch my heart as well. And I know personally with you I feel this.

I'm talking about this exposure. This is great exposure. It's not not possible anymore to talk about certain things and certain sizes. And I know you are a person who is challenged by that tremendously because you went huge and at the same time your original search is not going to serve that. This is not the motive. This is not the deep thing that drives you. So I'll always be available and and and free to come for a wonderful conversation with you. But I I I lament sometimes the situation with the masses and the public and where a lot of attention that the big viral things are going to in the sense that it's it's sad. It's it's very very pricey. It's very expensive. despite your and my attempts to enrichen the the conversations out there and um uh the younger generation whose brains were more plastic in this phase of of lowresolution overload. But I trust that there there's the hunger's there and they'll they'll rescue themselves. They're going to realize it. They're they're starting to realize it. Maybe this isn't the best analogy, but pornography is quite available online. And I think there's still a hunger for movies and about real romance and relationships.

>> I think, you know, interesting romances and relationships >> of their [clears throat] own and and to know that that still exists in the world. I think there's a crudeness to things, but I hear you. And there's a new generation coming up who hopefully are >> listening in like, hey, and have their own, you know, desire for for multiple layers of granularity. >> Good. Yeah, we we just need to invest in that. I'm I'm I'm trying my best to to invest in that. But I've moved away from doing certain things and exposing certain things cuz I believe there is no no way there, no path there into the real I want to help. I want to really help people myself.

But it takes a certain process to get to that critical moment of being able to actually help and transform. It's not as easy as just offering the help, putting it out there, not as it was. It used to be, but the game is different. We had a guest on, he's a psychiatrist, uh Dr. K, Indian guy. We were talking about um meditation and he described a meditation that is super interesting that I'm sure you've done many times and but for me was novel. He said try meditating for just 5 minutes but instead of paying attention to the inhale and the exhale pay attention to the pause in between the two >> as a way to start to notice transition points and it's a way of kind of dialing in the spotlight of attention. Boom.

Boom. and you can kind of release in between as opposed to just trying to constantly focus on the breath. What are your thoughts on on these kinds of like noticing transitions between setting down the phone, getting up, getting on the phone, maybe even between swipes if people have to do it that way, but ideally this would be done in terms of a movement practice as well, an emotional practice. >> Before I even talk about it, you know what? What is the discovery of that practice?

There is no point where the pendulum changes direction. >> No transitional moment where the this reaches this zero point and and that's what you discover as you're following this more and more and more and more. It

opens up. It opens up and this pulls you in. And that's why it's such a powerful practice. [snorts] And this is available in many places. It's the multi-stability again.

For example, right now I really have to pee. And inside this sensation, which funny enough I didn't know, but I kind of loved to practice as a child. I didn't realize that I'm the that it's unique. And I believe it's also related to my willpower in a way. No, I don't need to go to the toilet yet. I would hold and [snorts] I would recognize inside of it a certain pleasure. Maybe maybe a pleasure of the release that will come.

It's [clears throat] similar to the orgasm. It has something similar to this burning. The first time you have an orgasm, you're not sure it's painful. It's it's pleasurable. You're still in that multi-stability. So in that sense the kumbaka is very similar. So it's a type of practice not the only type you can do it with a lot of things goosebumps feeling cold inside the sensation of coldness. There is a heat >> underneath that's why the body creates this thing and I've I've seen it. I remember a time I was doing a standing meditation in in yelling up in Australia standing inside shallow water and the sun was coming down became very cold and I remember I was there for an hour standing and just this realization the beginning it's like oh it's cold and then I start no I'm going to stay and by staying and by investigating closer and closer I discovered this heat inside and when grab a glimpse of it. Boop, the cold was gone.

And now I locked, you know, the old woman and the young woman, the multi-stability, the visual thing. I locked into the other side. >> And I was able to see it >> and then I was [clears throat] able to bring back the cold and to see both. This is a practice that I engage with with rhythms, poly rhythms, with movements, with reading certain conceptual materials that are requiring this with meditation with and and it requires keen observation and it's very very powerful practice.

Even a push-up, I practice it doing push-ups. You can think of a push-up. You can you can experience it as a push but you can also experience it as a pull which is by the way closer to reality. One thing is for certain you're describing beautifully the antagonistic nature of every neural circuit that we are aware of. Flexor extensor being the most obvious. Right? When we flex our bicep or whatever hamstring, the opposite muscle, the extensor relaxes and vice versa.

But they're intricately related in their in their function. Like it's not they're totally independent, right? The ability to see dark edges is contingent on your ability to see light edges. >> Super imposition. Everything is superimposed. >> Everything's pushpull. this uh ventromedial hypothalamus right Dulin's work with uh David Anderson showed if you people for years had stimulated this brain area and in cats and rats and monkeys and bats and they would see that sometimes they would get rage and sometimes they would get mounting in sexual behavior even of inanimate objects. Dulin comes in, develops genetic tools to separate out the salt and pepper of these different neurons and shows that these are two antagonistic sets of neurons in the same structure that drive either mating or attack. And then she gets the opportunity to put them into competition with one another. And what she discovers and other people discover by monitoring the activity of these neurons is when you drive the mating activity, the the potential for firing in these other neurons is suppressed but then it comes back higher. The firing of these neurons that drive aggression suppressed then the main after some period of time

mating it subsides then the aggression comes back and we don't like these are uncomfortable notions for people to think about. That's just one example, but also eating versus the desire to naughty. Everything's a push pull in the circuitry of the brain, even in cognition. So, I I totally uh love, very crude way to put it, but I totally love the idea that exploring what feels like an extreme sensory experience is actually an exploration of of the opposite side of the seessaw. It's awesome that you could touch into that >> and you can directly connect to it by taking a multistable entity and observing it.

Any entity is multistable entity but there are ones that are clearly that like listening to a poly rhythm to two rhythms at the same time and spending time watching it from one perspective and then from another perspective and switching back and forth that switching again. It's extremely powerful. This is stuff I use with fighters because if you can't hear the various rhythms, you're not the DJ and the DJ controls the party, you're going to get knocked out. But if you can view all these complex rhythms that are there present in the footwork and in the breath and in the body and in the blinking of the eyes. And if you're sensitive to it, you can [clears throat] be a lot more aligned with that and manipulate it for your needs.

