



**Transcript of “Steven Kotler: Extreme Flow States
for Humans & Dogs - #173”**

Bulletproof Radio podcast #173



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Dave: Hey, I'm Dave Asprey. This is Bulletproof Radio. Today's cool fact of the day is that people lead cerebrally stimulating lives, people who use their brains a lot seem to develop an extra capacity so that as they age and even after they retire or later in life, they maintain some of what they built up over life.

If you're not leading a cerebrally stimulating life where you read and you talk with smart and interesting people, then you may actually pay for that later in life. Start paying attention, it's good for you. There actually is a study about what I just said.

Today's guest on the show is a friend, an incredibly awesome guy and the creator of the Flow Genome Project, Steven Kotler.

Steven: How are you Dave?

Dave: It's good to see you again Steven.

Steven: Nice to see you.

Dave: You've been on Bulletproof Radio, but today you are on stage with the [Bulletproof Biohacking Conference](#), and since we're actually in the same physical location I wanted to get a chance to record an episode with you where we could get it on video and instead of being over Skype, we could just chat. It's awesome.

People have already heard your story about Flow State.

Steven: It's true.

Dave: They know that you cured your Lyme disease through surfing with actually prescription, you have that insurance company pay for your surfboard. Okay, maybe not. You've been doing some work with animals, that's remarkable and I think has applications for humans as well, things about pack instinct and all. I want to talk with you about that 'cause people have no clue what it is.

Steven: Awesome. Okay.

Dave: Tell me about animals. What do you do with animals?

Steven: My wife and I were on an animal sanctuary in Northern New Mexico called Rancho de Chihuahua. We specialize in small dogs with really big problems. Most of our dogs come to us directly from vets, usually with dire warnings, three weeks to live, a month at most, primarily hospice care or special needs care. Invariably, our dogs live forever. A lot of it comes down to nutrition and a healing methodology which is based around flow states.

On the flow site, we take the dogs together as a huge pack into the back country every day. We usually do three to five miles running up and down mountains with the dogs and we'd put them into group flow situation.

Dave: How many dogs is this?

Steven: 37 is our count for right now. It goes up and down.

Dave: You go run with 37 Chihuahuas chasing you.

Steven: The packs go from Chihuahuas up to pit bulls, but let's say 22 Chihuahuas chasing me, that some bigger dogs. Yes.

Dave: I have a drone, one of those drone camera things. It's awesome. There's a kick starter right now where you can put a little thing on your belt and then your drone will follow you. You can get that HD aerial footage. I want HD aerial footage of you running up the mountain.

Steven: Oh no! It's like the David Attenborough thing. We can do this.

Dave: Yeah, but it's a just crowd of small dogs chasing you.

Steven: This is fabulous, we can do this. Yeah, this is easy.

Dave: Maybe in slow motion so you could see their ears flopping and ...

Steven: Move in slowmo.

Dave: All right. This puts dogs in a flow state.

Steven: It does. This is actually really cool.

One of the old questions from an evolutionary purpose is where does flow come from? The standing thinking has been for really long time that when we came down from the trees, not to the veld and started running down our prey. We had to run massively long distances. Obviously, anybody who got a little more pain relief, neurochemically of course, and a little more flow, we have an advantage, right?

One of the things that people start to realize is that very quickly after we started running down our prey, we started co-evolving with dogs, we were living with wolves, they would co-evolve. We started pack hunting with wolves.

The new thinking is that flow may have evolved as a communication technology. What happens in flow, one of the things that happens is patten recognition goes to the roof. When you're hunting large mammals, you're trying to bring down a buffalo and it's you and a pack of wolves and blah-blah-blah, you don't have perfect communication. If you've ever run with a pack of dogs or wolves through the backcountry and you're not in flow, you're going to be tripping allover dogs. You're going to end up dead trying to hunt a buffalo that way. You need to be able to coordinate.

Flow, all of the chemicals are very, very powerful social bonding chemicals. All the neurochemicals that show up in flow, norepinephrine and dopamine is romantic love, and andomize, that bro sense people get when stoned, and dorphins is maternal love between mother and infant or social bonding as adults. All that same things show up.

