Training Call #5: ANS & Self-Regulation Review, & The Two "Ceptions"

Irene:

All right. Welcome everyone to training call number five, numero cinq in French. We are going to get started into the content today. The topic today, ANS, so autonomic nervous system and self-regulation review. It's going to be a little review today with a little added extras on what I call the two ceptions. That's my shorthand for neuroception and interoception. I'm also going to read a little bit from Kathy Kane and Steven Terrell's book. This book is on the book list. It's called Nurturing Resilience: An Integrative Somatic Approach. This is really a theoretical book. There's no practice here, but I wanted to read because the passage is too long really for me to copy into your handouts. If you would like to read this book in full or have this reference, then I would suggest having the book for your own use. I will read a fairly long page that defines interoception and neuroception in a way that's perfect, so there's no need for me to paraphrase it. I'm just going to read it.

As we get started, I want to start with just a few housekeeping notes, quick notes. As you know, we're going into May with all of our new labs and modules of the course of SBSM, but the moderators, Mark being one of them, will stay on until, I don't know the exact date ... Bonnie can probably put that in the chat. It's into June. I really want to encourage everyone to ask questions, or at least go into the question area, the comment area, and read. Read some people's questions. Listen, or not listen, read the answers. Take use of the FAQ vaults. Has anybody just gone in to read those, even if you don't have a question? Yeah, it's a really good place to study. As I've said before, when you learn, you start to heal, because this stuff goes into our human brain, the higher brain, and it trickles into our cells.

June 17th for this round is the final day of moderating. It's four weeks after we officially end. Okay. Just really make use of that. We will pause moderation until we do the next session, which we are still not a hundred percent dialed in with, but we will. All right? Yeah. Someone said, "Yeah. Fun to read the Q&As." That's one thing. Then the other thing is how are you integrating? Today's call is shorter, so that's why I'm taking a little time to ask questions. How are you doing with integrating what you've been learning? Even if you've only gotten through lab one, doesn't matter, how are you integrating? Maybe just in the chat, put a little sentence

or a few words. What are you noticing that you're integrating naturally, spontaneously, organically as we're at this kind of really halfway point in the modules of SBSM.

I know some people here are listening to the recording, so I'm going to read some of these out. Orienting, being kinder to my kidneys and body in general. Feet on the floor, integrating. I pause naturally throughout the day to orient. I orient while doing routine tasks. Following impulse. Orienting and following my breath. I'm on lab two and I'm still doing conscious orienting or orienting consciously. Great. Someone, good honesty here, going too fast. Anybody else find that you're going a bit too quickly? So hard to titrate as I'm hungry to learn and regulate. That's a good problem to have. I'll say if you're feeling this desire to rush because you want to get more done so you can heal faster, just be aware of that and maybe even see, where is the past coming in with that. Is there something in my past history that's making me want to rush?

Third time around, integration is getting much easier. Working on it every day, responding to impulses, orienting, following more impulses, pausing. It's easier to stay by myself and also set emotional boundaries. We've got some themes here. Orienting, more impulse following. Someone said, hard to remember when not doing the exercises. That's fine. Use the recordings as much as you have to, as much as you have to. Then slowly you'll see that they start to integrate. Someone said hot water on the flanks. I think that might mean your kidneys, so orienting. Yeah. Hot water bottles can be really useful, if you know those red hot water bottles that are thick plastic. Fill them up with hot water, put a pillowcase around them. They're really lovely to put in parts of your body to feel sensation, heat, warmth. Orienting while driving. Yes. We all should be orienting while we're driving. Safety fact. Defensively orienting too. That's the one time when you actually want to be actively defensively orienting, to be aware of all the things in your environment. Potent posture. Yes. What my posture is, how it relates to how I feel. Yup.

I have a tendency to fall into my computer, because I want to connect with you. And so I have to constantly bring myself back. Something to be aware of if you spend a lot of time on the computer. All right. Thanks, everyone. I'm not going to be able to read all of them, but thanks. Thanks, thanks, thanks. Containment. Yep. Being okay with titration, going through the labs. That's that holding. Something that you're getting into this week, the containment lessons. Touching, holding, diaphragms, all these things. All right. Thank you, everyone. All right. Okay.

Before we get into theory, I'm going to guide you through a little mini lesson. Let's shake it up a little bit today. Maybe put down your pens, if you do have pens. Of course you can take notes if you want to, but let your eyes come away from the screen for a second. Of course, Mark and Bonnie, you can do this too. We'll let the chat be quiet, but let your eyes come away from the screen. And even for myself, when I do that, I notice a bit more of a breath, any desire to make any sound.