So this is extremely powerful practice. Certain texts, they don't allow you to grab a hold. >> Mhm. >> My favorite is Jorge Luis Bore, >> the Argentine. >> Yes. >> My father would be very happy that you said that. Yeah. the absolute master, the man who was the big priest of the cult of books, the ultimate, the blind librarian. What can be more than that? The man who read everything when it was still possible to read everything, who knew everything.

And what did he leave us? These incredible practices, short stories, but they are challenging. And they changed my body when I read them. They changed me again and again and again. And they transform you. And they're multi-stable. And they're examining things in a way that makes you transform. I used to fill my hot tub with extremely hot water, unbearable, and read the short story while being in there. In the worst times of my life, I use this and and the the physical discomfort and it's short stories. You can do it. It's a certain length of time. Somehow together I I like to relax into that combination and it was awe. It was I always came out different from that experiences.

I also used it just normally. I use it with students in events and there are other authors but it's just an example to feel real remorse in order to change change my ways to to to truly not to beat myself up not to make this yeah this this Jewish thing that the Catholic perfected hatch >> or flagagulate yourself yeah >> not this but true remorse it's like that was bad bad on me that shouldn't have done that.

That's that's not who I want to be and and from that place hitting this rock bottom and immediately climbing up from that. So it doesn't stay within that to so we we don't I don't think people tell me thank you in the end of teachings events but how often do I feel real gratitude we don't interact we don't feel they don't sense it no one can blame them but they've desensitized themselves from this whole granularity of emotions and so we need to bring it back we need to bring it back we need to go to train it back like losing your sense of smell because of COVID or something.

People ask me what shall I do? I said train it back. And that's you know I I I don't I don't know the neurology of it but it's clear to me. It's like what's the answer to any question? Practice. So I just send them to practice and it works. gradual, progressive, pleasantly visual, pleasing enough, etc. I'd like to take a quick break and acknowledge our sponsor, Function. Function provides over 160 advanced lab tests to give you a clear snapshot of your bodily health. This snapshot gives you insights into your heart health, your hormone health, autoimmune function, nutrient levels, and much more. They've also recently added access to advanced MRI and CT scans. Function not only provides testing of over 160 biomarkers key to your physical and mental health. It also analyzes these results and provides recommendations for improving your health from top doctors.

For example, in a recent test with function, I learned that some of my blood lipids were slightly out of range. As a result, I decided to start supplementing with nattokinase, which can naturally help reduce LDL cholesterol. And it did. In a follow-up test, I could confirm that this strategy worked. My blood lipids are now back exactly where I want them. Comprehensive lab testing of the sort that function offers is just so important for health. I mean, how else are you going to know what's going on under the hood? And while I've been doing blood work for years, it used to be timeconsuming, complicated, and expensive. In fact, I used to spend thousands of dollars per year trying to get this kind of data.

And the data, frankly, were not all that good. But now with Function, it's extremely easy and affordable. A function membership is only a dollar a day, \$365 a year. And if you think about the information it provides and the health challenges it helps you avoid and the proactive things that it can do for you to enhance your health, I truly look at it as a savings. To learn more, visit functionhealth.com/huberman and use the code hubberman for a \$50 credit towards your membership. Again, that's functionhealth.com/huberman.

the ability to um really acknowledge real remorse, guilt, regret. Uh that's hard. I totally agree. Um there's enormous power in it. Um and yet one can't do it in order to extract the power like that get keeps you away from the feeling. I had to spend, as we were talking about earlier, some time in my life just thinking about the times I genuinely failed, that I was a coward, that I made the wrong choice. I don't feel a lot of power from saying it. It just is what it is.

And that's like where the uh the benefit is just like sitting in there and then somehow one is able to move on from it. >> I'm with you. I don't know many people who talk about it. I'm the same. I'm saying to people I'm a coward. I'm a I'm a coward. That's who I am. Like that's who I was many times in my life. I've made the wrong choices. Again, I'm not beating myself up over it. I I've made my peace with it >> but I've had to glimpse it to change something and maybe it won't be enough maybe I'll need this process again but so remorse is crucial have to be part of the practice practice of remorse remorse of conscious that is also not available not there we can cultivate the process of it we can devote time to it we can um we can design practices for it. Grieving is also another one right it's so difficult. One time somebody told me a meditation teacher he told me I grieved my father's death for 20 minutes and that's it. I was done. But those 20 minutes people push away for a lifetime.

and and even if the you know not it's not exactly the truth I like to use that that story still so to interact with it and to be capable and to invite these things into our life also takes practice lately I've been I wouldn't say forcing

myself I would say nudging myself into um allowing some grief over the passage of time not regrets about certain decisions That's a separate line of exploration. But just acknowledging I think with all this stuff about health and longevity and I certainly feel vigorous. I feel great. But time has passed. And that doesn't mean thinking about the past. Just really acknowledging that I I and the reason I got to it is I felt like I was suppressing something like there was some lie in my head about my representation of time.

And when I spend some tough moments really like it does, as great as I feel at 50, I truly feel better than I did in my 30s if I think in terms of vigor and understanding of life and all that. But the fact that there's no doover and that I actually don't want to live in the delusion that I have forever. I think that's a huge mistake. That was a heavy moment and I'm probably still grieving it. I can kind of sense it a little bit. It comes up as a kind of odd constellation of feelings. But by acknowledging that I was a coward in certain perhaps many circumstances, it's actually allowed me to be much braver in leaning into the stuff that sucks.

It's such a weird thing and it almost sounds like we're, you know, like you're constructing this. It's a real thing. And I think the real key if anyone wants to try it is to not go do the acknowledge where you were wrong so that you can not feel it anymore. You have to go into it with the almost acceptance that you might stay there forever, but of course you won't, right? It's like this it's like this bullshitting of self that is useful. You know, earlier you were talking about sensory desensitization.

And it's so funny you said that because we took a brief break uh to relieve our bladders. Um and I was walking back and I thought I got to tell the Charlie Gilbert story. The Charlie Gilbert story is the following. Charlie Gilbert was is a very renowned neuroscientist. Uh he was at the Rockefeller University in New York. And I'll never forget as a graduate student, he came and you do these lunches with the visiting speaker and they bring lunch out and the lunch isn't great, but it wasn't terrible and it was fairly nutritious. And typically the speaker eats, but they mostly talk.