The new thinking is that flow may have evolved as a way to heighten nonverbal cross species communication so people could hunt animals. They actually ... There's also a research on this and it's done at the University of Arizona, and what they were looking at is an Anodamine which is one the chemicals that shows on flow. They trained humans and have took some training, and dogs and ferrets to work run on a treadmill and exercise, induce trance and hypofrontality. When your prefrontal cortex shuts off, usually shows up after 20-25 minutes of medium exercise and Anodamine gets released.

They looked, there was Anodamine in the humans, there was Anondamine in the dogs and there was none on the ferrets 'cause they're not social species. Ferrets perhaps can't get into flow but dogs definitely can.

Dave: If a dog can get into flow and human could get into flow, your hypothesis is that there is some communication into species...

Steven: One of the things that I've discovered when I run my dogs, when I first doing it when we weren't getting in the flow together, I was tripping all over them, they were tripping all over me. I went face first into a cactus one day. Once we started getting to flow together, and you can really feel that something shifts. You can really tell when it happens.

Your pattern recognition ... Your senses are hyped and you have norepinephrine-dopamine, you're taking in more information per second and you're processing it more quickly and you have faster pattern recognition, it basically heighten communication.

When they talk about it, there's a real famous Bill Russell quote where he talks about group flow being on a basketball court, it feels like ESP, you know what everybody is thinking and all that stuff. Same thing happens across species lines. I don't really feel I have ESP with the dogs but you know where everybody is and you work together as a collective union. You get heighten mind behavior. Much more effective if you were trying to rundown a large animal or anything along those lines. Very healing for the dogs, phenomenally healing for the dogs.

Dave: They're getting something they need from that.

There's a guy, a Cody London, runs a tracker school. Have you ever heard of that?

Steven: Which part? The Cody Lundin part or the tracker school part?

Dave: Both.

Steven: Not the Cody Lundin part. The tracker school is I've heard of.

Dave: There's various tracker school. Cody Lundin is one of the guys, and there's actually Tom Brown and there's maybe more...

Steven: Yeah, that's the guy now.

Dave: Yeah, Tom is I think the original guy, and then Cody also does one. I've been interested in doing one or both of those. Tom Brown writes a lot about,

essentially, shamanic states. Altered states that he goes into and he teaches people to go into when they're out in the forest. And he has them walk around barefoot and with no food for a couple of days, and some pretty stuff in order to access the animal mind, the hive mind kind of thing.

Then when you have a group of humans hunting in a pack that he'll describe, and his books are fascinating, but that he knows where the animals are. He just somehow knows.

There are definitely altered states that happen in nature when there are groups of animals cooperating that evolve at least sensitivity to other animals, I say definitely and that it's been reported and it's teachable. That's a pretty good thing.

Number one; I was going to say have you experimented with anything like that? You spent a lot of time outdoors doing extreme athletics. Do you think that there's correlation between those states and the flow state?

Steven: There's definitely one of the big flow triggers is a rich environment, lots of novelty, complexity and unpredictability, that's a natural world. Any time you're really going into nature and you decided not walk, hike the trail that you've hiked every day, which obviously if you're tracking animals and they're determining the path, there's a lot of novelty and unpredictability and complexity. You also need to track animals, massively focused attention, really, really focused.

Dave: On the very fine little footprints, things and everything.

Steven: Really, really, really minute stuff. It's obviously stuff that you're going to be better at in flow. There's a lot of really interesting anthropological data about tracking animals and flow states. It's hard to know what you're looking at and you can't go back in time and talk to people and that kind of stuff. It does seem flow and animal tracking evolve together for sure.

Dave: This is all stuff that even evolutionary psychologists don't really seem to talk too much about, at least in my experience. Have you come across people setting this?

Steven: Yeah, there are some people. I tend to think that evolution is one of those filters, evolution of biology, evolution of psychology. It's just one of those focus

that most of the really intelligent people that I've bumped into they apply. Evolution is one of the filters where if you're smart you apply the facts 'cause it's a good filter.

A lot of the flow stuff has, as I was learning it, as I was running it by evolution or psychologist and biologists all the time 'cause they'll call bullshit really quickly, and it's a great filter for that. Yeah, there are some people, but no, these are of course really new ideas.

Dave: They're fascinating ideas and I know why you run an animal sanctuary, but can you explain for people who are watching this why you do that?

Steven: There's a lot of different sides of this story. One of the sides of the story is that my whole life, when I was coming up as a journalist, I covered a lot of different things. I would go extraordinarily far out of my way to hang out with scientists who are hanging out with animals. I spent some time with Patricia Wright in Madagascar studying lemurs. I kept doing all these other things.