This week we're going to touch into the first kind of lesson around healthy aggression, mainly theory. Last week, the training call was part one of anger and healthy aggression, the training call. This ability to feel any urges when you're orienting and connecting. Are there any sighs, any breaths, any exhales that feel bigger? Or is there a noticing of any tension? Just noticing what is as you let your eyes and your focus come away from the screen. Of course, you can bring your eyes back to the screen if that feels like an impulse to see the gallery, who's here. Then come back out to the environment.

The word that I'm feeling now is smooth. How can there be a smoothness between moving your attention and your orienting processes to the outside? Then you can maybe come back, everyone's still here, and then go out. Can you sense the ground under you? Have you been sensing the ground under you, whether that's a chair or the floor? Was it in your awareness or did it come into your awareness when I mentioned those words? Yeah. If it wasn't in your awareness, that's not a big deal, just it wasn't in your awareness. So bring it in.

If you track through your internal body, that interoception that we're going to talk about today, what do you notice internally? Is there anything standing out in your physiology that's either familiar? Different? Is it quiet in your space or do you hear sound outside, in another room? How easy or difficult, gave you two choices there, is it to just be in some of these questions? Or is there a multitasking of things? Are you checking things? Are you looking at things that are more work-related or mobile phone related? Can you really step away from doing and just generally land in the moment with each sort of slice of awareness and attention. Not worrying about how long this is going to go, but more what is it like in the moment and then the next moment and then the next moment.

Does your system take in the oxygen around you through your mouth, through your nose? A bit of both? How can you maintain this sense of awareness with just a generalized attention? Then if we think back to some of the shares from the chat about the integration that some shared, and maybe you didn't share and that's completely fine, but just notice how even just

this simple little four to five minutes, if that pause, what has that offered your system in this moment?

Everything I mentioned you've already heard, right? Nothing was new, but even in this moment, what have you noticed that might be interesting or different or familiar or curious or what? Just again, if it feels like an impulse to do so, just share in the chat what you might have felt. Someone said, "Makes me want to close my eyes." Yeah, take a little rest. That's fine. Someone said, "Too many problems causing invasive thoughts, so I'm in my head." Yes, that mind can be quite pervasive. Good to be aware of that. Then how can you keep bringing yourself back to some of the basics?

I felt that I had to have pie. It was cold. Piece of pie can be good, for sure. Good noticing. More focus on the now. Tears. Yep. The essence of slowing down can let us sense emotion and sensation that's hanging out. expanded sense of awareness, peaceful, more present, some residual grief surfaced. Yeah. There's another kind of quality of emotion. Sadness. Reminder of how I can unclench my body. Had a busy day and I feel a bit activated. Had to go to the toilet. It's perfectly fine. At ease and yawns. I was in a rush, feeling calm, and space. Someone said it's quite a dichotomy between relax and angst. Yeah. What's interesting about the human system is we can hold very opposing, polarizing qualities in one. When we get into working with the heart space in future labs, I'll talk about that specifically, that we can hold dual qualities that are quite paradoxical at once.

Some people are saying, "Realizing how much pain I'm in right now." That's also a good awareness. Not always pleasant, but something to be aware of. The lessons this week work with a little bit of this, finding the painful and the pleasant is one of them, and tensing and relaxing, so actually working with going into the quality of pain, going into the quality of tension. Then the fancy word from somatic experiencing would be to pendulate and move to a part of the body that is less painful, that is less tense. That's a little trick that we will teach in that lesson.

All right. Let's get started. Yeah. Someone said eager to start learning. Cool. Okay. As you all know, what we just did was quick and something that I encourage you to practice as much as you can on your own, as much as you can so that you can start to integrate and add these things into just your natural, daily environment and life. One could say there's no reason that you should wait to the very end of the day to pause. How can you pause first thing when you get out of bed and you're sitting on your bed? Pause, orient, connect, and just keep doing

these in little bits. It doesn't have to be for long, it could be for 30 seconds. Yeah. All right. Handout. Thank you everybody for your comments.

The first thing I have up here is just, this is a review watch. Biology of Stress video number three covers a lot, some of the things that I'm going to cover right now, but it's always good to review. The number three is the vagus nerve 101, where I get into the branches. The reason why it's important to understand, in my sense, and of course the teachers that have taught me, the vagus nerve is really complex. It isn't just about relaxation. I know many of you, maybe have come across other teachers in the world of the internet and they'll say, "You just need to relax the vagus nerve." That's completely misinformed information. It's just not accurate. It's not enough. I hope you're seeing that the vagus nerve is not just about relaxation, it's also what puts us into freeze. It's also the social engagement.

Recap of the nervous system. First word, two main nervous systems, invertebrates. That's a fancy word for spine, vertebrae. Number one, central nervous system. That's the brain, under the skull of ours, and spinal cord. Brain and spinal cord. The central nervous system is the brain and spinal cord. Those are the two words on that line. Just for a little bit of tactile stimulus, bring your hands to your head if it feels okay. Just, as odd as this might seem, say hello to your brain. We're always fretting about how it's overthinking and causing us stress and grief. Let's consider what it might be like to just imagine that brain tissue inside and just thank it for working, because if you're sitting up right now and breathing, it's working. Yeah.