And I'll never forget, he said, "No, I'm not eating lunch. I'm going to my favorite restaurant tonight in Napa." I said, "Is it going to be a big meal?" He said, "No, not at all, but I want my senses to be tuned to the subtlety of every bit of it." And I said, "Is the food rich?" I'd never really been at that point in my life to a really nice restaurant, and I assumed I still haven't been to the one he's referring to, but I assumed that the food would be really rich. And he said, "No, that's the point. The food is just delicious, but it's not overcome with flavor, like the food you're eating right now." And I looked and it was like turkey sandwiches and some chips or something, you know, graduate student fair, some salads. And I asked him, I was like, "What do you mean?" He said, "When you're hungry, you are able to pick up on all sorts of subtleties and pleasures and aversions to what you don't like. You're allowed to not like food, even when you're paying a lot of money for it. In fact, you're in those circumstances, you're particularly allowed to send things back. People don't realize this." And he said, "I'll never forget." He said, "This pertains to most all experiences in life." And I was like, "Whoa, wow." Well, he's from New York City and very sophisticated clearly, but what he was describing is exactly what we're talking about, what you're talking about, that if we dull our senses, we miss all of it. We miss the the difference between crude and refined.

It's not just like this ability to get into this like ultra refined state. This was before intermittent fasting became a thing. So, beautiful story, >> man. He nailed it. I can't take any credit for. He just nailed it. I just have a good memory for things that like stand out. So, now I want to talk about relationships. something I didn't anticipate we were going to talk about. But before we came in here today, we were sort of reflecting on what our happy lives currently are. And you said something and I'm going to get the language wrong, so forgive me, but it's sort of like the exploration of relationship also involves this opportunity to explore all these different dimensions and the transitions between them. And it's a like a vast probably infinite landscape between two people. I think I'm starting to get my head around that one.

>> Tell me more and how you think about it. You don't have to reveal any details of your personal life. I just it's such a great framework. Can an argument that you didn't want to have become the point of enrichment? Let's start by we are robbing against things to be not to rub against things. Being is that is this rubbing mapping yourself by rubbing against things.

Relationships are very powerful for that. Alone you're also rubbing against things but just different things. It's also a practice to be alone and both of them are very important. But when you relate you become this is being it's a relationship thing. Everything exists only as a form of a relationship. Now this is the big picture. Of course now we can take it into the the human relationships and some of these things are not going to be so easy to digest. I believe the make or break element is we are together in this game.

Not one against the other. It's not a pingpong but it is a game an infinite game in that sense that we want to sustain the play. It's not a finite scenario where we want to finish, we want to win, we want to we want to continue and we have to create this practice shared practice. How to be in this game of evolution, of transformation, of insight together. It's not a fixed point. I cannot come from the place of I am XY Z.

I'm already a finished product in that sense. If the other side is a finished product in their mind, it can't work. That's why it's the make or break. Not sexual attraction, not love in that sense of that chemical concoction, romantic love, but this element. And it's true for every meaningful relationship and I believe also for romantic relationships. And then around them you got to wrap the other sides.

The physical love which is the sexual attraction the romantic emotional one and a higher concept of love. Not one that we speak through lawyers if you say the wrong thing after you know 30 years of marriage. What kind of love is that? That trans that breaks like this that switches that is this is no love. But really this meta concept of love meta as well. So relationships are a form of a practice together and they must be cultivated as such.

We're using each other but we're helping each other as well. And we're together in this game going through life's experiences, crisis, helping each other, bringing kids or not bringing kids. This is a core piece and I don't often hear it pointed as a central element that seems to be a good partner for that. Usually it's a good partner for something else which is all good respect. Should respect it. But this is the make or break for long-term relationship.

I love the one who loves to practice. It can rob people really the wrong way. But now you understand why it is said in this way. This is the love that that choice that deep choice in you. Okay, you're a partner. Now we can go. We are here at this practice. We are not against each other. We are supportive of each other. And we play this game. I need your attention. I need your presence.

I can't have you check out. And there is this infinite game that we play that might finish at a certain moment, but it just actually changes its face. It never finishes. >> I love it. And I feel obligated to raise a an example of relational dynamics that's outside of romance, which is of all things uh The Grateful Dead. Um a good friend who's an amazing uh punk rock musician uh encouraged me to listen to The Grateful Dead. I didn't have an aversion to it, but um I didn't have a tendency to want to play it. Now I'm I really like it. I don't know if I'm like into it, but I really like it.

So, I watched a few documentaries about the Grateful Dead. I They come from my hometown. They used to hang out at a music store near where I grew up. They were around until they weren't. Even went to some shows. In this documentary about the Grateful Dead, they talk about the amazing chemistry that this band had. Just the amazing chemistry and why people literally followed them around the world. And then they talk about why it suffered, why the chemistry fell apart at a certain point and then maybe it was restored. And it was one word. They asked what happened. They said cocaine.

But then what they said next was cocaine made people very focused on their own goal directed behavior. And even though everyone was playing together and they all knew the songs and they were paying attention, someone or several people were kind of vying for something that was more about them as opposed to the chemistry and dynamics because cocaine is mainly a dopamine related thing. just kind of speaks to the fact that like if we lean too hard into it's not just about like me thinking but in terms of like advancement like got to get to this place the group doesn't necessarily move forward and so we need leaders but it's more like this dynamic subordination where there's like a like a flock flock of birds moving forward and then one replaces and I feel like in any kind of relationship whether or not it's two or more in a work situation um or maybe even romantic relationship between two people that there's some some sense of of this kind of subordinating the the the eye >> in the deep sense of it in the neurology part of it we are sharing kind of a the allostasis the the body budget we are sharing it right so it's like it's a way for us to metab to be metabolically bringing in more resources >> so that's even the neurological reality of it >> that's Why also grief is so devastating because it removes in a moment huge amount of resources right all of a sudden it's pulled out of you as if it's not really the the the hofster talks about this this the loop is still there it's it's part it's part of your loop already it's integrated but there is the resource part and how am I going to face these challenges without that person. It's highly related to the grieving thing.