I was actually running ... I'm a big believer in service. I think everybody should have a little service component in their life. I was running a different nonprofit, it's called the Reporter's Gym, it was in LA, it was the LA Lakers and Dave Eggers' organization, 826LA. We were teaching intercity kids how to be sports writers, literacy as a ticket out of poverty and it was great, really changing lives.

I didn't particularly love working with teenagers, it wasn't my thing. I like animals more than I like people, and it's in a click that was going extraordinarily far out of my wave to go hangout with animals. I was running this service project and why didn't I just get away from helping people and go back to helping animals. It fit better with who I was.

Rancho de Chihuahua my wife and I started at, and this was her doing. I just didn't know any better. She said, "I want to work with hospice cases. I want to work with special needs dogs, and I want to work in a very, very rural and poor community 'cause those are all the gaps in the rescue network." Nobody wants to work with Chihuahuas, yes they're the most euthanized dog in America more than pit bulls. Nobody wants to work with special needs dogs or hospice dogs because the animals die or their special needs case, you work with them for a year, two years before you adopt them out and the emotional bonds are really strong. It's emotionally difficult, to do all these work is really, really emotionally difficult to do it.

My wife, when she was proposing all these to me, I was, “I’m tough enough to take it. I was, “Okay.” I guess, what do I say at that point? That’s what we did. We tried to build an organization that filled huge gaps in the rescue net. It’s tricky, there’s no ... We’re outside the traditional funding models and things like that. There was a lot of things we had to reinvent along the way, our healing methodologies are very, very different, all that stuff. Immensely rewarding and super, super fun.

I also like, with service, when it’s in your life, when it’s built-in. We live in the animal sanctuary, there’s no separation. When I’m talking to you on a podcast, there’s 15 dogs sitting around my feet. I like that, I like when it’s integrated in my life. I found it was easier to be a little bit uncomfortable all the time rather than having to say, “Okay, this one day a week I’m going to go ... This is my day, I do service and I’m going to be ...” Took myself out of my life. I’d rather have it integrated into it and just reset what normal was rather than trying to change it the other way.

Dave: It was part of your design for being in a state and flow and just something you have...

Steven: That’s the other thing. I wanted to ... I spoke at it this morning, at the conference. There’s an altruism base flow state, helpers high. One of the things about flow is the more flow you get the more flow you get. You’re training the brain. It’s a skillset and it crosses over. If you’re an athlete, you’re a skier and you’re getting lots of flow, on these key slopes, it’s going to bleed into your work life.

Now I’ve got my writing life very flow heavy, creativity triggers flow. When I have free time I hurdle myself down mountains in high speeds, very good flow driven. There’s altruism which is the other thing that is always there.

Everything around me is a flow trigger. My whole life is designed to produce more of this state.

Dave: That makes really good sense. When people read *The Rise of Superman*, you describe this pretty accurately. If you haven’t had a chance to read *The Rise of Superman*, Steven’s latest book, it’s a read worth having. It’s, I would say, a work of art, a great book.

Steven: If you haven’t read [The Bulletproof Diet](#), also a work of art.

Dave: It’s not available yet, Steven.

Steven: Sorry about that but ...

Dave: Although you might have an early pdf of it. I think we sent that to you. We did.

Steven: It's phenomenal.

Dave: In fact that's because you're on the book jacket. You had the very first pdf that came out. Of course, yeah.

Yeah, order bulletproofdietbook.com.

Steven: What he said.

Dave: Even in the New York Time's list multiple times, right? The previous book you wrote with Peter Diamandis, it was Abundance? What was it like working with Peter? He's a pretty successful guy.

Steven: Peter and I are great. Peter and I work really, really well together. We have a tremendous amount of fun. It's a good complementary relationship for us even when we were coming to Abundance. I came to Abundance from a book called Small Furry Prayer which is about the relationship between humans and animals. It's a lot of the work we do in New Mexico and someone who's deeply passionate about animals and people passionate about biodiversity. I had been working on how do you protect biodiversity. Those were the things I've been thinking about.

Peter, who likes people more than animals, had been working on how do you heal the planet and save people. These two streams came together into Abundance and it worked really, really well.