Then if you even bring your hand to the back of your neck where that spinal cord comes through the brainstem, same thing. I know this seems a little remedial, but if you're sitting up, if you can digest food and talk and walk and you can wiggle your toes and your hands, your spinal cord is working. I've had the fortune of connecting with a gentleman in my hometown here who's just been paralyzed, partial quadriplegia, from a car accident. Someone wanted me to consult. I met him. It was just so interesting because I don't have a lot of opportunity to work with folks anymore in that way. You have to consider how you guide someone through something differently when they cannot feel below their chest. It brought a new appreciation, for me at least. I'm offering this to you, you've got this capacity for your brain and spinal cord to move you and go to the toilet and eat. It's really a blessing. I could tear up thinking about him. Full of activity in life and then have this terrible accident. Now he's learning how to do all these things.

Again, not to say that dysregulation that's causing chronic illness and autoimmune is not a serious thing, it is, but I wanted to just bring that connection to your brain and spinal cord to go, "Wow. You are working." You've shown up here. You can read, you can talk, all these things. Sometimes perspective is an interesting thing to play with. I just wanted to offer that because it's top of mind right now for me. Number two, peripheral nervous system. Peripheral. So this is everything that comes out of the central. And we hear the word peripheral vision. That's where you can see, if I have my arms out here, and you could even play this with yourself. There's a point where you see your hands come in front of you. That's your peripheral vision.

And the peripheral vision is the next line down, autonomic nervous system and the somatic nervous system. So I've got my cup of something here. It's coffee, if anyone's interested. And this is happening because my peripheral nervous system is working. I can feel the weight. It's not hot, so I can fully touch it, right? But if it was scalding hot, I would be more tentative. So that is your sensory and somatic nervous system working part of your peripheral.

Now, the reason why it's so important for me, and many of our alumni will attest to this, is that we're doing movement in this course, the Feldenkrais movement, potent posture. You're feeling the movement to parts of your body. You're being attentive to your world of movement.

And if you look at number two here, by working with the somatic nervous system, by being more aware of these sensations and how we feel things and how we move through space, we are, in a way, influencing the autonomic nervous system and of course, the peripheral nervous system. This is why it's not enough to just work with thoughts, when we know that there's a lot of somatic held survival stress in the body that is impacting not just the brain and how it's spiraling into fear and worry and all that, but how the tissues and how the movement responds to the world.

If you've ever been around, or you might know this from yourself, when you're really anxious and worried, your movements aren't smooth. They're jagged, they're rigid. Or if someone is really collapsed, they can't muster up the strength to be really strong and boundaried. Right? You need sympathetic energy to set a boundary, to say no, to fight, to flee.

So when we're stuck in these states of dysregulation, this somatic motor nervous system is also impacted. That's why working with the movement is, in my opinion, equal to working with the stress organs, working with orienting, working with learning the theory, et cetera.

So the peripheral nervous system is the autonomic nervous system and the somatic nervous system. Next paragraph down. Between all these nervous systems are pathways, sensory and motor, that communicate. That's the next word. Communicate signals. And that I have in brackets there, and this isn't the full list, but just some of them, sensation, stimuli. So like light, for example, cold, sound, hormones, or signals for function, metabolism, homeostasis, actions, so our movements, and survival, fight, flight and freeze.

So if you really think about it, this entire nervous system of ours, in all of its branches, central and peripheral, is exquisite in its capacity to self-correct and release what it needs when it needs. Now, of course, we know when things go off, certain parts of our body might not release what it needs. Someone who struggles with, say, diabetes, lives with diabetes, depending on the type, they might not secrete insulin when there's sugar. That's a problem. You want the system to tune in. "Ah, there's sugar. Sugar is in the blood. We need to pump out this hormone insulin to bring the sugar into the cells."

What's interesting is I've had a few of your peers, one in particular I'm thinking about, who has mentioned that as they become more regulated and more socially engaged, their blood sugar levels improve without any insulin. So that's a showing, a telling that this ventral vagal portion of the vagus nerve, which you've learned about, when it is more online, it directly helps the autonomic nervous system processes, as I have here, that release the hormones for homeostasis of blood sugar. That's just one example.

Some of you might find, even if you don't have something as extreme as a type of diabetes, you might find that your ability to regulate your blood sugar improves. Has anybody found this? Your hunger cues become more specific. You know when to eat and not to eat as you become more regulated. That's not a coincidence. That is an actual autonomic shift in your system. And yeah, two people have already said, "Yes, yes." One person said, "I've been more hungry, more cravings." Yeah.