It's not removed from it. It's it's maybe the core of it. Not often mentioned again in relation to grief, but it's it's a very egotistical thing has [snorts] to operate in such a way along the lines of music. Um, for the longest time I've had this question and I'm hoping you can help me shed some light on the the answer which is there are some forms of music I think of like Bob Dylan certain um songs that Joe Strummer from the Clash sang there going to be other examples that I'm not aware of but everyone will know what I'm talking about in a moment where the

words if read literally make no sense but somehow they seem to reveal like a fundamental truth that people can relate to. And when I say fundamental, I mean people seem to agree that there's something important there. It sounds important.

And it's not just because it sounds beautiful or melodic. Like there's something important there. And that maybe, just maybe, these songs are tapping into some language of the nervous system or of whatever human experience that that we don't have a word for, we don't have a concept to pin to. And my question is, is there an analogous phenomenon in movement? >> Most definitely. There is an aesthetic value to it beyond the the symbolic significance.

That's why we are hitting constantly this this glass ceiling. We cannot break through because we're approaching everything from the intellect from this this this place and and it does not carry certain pieces with it. I can't do it in this way. This is not understanding. I cannot reach understanding in this way. I only reach knowing understanding is much bigger. It's much more visceral. It's much more bodily and emotional and musical and rhythmical.

And there is an aesthetic value to the word when I say slippery. And in a song even more there is rhythmicity. There is moments there is silences that are placed correctly. And that's why good music. Tom Waits is Tom Waits. He brings that thing always present in all these different ways. It's so diverse and it's so powerful. It affected so many genres and people and it's the mastery of that instead of the AI strip down give me the recipe I make it and the cake doesn't taste good and I follow the recipe to a tea there is missing components and some of them we know about and we can talk about but most of them we will never find so the magic that's why the magic is in The doing, the magic is in the practicing.

And that's why sitting here is very different than doing this on screen. >> And [clears throat] we share something. Our bodies are communicating in all these ways that you know about. And all our senses are engaged and we're sharing this space and we're tuning forks are aligning in all these rhythms. And so it's different. We can't keep coming back to this illusion that we can put it together if we take all the ingredients that we know of because there are more ingredients that we don't know of and the good news we can interact with it directly by engaging with the practice with the motion with the body. So body movement, human movement carries huge amount of that. It's not the same for me to do a movement like this. And now I do it with a different focus point of awareness of attention. I totally transformed the neurology of it and the effects of it on myself and on the environment as well. To watch a dance performance live is extremely different than to it actually doesn't make any sense to watch a music video in that sense of movement because it's there is a critical mess in relation to human movement which is not reached there other things okay you can do something music is arguable right like to listen to Tom weights live is maybe that's a totally different thing I never did I never had the chance but I I would love to maybe that will transform my experience of it totally we have to give attention to these and a place for these x quantities like sister Korita Kenchi mentioned this always leave a room for x quantities the unknown quantities because you can not leave room for them it's not like they're always there no in some ways in some stratas of how we approach things. We don't leave room for it.

It's important. >> I'm struck by the um the artists, the practitioners, whether it's movement, dance, or visual art, or music that tap into this to something that language alone can't tap into, that um film alone can't tap into. And the the example that I often go to because I think well because I like the work so much is like a Rothko you know which most people would say is just you know couple blobs of color couple squares or rectangles but um the vision scientist in me and I'm not the one that that unpacked this but a guy named Beville Conway who's uh at NIH explained this best that what Rothko was able to do was because he eliminated the frame And there's no white that he combined colors in ways that when you look at it, any Rothko, you're seeing colors that you've never seen before because of the way color space interacts. But here's the interesting thing. It's not clear to me that Rothko understood that as he was doing it. So, it does seem like some people are they're able to kind of scratch and dig and create around something that they feel I don't know what they're feeling, but they get to some fundamental truth that becomes the signature of what they're doing. Maybe Andy Warhol did it with his kind of like play on marketing and branding and and it's in the end it becomes very simple like what pops out is very simple but it feels like a like a macronutrient >> of experience and you go I can't get that anywhere else. I can't just look at a Campbell soup can. But seeing them like arranged that way, I can appreciate something completely different about marketing more generally or brand or visual art or color in the case of Rothko. I'm going to draw you into something that you really know a lot about. Actually, it's related to art.

What are these great artists? Well, the practitioners, and I'm a broken record with it, they realize things much earlier because they're in the experience. What did they realize? The eyes don't operate like a camera. That's the wrong model. When I look at your face, all the pixels are not equal. And I move my eyes in a certain way that constructs you. So what do these great artists did?

They did deformed wrong paintings, but they move in front of your eyes. The perspective is wrong. The the hand is placed incorrectly, but it respects the way that our brain looks at it. And this only came much later in terms of understanding why. Because we have all these distortions from great artists. If they wanted to do it right, they would have done it right, hyper realistic, etc.

This is a crucial thing. Our models, the neuromuscular model is another one. The skeletal neuromuscular model, the fascia skeletal neuromuscular model. And you can expand it more and more. And they're all the time replaced. And it's important that we replace them. But there is something even more important. the realization that all models are wrong but some are useful. that that quote I use it a lot in the sense that I need to switch up my models to useful models at this current moment and understand that this model will also be wrong in essence but it doesn't mean that I have a choice I have to use models there is no choice about it so when we are creating this art and we are respecting this it's a representation of these deeper models For me as an example in the physical body there is something about fluid mechanics and pressure changes and liquidity of the body that is was a huge leap in how I moved compared to the old balls and levers thing and it started up here in in this understand that's not how things work.

From there my whole body changed for the better. >> When did that occur? >> That shift >> in the recent decade a bit more looking for these models of like how is the body constructed? What is the right way of running? What is the don't tell me how the body is constructed? I'm not interested. These people are not

actually even moving eventually. And again, you don't need to test it there. You're not wet tested often. So, it's not representative of a high level of movement. Somebody who engages with it will tell you.