Dave: I had a chance to spend a day with Peter at the Joe Polish event and just catch him a little bit. What a fascinating guy. It was really cool because I share that biodiversity thing with him, because Biodiversity is something that starts in the soil and it moves into the animals and it moves into us. If we don't have that biodiversity, it's going to hurt our performance but it's multigenerational. It's gnarly because you're not responsible or in control of what your grandmother or your mother did yet you're bearing the fruits or paying the cost of that.

If we build the world to be more bio diverse, people can do all sorts of things like even be in a flow state better which is the other thing that I care a lot about. That's why I'm, how do I get to meet these two guys in the same year? It's amazing.

Steven: That's fun.

Dave: I've some questions about the flow state though. I spent some time today at the flow genome project here at the [Bulletproof Biohacking Conference](#). One of things was awesome. It was essentially, you're hanging in the air and it's like riding a half pipe. Another one is being inside a gyroscope, so you're spinning around upside down. The other one is this ridiculous wing that I broke. Sorry. Where you're standing on a surf board and you actually can swing all the way upside down. You have a great way of explaining why these amazing acrobatics are doing something for us. You have three big buckets. Can you walk me through those buckets and why this stuff matters for flow state?

Steven: Sure. As we know, flow state has triggers. These are preconditions that bring on more flow. There's about 17 in them that we know of. There are probably actually more but 17 that we know of. Three of them, we call these the environmental triggers or external triggers, are high consequences, rich environment, and deep embodiment. Let's look at all of them because these are what all our toys are essentially about, these three triggers.

Let me come at it in a different way. One of things that we discover in the work flow genome project does is, we've known this for a while, action adventure sport athletes are phenomenal flow hackers, some of the best flow hackers in the history of the world. One of the reasons is; they're exposed to zero g's, multiple g's and poly axle rotation.

Weightlessness, weightedness, and poly axle rotation is rotation around your middle. As I said, deep embodiment is one of these triggers. Deep embodiment means you're paying attention to multiple sensory streams at once. It's not just your five senses, it's also proprioception and stipular awareness of balance, body position, and space.

All these stuff, when you're paying attention to multiple sensory streams, drives attention to now and it precipitates flow. Action adventure sports athletes get this all the time because if you're pulling multiple g's or zero g's or poly axle rotation,

we're gravity-bound creatures. We're not used to those same sensations, so as soon as you feel one, everything drives attention into the now.

Most people, if they're not interested in action adventure sports, it's because they don't want to hurt themselves. What we create in the flow dojo is a way to suspend the consequences of gravity. We've created machines that basically create these same inputs but there's no danger. You can't actually hurt yourself on them but the other thing about them is you can't try them with your brain. You have to be in your body.

If you try to muscle on them or outthink that it's not going to work, you actually have to feel your way to these machines. They're all even momentum powered but they're not exactly as you found out super easy to use it. It takes a little while and you have to ... You're training up the deep embodiment trigger.

Rich environment which is a fancy way of saying lots of novelty, complexity, and predictability in the environment, again, very big flow triggers. All of our toys, novel, unpredictable, complex, right? All that stuff so again, high consequences which is risk. It doesn't matter if it's real or perceived. It's also a flow trigger.

We've created an environment where there are lots of built-in flow triggers. The whole second half of this is that there's a whole tech side to it. We've got heart rate variability monitors and EG and some of these stuff. As we move forward and the technology gets a little bit better, we'll be able to incorporate real time neurofeedback into the devices. Right now the noise of motion is a little tricky where you can only do it afterwards.

We're starting to incorporate more of that and we're also wiring people up head to toe in sensors as they're riding this stuff. As it's putting them into flow, we're data capturing. What this is going to allow us to do long run is take a big data approach to taking flow state research in the next level. That's never been done before. We're really excited about possibilities with that.

Dave: This is just like a biohacker's wet dream basically, because you're getting all the data. We're going to get data from multiple people. One of the challenges, whenever you're dealing with altered states is that there aren't really words for them. Even flow state, there's different people probably believe in flow state, it feels like this, it feels like that. When you're trying to teach meditation, you

go to what the Buddhist say, “Open the thousand pedal lotus above the left nipple two inches in.” “What?” This doesn’t translate to me.

Yet, that was the distilled wisdom of people trying to say, “There’s this feeling and there’s multiply layers and it’s ...” and its like... a sense, a green color. Not everyone senses things the same way.

When we can tease the data out of that using big data, then all of a sudden we can say, “Do whatever it makes the data look like that.”

Steven: Right. With the neurofeedback, when we know for example, flow is ... From brainwaves, it’s on the border within alpha-theta, right? The big looping swing. This is not data iteration, but the next iteration we’re going to have you in a wireless EG helmet and if the whole sleeping swing as you noticed, just lined in lights. The closer you get to that alpha-theta border line, it’s going to glow blue. The farther away it is going to glow red.

You have real time neurofeedback, you don’t have to break state and look at a screen and say, “How am I doing?” ‘cause it’s built in to the colors of the thing. Not only we have all these flow triggers that you’re playing with but you’ll have real time neurofeedback to try to train your brain too.

Dave: It seems like you would want to use sounds, not lights because when your eyes are open you’re surprised to alpha normally.

Steven: You are right about that. We do have some sound stuff too, the gy I was speaking.

Dave: Vibration would be better.

Steven: The haptic stuff is for sure the best. Over and across the boards, when we’re looking for any kind of feedback, it seems that haptic is the easiest thing for people to respond to.

Dave: Haptic, and my ultimate fantasy feedback device. If someone make this for me please, I’ll buy it. Uses a tongue sensor. They have those tounge.

Steven: Those are for blind people.

Dave: Your tongue is the best sensory organ probably that you have for a lot of things and certainly for feedback.

Steven: Thank you. You mean, just everything in general, not just me.

Dave: No, yours, I'm saying.

Steven: Okay.

Dave: What happens there, if you listen 'cause you haven't heard of that, is blind people can actually see with their tongue. When a computer takes an image and translates into pixels and then transmits them to your tongue, 'cause your tongue is that sensitive.

You can have a full very thin comfortable display on your tongue while you're moving, while you're swinging or while you're downhill skiing or something. I fully see that we'll be doing stuff like that, sensitive parts of your skin. You can patch on those and get very rich data once you train the nervous system.

When did the swing, this thing is incredible. I felt exactly what you're saying. There's a line of thinking, but when you're dealing with gravity, you can't think as fast as gravity acts.

Steven: Right, that's fair.

Dave: You'll fall down and so you're not going to think how you walk, you learn to walk and most of it is automated. There's a little bit of conscious directional change, but for the most part it's totally invisible. How do you balance? Use words for that. There are no words, you bounce until you fall over. Do what makes you not fall over.

Steven: You wrote, it's called the Psycho Swing and it's basically a free standing. It's being in a half pipe or in a snowboard park or in a skate park. It's essentially like riding a swing. People get on and you can always tell, there's no hiding from it. People are either in their body or they're none their body and if they got on and they're none their body and try to think their way through it, they cannot figure it out.

Dave: You just stand there and wobble.

Steven: Right. Usually, sooner or later, even when they're doing that, at one point there sooner or later, if they're going to go forward and that memory of being on a swing set as a kid is going to kick in 'cause the sensation is going to be the same and you watch it. It's like the program gets uploaded, they go from totally klutzy and, "Oh my God! What am I doing?" Then you watch this thing just go "zoom zoom zoom" and so they know how to move the thing 'cause their body actually understand it, it's really fun to watch.

Dave: What's going on from an experiential perspective, is they're actually stopping-thinking, so they can start feeling and then being in their body. Most of us especially in the west, those words don't mean anything, the thinking versus feeling. At least they didn't for me as a young man because ... I could think about my feelings. Therefore, feelings are subject to thought.

When you're in a situation like that where you have to go with what the body is telling you instead of what the brain tells you, it could be really unnerving. Do people get afraid when they're on that?

Steven: Yeah. Obviously, these are high consequences that triggers. They do feel at a certain when they do start to ... Some of them can scare them. On the gyroscope, the first time you go upside down and go backwards, these are not normal sensations to most people.

Yeah, there's a lot, and on the big swing obviously, there's a lot of fear there. It's built-in. The surf swing that you wrote, that's the scale down model. There's a little butt of it. Once you get to the bigger one that we're taking huge 30 foot arc that there's more fear there.

Dave: I can't wait to be on that giant one. I did the big swing. The big swing, it's scary because you're standing, not sitting and your feet are strapped in and your arms are strapped in so you're probably not going to die. You're using your whole body to pump this thing and you pump it to the point that it goes all the way upside down and goes again.