So, I slowly realized the fault is not in the way that we are structured or in the practice, the way that we are practicing. It is in the model. It is in the way that we think of movement to begin with that makes everything your back pain can go away from from a change of the model. It's the most powerful thing that I can give physically to someone. So to work with models, to refine them, to change them, to switch them around is important for the artist, for the health, longevity, for cognition, for problem solving, for everything. It it keeps coming back to this most important thing. So rather than think about fascia or muscle or connective tissue, sounds to me like you're thinking about certainly how all the pieces fit together. And I've I've heard you say this before. It's it's more about the organization of all these pieces, >> the relationships, >> the relationships, >> how they relate. This realization that especially in the body schema, it's immediately changeable.

In the emotional schema, in the abstract one, it's a lot slower of a process. But if I hold this cup, I immediately change. It's so quick to change the body. This is something that Moshe Feld and Christ realized a long time ago. People still don't appreciate, don't understand the power of that work. We've desensitized ourselves. >> What do you think is the crux of that work that hopefully this conversation can get people reading and looking at that more deeply? Uh I confess I haven't spent a lot of time with it. Very little. In fact, >> awareness through movement in that sense the same thing that I'm practicing. I I've learned a lot from him. Not personally, of course. He died when I was four years old. But in in the sense of don't tell me how I'm built, let me build myself. Let me model myself. I can refreshen how my shoulder is with the right approach and it's extremely powerful when you can interact with it. The problem is again many times people don't want to interact with it.

You bring them to the water but they don't want to drink. That's why I keep coming back to this crucial component. First realize that you don't want first that realization is already precious and then from there you know the the old Pinocchio illusion stimulation of the bicep tendon when touching your nose. You don't know this one. >> There are a few versions of it. It's a a pretty common one. You touch your nose and somebody stimulates with a vibration gun the tendon and your nose become longer. You feel as if your nose become longer. Or there is this version.

You know this one. Put your finger against mine and do this. >> Oh yeah. It's very bizarre. It's hard to know what what where my finger stops and yours begins. And another version of the Pinocchio illusion is we sit in front of each other. I rub my nose and I rub your nose at the same time or I tap my nose and I and I tap your nose and again this distortions. What does it show you? The change that you're after is immediately available.

>> Mhm. >> We can It's so potent. It's it's now you're in depression. You're in a bad state. I can flip you now. chemically you know that you can do that but we can do this not chemically and we can do this in a longlasting way and we can transform how we experience but it takes a certain quality of the how we practice that has to be built through education through connection and then applied correctly.

This is the most powerful thing I know this interaction with the models and the transformation of the models

more than any structural approach more than anything else. We have to invest in it. We have to work on our models like for example your bodily model, your emotional model, the schema and your abstraction model, social model etc. We have a point a point of leverage as our committee asked for and we can lift the world. We can change our reality.

This is the promise of being a practitioner being in [clears throat] practice and learning that everything is possible that everything is malleable, everything is adaptable. I love that you mentioned that the movement and sensory maps are very dynamic because the plasticity is so fast in part because it's revealing what are ordinarily cloaked connections. You know, it's it's not the growth of a new connection yet. The connections are there, we just don't know how to access them. So certain forms of movement and sensation like you said like the hot bath and and reading a short story or poem it sitting at that transition point and and having to deal with those two what previously were incompatible experiences unmasks a a a capacity that somebody has right then.

>> Beautiful. And there's no question that doing it repeatedly will lead to strengthening of that unmasking like make it more robust. Let me tell you something about that that I want to share to help people. In my past ways, I would have looked at it and said, "Ah, it's not potent. It's a cool moment, but it's not potent. It's not going." Now, I learned there is another category, another way of looking at it. I don't need high volume, high intensity only to transform. There is another important more important maybe freshness.

>> A moment of freshness can transform you irrevocably. And that is something that I was blind to cuz I was a hard worker. So I didn't realize that I just need a fresh moment. Just a moment where things look different, feel different. I experience my body differently. And I've had these experiences in the past and I've lost them. They've leaked between my fingers. And the reason is I didn't note them. I didn't stop to give them the power by noting it to myself, by paying attention to it. What we pay attention to grows.

So we don't necessarily need a thousand reps as we think like in order for it to lift. Maybe you have a pain in your shoulder and you experience it as a form of hardness that you cannot penetrate, you cannot sense well into it. And maybe through a certain practice of attention, I bring a moment of freshness and then the pain is back again. The past self, I would say that was nice, but it's not going to solve my problem. Now I know, no, this can really solve my problem.

This is how people with incredible challenges can work through things. This can take you above and beyond any kind of discipline, volume, intensity approach can. And I started to respect this and look for these moments of freshness. One reason that I'm so reassured by everything you're saying and and reassured by the idea that there's going to be a return to a deep interest in uh complexity and and really parsing things as well as the realization that what sounds really complex is actually it's it's simple, but it's in the gaps between everything else that's been described. Right? People are like, I can see why people like sets and reps because there's no ambiguity and the ambiguity is hard to embrace and it almost starts to sound like be like water, you know, well like okay that sounds great but you know be like water Bruce Lee like but that he did a lot of sets and reps too I have to imagine.

Yeah, >> I think that it's a basic human drive to want to understand at least oneself. And by [clears throat] trying to do that, we immediately become neuroscientists, psychologists, philosophers. It kind of stems out from there. There's no way to understand one's own life and self and people around you without having some interest in in these things. And the idea that what seems like subtle is actually so potent is such an important idea. I'm so glad you raised it. I I haven't ever had that thought specifically, but now that you say it, I'm like this. Yes. Yes. Yes. Yes. I start thinking about it. So, I'm learning from you right now. And And I think I'm not alone in that. I know I'm not alone in that because we think of peak experiences as like the thing, but by definition, those peak experiences can't come very often. And I think a lot of the uh depression, the the sense of a lack of meaning comes from like just waiting for like the next big thing that if you have enough of those, you eventually realize that they have some potency, but they're not like life, you know?

>> So, as a daily practice with movement, I mean, you talked over the years and we talked last time and you know, like there's this great video of you online. And I love the one where you put on a backpack and you move through a crowded city trying not to uh make contact with anybody as a way to just move your body differently. And some people might look at that and say, "Okay, well, okay, he could do that. I'm not going to do that." But the commute example I gave earlier, it's just a different version of it. I think that if people could start to see their body as this vehicle that they have so much agency over, I think people would still exercise.

They want those health benefits. But if they were to start incorporating small amounts of movement practice, even just with their hands or their toes or whatever, you know, >> and if you can do it while exercising, >> it's it's about a transformation of the whole perspective. I I also exercise. It's about changing the paradigm. Everything is an opportunity. And again, like I told you, like you can do push-ups or bench presses. And by putting attention into the fact that you're pulling the bar close, not just pushing it away. While you're pushing it away, you can you transform something. And I know it sounds as if ah what's that going to do because the corrupted self jumps again and wants this immediate result this or that. But anyways, you're doing those bench presses.

So you don't need to change that. You don't need to start to do some weird toe and finger exercises. >> It's about educating ourself how to approach almost every scenario just like you did with the traffic jam. Playfulness is one thing that we mentioned. Observation and presence are key. What starts to clear its space is this quality of scatteredness. multiple things that are switching, you know, all this starts to become and again remorse hyper expensive.

>> They are much more evil than what we think is evil. We put evil still in this category far away. Evil is the indifference to those things, those little moments that they steal our lives. And it's very hard to get rid of it. It's very hard to to let go of it. But there is a promise in every moment. I start now in the way that I'm talking to you, in the way that I'm listening in and I remind myself. And this brings me to that quality remembering what is important, cultivating that.

How much did you invest in certain concepts? tremendously and that's why they're present in your life. If you don't invest in these concepts, don't expect things to change. Start there. Wake up, think about it, watch this

episode or others or go down the and do it attentively. Make notes for yourself. Keep coming back to it again and again. Start this will start a process. Without this, there is no promise. Without this, yeah, it's true. The corrupted self is right.

It's not going to work. It's too far away. I don't know what to do. I'm freezing altogether. And I can give you some protocol and we've talked about it before. You can hang and you can do spinal waves and you can spend some time in the squat essentially stretching the body open compressing the body fully. Those are the hang and the squat and the spinal waves which is the connecting bit. This is great and great practices that I share with people. And there is more certain games, certain playfulness, but those are the specifics. That's not where the heart of things is. The approach is what produce those things and what will produce many others. And we have to invest in that remembering in making it important for ourselves.

That's the the make or break for me. Would you be willing to indulge us with um some reflections on different athletes and sports or maybe sports? We don't have to get into specific athletes unless you want. Um before we came in to record, you were talking about air sense. I've never heard of air sense. Um we're talking about >> skaters word a different word for it maybe. >> Well, I don't even know that they're aware that they do it, you know. Uh, we were, it was just a brief conversation to give people context. It was a brief conversation about how some skateboarders look particularly impressive like this kid, he's a grown man now, Antoine Dixon, who was it amazing when he was a young kid, still is. He did a bit of a comeback recently.

He's phenomenal skateboarder. But if you watch him, he's doing things that other people do, some things other people don't do, but his arms never like really fly up. his hands don't go up. So, he's doing his knees sometimes are up near his ears as he's doing things. He's catching everything. A lot of people can do that, but he has this amazing ability to keep his hands and arms down throughout the the entire um trick. >> But you're amazed by this because he doesn't recalibrates, rebalances.

>> He doesn't look like he has to use his arms in order to pop really high. he doesn't have to kind of explode out of that squatted position. He somehow managed to put it into his uh the rest of his body and it looks awesome. We'll put a clip to something. There's actually a really terrific bio about his personal comeback against addiction and what he's done with himself. It's just a an amazing story and just but his ability is just it's kind of like if you look at like you know Jordan you know dunking in his prime is like something's different. Yes, he's jumping high. Yes, he's jumping far. Yes, he's got his tongue out and he's like signature Jordan and but there's it's the way the whole thing is put together. So, it's a little bit harder to describe. I should just send people to a clip. And you were talking about across sports this notion of air sense that some athletes just have this ability to orient and move through the air. Can you tell me more about that and some examples that um resonate with you >> and you because you have this >> to a certain extent. Mhm.

>> There are others who have it much better than me, but I I grew up doing acrobatics in Capoa and flipping and doing these things. And very early on, you get to I got the realization of, oh, there is these people that are very coordinated, they're very organized, they're very well oriented as long as that they're in this normal vertical situation touching the ground. But once they're in the air, they have no idea where they are.

[laughter] And then others can navigate this scenario which is clearly unique. >> So we started to call it air sense. Trampolinists are the most extreme example of it. And nowadays high level extreme athlete skateboarders they use trampoline a lot. [snorts] And those in the know, they know because this is one of the most basic tools. Uh, and different pits, landing pits made of foam pieces where you can fly with your bike or your skateboard off of a ramp and you don't need to land and you get to develop this sensation in the air. When is it time to open up? When is it time to change your shape? So since the proprioception is available all the time, is it the vestibular side of things that makes it a unique scenario? Is it a certain gift or or or a a capacity with the vestibular system? I wanted to ask you, >> what would you think it is? If we're really thinking about time in the air, we have to talk about Tom Char, who's this phenom of a skateboarder who, you know, I'm sure some people, most everyone's heard of Tony Hawk. If you took Tony and you combined him with like Danny Wei, who's probably easily one of the best skate vertical skateboarders ever, built the mega first mega ramps and did that or Bob Burnquist, like these guys that like go just huge uh innovators do it. Tom um and a kid named Jimmy Wilkins I represent the the latest generation of but in my opinion anyway the greatest vertical skateboarders that have ever lived because >> of their ability to have so much control, speed, technical ability to do things that typically were only done on the street like kick flips, heel flips to board slide, smacking the board on the way back into the ramp. No hand.

So, ollieing, not grabbing, doing all of these things bigger, faster, cleaner, but also an order of magnitude in every one of those dimensions. And so, if I think about like Tom, I've seen Tom and Jimmy firsthand doing these things. I think they go faster than everybody else. They pump harder and they go faster into this. So clearly they're willing to spend more time in the air. Danny was like this. Like Danny and Bob Burns were willing to spend more time in the air even if it was a simple trick. So it's not necessarily they're spinning around a lot. Like people tend to over uh like overemphasize like how many spins. It's a 900, a 1200. Like there's something impressive to that. But um what's far more impressive to me anyway would be like Jimmy Wilkins, his mom's a ballerina.