I got the quarters away upside down, I'm almost there and in order to get it you have to really ...

Steven: Yeah, you have to lean with your chest.

Dave: Your natural protective response ...

Steven: Is to go backwards, yeah.

Dave: I'd get there and it took me about four or five swings before I realized...

Steven: You see ... Yeah, you can watch people on it 'cause they have this battle with themselves. It's really funny 'cause the only way to break the plane is to do the thing that makes you most vulnerable. You don't want to do it.

Dave: I did that and I was just getting there and then one of the foot attachments broke.

Steven: You broke our toys?

Dave: I did.

Steven: I wasn't even there for that.

Dave: This is exciting, but unfortunately I'm not a panicky ...

Steven: Which is why we have a very good waiver.

Dave: Yeah, exactly. I think it was just the binding thing. I have these three points attached, not four, there was no danger there at all. I came down. I haven't had a chance to get upside down on the thing yet but I really want to give it a try because you feel the fear coming from the body and it's totally irrational, it has nothing to do with what I'm thinking about.

To be able to draw that line for me is been an enormous gift, but most of the minds come from neurofeedback, because just finding that line.

Steven: That heart rate variability is really good for that, right?

Dave: It's where you start, yeah.

Steven: Part of flow hacking is ... In a lot of situations, flow is found on the other side fight or flight. You want to use the extra neurochemical boost you're getting from fight or flight and follow that focus in the flow. You don't want to give in to the

fight or flight, and that's all about breathing, heart rate variability, all these things and staying calm.

One of the things that's really great about the surf swing is it trains you to do that. It trains you not to panic, because if you panic you literally can't work the device. You're just as going to fold in.

Dave: It's the real time feedback, but it's gravitational real time feedback. I really did feel it. I didn't feel a sense of panic and I think if I have the HRV stuff on me, measuring my sympathetic fight of flight response, I don't think it would have got too high.

There was a definite physical closing in that would cancel my swing motion. That's not something that most people ever going to experience. Not just experience, but you're swinging, "Darn! I did it wrong last time. Let me do it again. Let me do it again. Let me do it again."

To do it in short order, that's what triggers learning in the nervous system and in the body. This is why I'm stoked to be supporting flow genome project because it's the thing that even though I used to do mountain biking a lot as a kid and some downhill stuff. I remember very distinctly going into a flow state that's entering 35 miles an hour and if I hit that rock I'll probably die, so I'm going to find a path. The world tunnels in and most people have been in it at some point or another.

To be able to practice pushing that right there. Even just for five minutes on the swing, it's remarkable. I'm going to incorporate some of those in my biohacking facility.

Steven: Yeah. The other thing is as long as you can find ways to push up the challenge skill's equation, you're staying on that edge. It keeps working and you're training a part of your brain and your body that most people don't even get access to. Once you actually start training it up, really amazing things start happening as you pointed out.

Dave: What happens?

Steven: It's easier access in the flow and it translates, right? Bravery works across situations as you know. Little bit of effort on one ... That's why there's a protocol with lots of different devices and we can walk you up baby steps from

where you are. The flow dojo is designed for everybody from ... First I was ever around the looping swing, my partner Jamie Wheal's 11 year old daughter was trying for a world record at it. She was, "How many loops can you do in a day?" I got in, it was the very first time I was on it. It was terrified, I couldn't even get it above really here. She, this 11 year old girl was showing me how.

Dave: I love it. In fact, being upside down is neurologically useful for people. Ever since my kids were born, I'd carefully hold them upside down. Now, I don't think they see a difference between being upside down and right side up. I pick them up, I flip them around and they just think it's fun. The few response that almost all of us have, when I learned your hand stance in yoga, I've spotted hundreds of people in yoga classes and people scream, they're terrified and they're shacking and quacking just from being upside down because the body is essentially overwhelming the mind at that point. The fear response is so big.

What you're doing in flow genome there is you're basically showing them the fear response so that they can see it and sense it and feel it and get to know it without skinning their knee or whacking their head on something sharp.

Steven: You can down regulate it overtime. You learn to suppress it. It's also, it translates to some athlete. I spent a bunch of time on our equipment and then I go downhill mountain biking and when I start to feel the fight or flight response coming up, I can move through it and into flow a lot easier. My chances of panic in crashing and drying go down.