I think his father's an orchestra conductor >> and when Jimmy does a handless, so we call an oi on vert where you don't smack the tail like a handless air. His back knee touches the board and he's guiding the board with his back knee. He has the hip mobility to be able to do that. He didn't train it. It's just how he's built. So, I think it's a combination of things, but what makes it look so amazing is how fast he's going. And you don't realize it. You just think how high he's going. But the height comes from the speed.

>> Here there are a few things inside hiding. >> Mhm. >> Which which I would love to unpack further. First is the speed and power when it's mentioned in those fields must be differentiated from the physiological speed and power. I remember the first time I read the the book of Leonid aray, professor archive, the legendary Soviet gymnastics trainer and in his book he mentions the vertical jumps of the Olympic Soviet male team. I think the best was something that I did at the age of 13.

But people are still under the impression that gymnasts have good jumps. They're rebounders. >> They use the floor springs very well. Skateboard similar. >> Mhm. >> Power-wise, strengthwise, nothing. There is nothing there. It's the willingness to go into that speed and to exit from the ramp. And the willingness comes from a

confidence which comes from a certain capacity to orient in space. That's my suspicion.

>> No, you're absolutely right. You nailed it. And uh Jimmy and Tom will hear this and appreciate. There's only historically I left out one legend that isn't mentioned as often as you know Tony Hawk or or Danny or Bob Burnquist um who is truly amazing that they both sort of capture some of the essence of and that's Chris Miller who it's the same thing. And none of these guys are are physically very very large. They're very slight. Um so they don't have a lot of body weight to throw around. Um but although Danny got strong, he broke his neck surfing when we were younger and um came back with a with a thick neck and and doing strength training. He worked with Paul Paul Czech >> um and built himself back up to be really resilient because he was >> jumping the Great Wall of China doing these kinds of things on broken ankles.

It's like you need some resilience. Multiple knee replacements. He's a gladiator. He's like evil conval combined with the gladiator. But if you watch Tom Char or Jimmy, they don't look like they're throwing themselves into it. But that's why it looks so graceful and fast is that there but there is no hesitation. >> And the other part to explore in this is comes from the father of biomechanics Bernstein. you know the Soviet government there is this legendary urban legend. Maybe it's true, maybe not. But there is I I believe it it it might be true. The Soviet government brought him in to improve productivity in workers and he was the father of motion capture. He's the man who came up with it. He put these globes and used an old school camera to capture the motion and study the biomechanics.

And they brought him to this factory and one employee, let's say, was producing 200 perfect pieces in an hour. And then the average was 150 pieces. And they asked him, why? What's so special? He put these sensors on the arm. He let's say it's with a hammer working with a sledgehammer. What did he discover? There is more variety in the trajectories for the worker that gets more pieces perfectly done.

>> More variety. >> Correct. Notice what is the variety where it is in the trajectory of the various joints. But the end result has less variety. [clears throat] >> It is more perfect. >> Mhm. >> That brings me back to the skateboarders. I believe from my experience there is something like a meta movement. A movement that when it's developed correctly, it's capable of achieving the task in any condition. This is the difference between a boxer's jab and a kung fu punch.

How do you develop a boxer's jab? From the first day, somebody interrupts it. You're not throwing punches in the air or on the makiwara. >> Someone parries it or >> someone parries it, moves it, you know, you miss you. From the first day, you use it as a tool under these chaotic conditions. >> So, you develop it. When you look at a boxer's punch, most people will be more impressed with the karate guy, with the kung fu guy because on the air it looks much crisper. We don't people don't appreciate boxing. They appreciate Jackie Chan movies. That is much easier the the the visual side of this fighting. But it's not the real thing in this sense. It's not adaptable. It's not alive.

This is the Instagram reality. Another problem. It has destroyed the real deal. Now I can put a camera on and I can practice here for two hours until I get one good rep. I capture it and I put it online. But when I meet these

people and it's time to move, no it's not happening. So in this sense the skateboarder faces every time a fresh [laughter] scenario altogether different and must be present and adapted the meta technique to the situation. It's not to be perfect in the way that you are like the discipline push hard and perfect it.

There is an aspect of it. The stabilization of performance must resist certain interruptions but must not ignore other interruptions. >> It brings to mind a couple of important things. Um right now there are a lot of very very impressive skateboarders, young and old, male and female. um [clears throat] some like just to mention like this young girl Reese Nelson is just a phenom and her style is great and she's different than a lot of the young kids that are like really flippity and go big. She's a vert skateboarder. And there are a lot of skateboarders now that can do things big, fast, flip, twist, lip tricks. Like they can do all of that on on the street tr also. But there's some that just look like robots. They're just technicians.

They And cuz I was going to say that when in a line where there's no break in the editing, that's where the [clears throat] real magic comes through cuz they have to line things up properly trick to trick. It's not just like one hit. >> Totally different athletes. >> Totally different athletes. But there are some vert skateboarders and some street skateboarders that they still just look robotic and they just and it it's almost like it's too perfect. And it's real. It's too perfect, but that's not what real like the the cool thing about skateboarding is that it rewards a bit of that like you said, approaching things from different angles, but the end point still sticks. And that's the real magic. And there's one other person I have to throw into the mix because growing up this guy he he was like the real evil conval and he's still a legend. He hasn't hit a bad injury and so he he actually brought himself back from paralysis. He can bike now and skateboard a bit. Great artist. Amazing.

Super nice guy. His name is John Cardiel. I was fortunate enough to know John a bit and uh we're still friendly. although I haven't seen him in years sort of online we're we're friendly but I got to see him firsthand years ago and he was one of these people that it looked like everything was chaos around him but he could go bigger and further and he's the opposite of Antoine's like hands flailing and like the amazing thing was the the speed the energy and the I don't want to say imperfection cuz it was perfect in its variety of like entry points But he's he's still revered many many years later and probably always will be. And so there are certain things like skateboarding >> beautiful where it's still celebrated to not just be perfect never miss and and these guys that I'm I'm referring to and Reese um and there are others of course um it's like real poetry uh but sometimes it's heavy metal poetry.

>> Yeah. >> Yeah. It's beautiful and also it breaks the aesthetic. [clears throat] The aesthetics and the performance they walk hand in hand to a certain degree but not beyond that. And it's a slippery slope. I warn people don't try to beautify your movements. You will destroy them. The beauty is a side effect. >> Mhm. >> It's an effect. It shouldn't be a cause. This is what happened to our asses.