Dave: There's a level of input, level of, we'll call it emergency input that people are capable of before they go into the blanked out, essentially automated programming. We know this from studying SWAT teams and all. They're actually trained very carefully to recognize, "Okay. I went into this state and now I devolved to my training and I'll pull my gun and fire in this order and I'll ..." Every little thing, but none of it is conscious. It's just built in. It comes from reaching that level.

Is it your understanding from flow genome that we can actually train that level so that it's higher, so that you're still on a conscious state whereas most people would be freaked out, terrified and not present, but you're still there?

Steven: One of two things is ... As it goes up, it's fight, flight or freeze. One of the creasiest experience that I ever had, I was rock climbing and I was very exposed. I

was high above my protection so I took fall, it was a death fall and the rock I was holding on to pulled out of the wall. I was about 50 feet from the top and the boulder was heading right in my training partner. I screamed rock. He dove out of the way and the last thing I remember is I was moving backwards off the wall and then next thing I knew I was 40 feet above me on my belly crawling towards the anchors. I have no memory of what happened. He dove out of the way to avoid the rocks so he has no idea.

Totally checked my brain out and I got to the top of the climb but had, literally, I wasn't even there. I have no memory of it. You know, when I was on top of the rock I was, "Okay, this is either divine intervention." But I sure didn't ... Doesn't that usually come with a sense of angels are coming down and saving your ass? There was none of that. I was ... and there were no aliens who picked me up in their spaceship.

Dave: You looked for implants.

Steven: None of that. I was, "All right. This must be natural." I have no ... Still this day, I still have no idea how I got to the top and it was the first time I saw what that actually happens when your brain totally checks out and performs and you perform anyways on that way.

Yeah, you can stretch out, you can stay conscious in higher pressure situations over and over. I think it really translates and actually adventure sport athletes talk about this a lot.

One of the things that, in western culture specially, we have really balkanized death. We've hide our old people away. We send them off to nursing homes.

One of the things about working with animal sanctuary is death is a daily part of our lives. We'd work with sick old animals. Actually, in sports, injury is a daily part of your life. There's something about confronting that. I come back from a day, a downhill mountain biking and it really doesn't matter what problem I was having as a writer. It doesn't compare.

On Friday, before, if I'm going to ride on Saturday, I could have the biggest problems in the world. I go riding, I confront some level of mortal fear. It resets my nervous system and at a totally different level. The problems I was dealing with the day before look tiny. My performance goes way up. Which I don't know if you can tell

people that getting more comfortable being around death and dismemberment is a good thing for work performance, but it actually is.

Dave: Buddhist teachings are that all fear is fear of death. The more neurofeedback I've done and the more I've dug into my own crap, pretty much every fear comes down to an irrational fear of death.

You might think, fear of being alone. It comes down, if I'm alone no one will feed me. If no one feeds back I'll starve and I'll die. It's this dumb little thing, and none of it is rational. It's all neurological.

Yeah, I'm of the same opinion there that anything you can do to allow you stare death in the face and go, "Yup, that's death." without running away and without jumping towards it, either one, but to be accepting and that it's liberating in a while bunch of ways that don't make any sense at all.

Steven: We do a great exercise of the flow genome project that makes people very, very uncomfortable. We ask people to write their own obituary. Which is a really ... Which is great. It's really ... Write your own obituary and judge your own life and make decisions that way. It makes you think about immortality. It makes you really come ... It's a very, very deeply, deeply powerful exercise for people.

Dave: It's not what I've done and it's one I can imagine though, and I don't think it would bother me in the slightest given the things, just the training that I've done. I think it would be bothersome for most people. It's one of the things we'll do it afterwards.

Steven: You are not most people.

Dave: I'm not. No. I've done all these huge ... I spent 6-1/2 weeks with electrodes stuck to my head, with a lie detector telling me when I'm lying to myself about things ranging from death and all these other things.

Steven: That's amazing.

Dave: People say, "Why do you do all the things you could do?" I'm, "I learned how to get it on my own way." Everyone finds their own path of doing that stuff and I use a lot of tech.

I'm really intrigued because even though I've done that, when I get on that giant upside down swing, I still find ...

Steven: You just get ... Amygdala function is amygdala function. You can't beat it.

Dave: Yes I can. Give me time. My buddy gives me that thing. It's an ongoing challenging and finding ways to see how your body does something without your permission or knowledge and then to become aware of it and then to become in control of it is the path of becoming a better human.