[laughter] Where does it come from? It comes from a person who can jump high, who can sprint, who is productive, and it's attractive. Now, it's just the end result. >> It's like uh the exercise equivalent of plastic surgery. >> Yeah. And we found a way, a better way. We always find a better way to get what we want. We want the aesthetics. So we found a way training way how to boost this to create the shelf the I don't know what all this

yeah the but this is a terrible mistake in many ways when you look forward you can develop the glutes but don't disconnect them functionality without function is in this case very costly and you start to get a pirated product that is eventually too good to be true.

In that sense, what you mentioned is very interesting and we start to separate. Also, you see it in tricks, tricking phenomenons, sports that started to develop. Have you seen those kids who can do the juggle like football players, like soccer players? They can do things that no soccer player can do. But I cannot play in the World Cup. Now this shows you the difference. One, I transform myself to the challenges that I'm presented.

Two, I transform the environment or the field to fit myself. So in this case, I control all the parameters of my skateboarding and it becomes perfect yet robotic. Diego Armando Maradona used to warm up with the shoelaces open. I used to love it. Showing you the whole scenario is open. I can still function. Fighting is a very important field in that sense for movement perspective. I'm not a fighter but my interaction with fighting I used to think it was so ugly, so ungraceful that the movement quality was so low.

They cannot do nothing well. These real fighters, MMA fighters, they don't punch well. They don't kick well. Nothing that they do is of high movement quality. And yet, they'll kill you. They solve the problem. They're not about perfecting. They're car mechanics. They're drivers. and they will drive a Toyota and will defeat you with a Lamborghini.

This is what they do. And there are certain fields like that. And skateboarding comes from that because it's the street. Everything always changes. The sidewalks, the heights, your mood, your state of being, the shoes. And there was grace in being able to navigate that chaos and become chaos. Not to control it, to make an order off of it. So this is what you feel. Ah it's not it. And I feel it a lot with many movement fields. Look, look, it's so beautiful. And we even became desensitized for this beauty which is good because in the future this will open the door again for real movement, real performance, real presence and then beauty is part of this equation but not the it's not the everything. It's not all about it. It's almost like it becomes an emergent property of all the I don't want to call them imperfections because they're not there. It's it's it's there's something that's real about what you're describing and what I'm attempting to describe, but I I stumbled. I tried to provide examples.

I'll provide some links, but uh if you ever want to get a little bit scared, you want your amygdala activated a little bit vicariously um and see what real chaos upon chaos harnessed into something beautiful is. although I don't re recommend actually doing it is go on to YouTube and put GX1000 and watch these kids bomb hills in San Francisco. Um >> I've seen some >> they're like yelling get out of the way. Like they're not setting it up so that the streets clear. I mean it's super crazy hazardous and one of those kids ended up dying years ago skitching holding on to the back of a a vehicle.

But nonetheless, I mean they're maniacs of a certain kind. Um, and there's something about embracing the uncertainty. You know, I I have to say, uh, Edido, uh, I did not expect we were going to go where we went today, [laughter] but I would be remiss if I didn't say, and I take no credit for this, I really want to give you due credit, is that everything you just described about allowing for different entry points and coming to a a place

that nails it, like that's you. And that's in some sense the best of podcasting. It's we don't have a script. We didn't come in here. I didn't even show you what was on this sheet of paper. I looked at it a few times, made some adjustments. It's improv to some extent. But it takes a special kind of person to be able to do what you do in the physical space to be able to articulate about that but also to pull in from so many areas of philosophy, psychology, physiology, neuroscience. By the way, your description of the eyes not as cameras.

Like the reason I didn't yap about that is cuz you nailed it. I couldn't have given a lecture [laughter] like that truly. And um you're one of these people that when you speak, people learn. And it's transformed my experience. I go up and down the stairs a couple times a night lately to check on my puppy. And I still can't go up or downstairs without thinking about the way I go up and downstairs ever since we recorded in my house. Gosh, probably three maybe four years ago, five years ago. In any case, >> it's not an invasion into my consciousness. It's it's a real gift.

And I I know people will come away with these gifts. And I really want to encourage people to think about leaning into these subtle ripples, the spaces. This isn't just language. It's the magic that really makes life so much better. So I'm very grateful to you. I really, really am. And please come back again. >> Thank you. Thank you. Truly enjoyed that. >> Thank you for joining me for today's discussion with Ido Portal. To learn more about his work and to find links to the various things we discussed, please see the show note caption. If you're learning from and or enjoying this podcast, please subscribe to our YouTube channel. That's a terrific zerocost way to support us. In addition, please follow the podcast by clicking the follow button on both Spotify and Apple.

And on both Spotify and Apple, you can leave us up to a fivestar review. And you can now leave us comments at both Spotify and Apple. Please also check out the sponsors mentioned at the beginning and throughout today's episode. That's the best way to support this podcast. If you have questions for me or comments about the podcast or guests or topics that you'd like me to consider for the Huberman Lab podcast, please put those in the comment section on YouTube. I do read all the comments. For those of you that haven't heard, I have a new book coming out. It's my very first book.

It's entitled Protocols, an operating manual for the human body. This is a book that I've been working on for more than 5 years, and that's based on more than 30 years of research and experience. And it covers protocols for everything from sleep to exercise to stress control protocols related to focus and motivation. And of course, I provide the scientific substantiation for the protocols that are included. The book is now available by pre-sale at protocolsbook.com. There you can find links to various vendors. You can pick the one that you like best. Again, the book is called Protocols, an operating manual for the human body. And if you're not already following me on social media, I am Huberman Lab on all social media platforms. So that's Instagram, X, Threads, Facebook, and LinkedIn. And on all those platforms, I discuss science and science related tools, some of which overlaps with the content of the Huberman Lab podcast, but much of which is distinct from the information on the Huberman Lab podcast. Again, it's Huberman Lab on all social media platforms. And if you haven't already, subscribe to our Neural Network newsletter. The neural network newsletter is a zerocost monthly newsletter that includes podcast summaries as well as what we call protocols in the form of one to three-page PDFs that cover everything from how to optimize your sleep, how to optimize dopamine, deliberate cold exposure. We

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