Steven: One of the things I always think is interesting. Laird Hamilton was the first person who said it to me.

Dave: He's here at the conference.

Steven: Oh! Is he?

Dave: Yeah.

Steven: If you ask Laird, are you afraid out there? He's, "I'm afraid all the time. You just deal with it and you get better at dealing with it." People think that action adventure sports, these athletes, there's bravery ... No, they're just as terrified as you are. They've just learned through practice to push through it and take all that energy, meaning, all that neurochemistry really and utilize it.

Dave: It's a remarkable thing to understand that, that facing terror teaches you to face life, actually, not just death.

Steven: Absolutely.

Dave: Steven, I always have a great time. I just wanted to just hangout and chat with you and we get to do that on occasion. Next time I'm in New Mexico we'll definitely do that over some green chile. I grew up in New Mexico, definitely miss that.

We're up on the end of our show, and I've already asked you your top three things that are for people in a performed best. I ask that at the end of all these interviews. I'm trying to figure out what else I should ask you. I'm going to meta on you. What

questions should I ask you at the end of the show that would be most useful for people?

Steven: This isn't even fair.

Dave: Say something that people like to hear about.

Steven: You know what? I'll give you something. I did a different podcast. I'm sorry, I was cheating on you. This week, and somebody else asked me this question. This is one thing that I've noticed. Just because the way that Brian has worked, we privilege negative emotions, we privilege negative memories.

One of the things, and I think it's most useful to people is very few people seem to trust their own history. You have a record, all of all the things you were good at in your life. We pay a lot of attention to things we're bad at but we don't look back and noticed all the little skills that you were actually good at along the way.

I think looking back over your life and going, "You know what? In difficult social situations in foreign countries, I actually, overtime," I've been four or five of these situation. "I've done really, really well."

When you start looking for those patterns, what are the weird little things you've succeeded that? There's a whole alternate record of your life and of the success. I think it points in interesting directions where you should move in the future.

I think people pay a lot of attention to the negative direct failures, but there's the tiny microscopic successes that you never notice. Those are the things I think are really, really valuable to use as a directional arrow.

Dave: Would you tell that then with gratitude, essentially noticing them and then being grateful for those, or is that a separate thing?

Steven: I think gratitude is a separate thing. We've talked about this, I think gratitude is extremely useful, especially; you have to linger on it by the way. Gratitude lists are something we use all the time at the flow genome project. There's a lot of written oral biological reasons we use it.

One of the most important thing from people to use gratitude is, again, this goes back to amygdala function. We have a, what Daniel Kahneman call the negativity bias, a tendency to privilege negative information over positive information.

If you want to actually ... You have something called an emotional set point. It's basically how you felt. It's why essentially feel the same way as an adult that you did as a little kid. It's because your emotions exist in a very particular bandwidth. It's very difficult to reset your emotional set point to be, "I want to be happier."

One of the only ways you can do it is actually reflect on and linger on positive emotions, 'cause we don't do that very often. We will linger on the negative emotions, what happens with the amygdala when you privilege the negative is it becomes more sensitive overtime. The exact opposite works as well when you start to linger on the positive. You make your gratitude list, "I am so happy that my dogs are healthy today." or whatever it is that you're being thankful for, but you want to linger on that feeling for about 10 seconds because we don't do that, but it retrains the brain. That can alter your emotional set point.

Dave: Every night when I tuck my kids in, we do a gratitude list. I'm just building in to the way they see the world 'cause I think it's one of the more important things I can do as a parent.

Steven: Yeah, I agree with you. Jamie does it, I don't have any children so I do it with my Chihuahuas and I don't quite know if it works for them as well. Jamie does it with his kids, my partner, the flow genome project. Yeah.

Dave: Yeah, I think it makes them happy. They teach you stuff. The other day, Anna, she's 7, just out of the blue said, "I'm grateful for the Big Bang, because without it there wouldn't be anything." So cool.

Steven: That's great. We can't beat the big bang banana.

Dave: On that note, Steven, it's always a pleasure. Thanks for being on Bulletproof Radio again. Thanks for coming to the conference and being our keynote speaker and bringing all those big toys man. It's been such a blast. People, everyone is coming out to me just saying, "What an experience it's been to play with those things." They like your key notes. Thanks again.

Steven: Thanks for having me. My pleasure.

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