I don't understand when people say, "I forgot to eat today." I used to hear that a long time ago. How's that possible? I'm hungry as soon as I wake up. And so, we know that these hunger cues

also give us clues as to how healthy our system is, our hormones. All right, so that was a bit of an example to this one.

And yeah, someone said, "Reduced my gluten sensitivities." I have a strong hunch that a lot of our sensitivities and allergies, the food supply has its problems, but a lot of them are due to dysregulation and the system having hyperactivity to just things that are considered normal and okay. So you might find that there are differences in your sensitivities as you become more regulated.

All right, next line down. ANS. The autonomic nervous system has two main branches, plus its sub branches. Again, this is a review. Sympathetic nervous system is our fight, flight. Fight, flight survival system. Everyone should know that by now. Fight, flight. Sympathetic nervous system. Again, remember, this is part of the peripheral nervous system. You need that peripheral nerve to go to the muscles, to act, get contracted, all these sorts of things. The blood pumps so that oxygen comes to the legs so you can run, so you can move, this sort of thing.

The parasympathetic nervous system is our slowing down system. Slowing down survival system. Often, people will say the parasympathetic nervous system is rest digest. That's not accurate. I like accuracy, right? Parasympathetic nervous system is a slowing down. Part of it is rest digest. So if we go to the next line here, then the PNS, the parasympathetic, is broken up into two branches.

First little bullet point there, fast, clumsy, and quick, shut down nervous system. The dorsal vagal complex of the PNS, fancy words, but that's what it is. The reason it's called dorsal, dorsal just means back, le dos, French, means that vagus nerve coming out of the brain is coming out behind the brain stem. Dorsal.

So this would be the nervous system that something is so stressful, you faint. Something is so stressful, you feel dizzy, "Ugh, I think I'm going to pass out." Or I'm getting really sleepy, but I shouldn't be tired. I was completely awake a second ago. I just heard something stressful. It's fast, it's a protection.

In a more accidental situation, it would be you have a really bad injury, you're losing blood. What do you want your autonomic nervous system to do? Slow gears down to the first gear, right? You don't want to be revving at the fifth gear. Heart rate goes down, blood pressure goes down. Everything comes into the core to preserve the brain and the organs, and to not lose

blood, say, if an artery has been cut or something like that. So we want, this is the other thing, we want these shut down responses, these freeze responses to happen when there is a real threat.

Next one. Slow, refined, and more evolved, calming down system. So again, this is in reference to the two branches of the PNS. So one is fast, clumsy, and quick. The other slow, refined, more evolved, calming down nervous system. This is the ventral complex, ventral vagal complex of the PNS. And ventral just means front, devant, and it's the brainstem. The vagus nerve is coming from the front of the brainstem.

So this is what we would call that self-regu;ation. This is, "Ah. I'm feeling a little stressed. I'm going to just slow things down." And I'm maybe going to talk to someone. I'm going to connect. That engagement, that essentially connects to the heart. And there is a connection from that ventral vagus of this parasympathetic nervous system, it goes directly to the heart. Heart to something called the SA node. It's a sinoatrial node. It's the pacemaker of the heart, and it sends it the signal that says, "We can shift this intensity."

So it's like if you're driving a car really fast with a manual and you will never want to gear from fifth to first. Not good for the car. You gear down fourth, third, slowly, slowly, you brake. That would be an analogy to this slowing down that's refined. If anybody remembers learning how to drive a stick shift, you did. It's not very, very good at the very beginning. It's a bit clunky. You pop the clutch, you're not so sure. And if you drive different cars, the clutch is different, different cars. I learned on an F250 diesel truck. Very big truck. That clutch is very different from Seth's little Volkswagen Golf.

And I use that example because people have different clutches, if we use that example. Their nervous systems shift in different ways. But essentially, it doesn't matter the vehicle, you want to be able to gear down or gear up in a smooth way. That make sense? Strange analogy, I've never used that one before.

But if you've driven these vehicles, you know you've got to attune to the engine and the clutch and the gear in different ways. We could say, when you're attuning to other humans, you have to decide what kind of gear is this person in? How gentle does the clutch have to be released? And that will, when you have that refined slowness, that's you connecting at that ventral level. Right? You're connecting at that ventral level. You are putting yourself into a more slow, connected way. And then that often will help the other person. Kind of mixing metaphors here.

To page number two, page two. Go to the next page. All right. Here's where it gets more complicated. Again, this is a review. Just in different ways we're reviewing. So the dorsal vagal complex, this clumsy, unrefined portion of the dorsal shutdown has two, that's the word, two main modes it operates in. Low tone and high tone. Low tone dorsal and high tone dorsal.

So if we keep on the analogy of the car engine, the manual transmission, the engine is always the same, but you're shifting the gears. So we could say that the low tone is where it's pretty smooth. This is the rest digest. So the next line down, low tone is the true rest digest parasympathetic nervous system. The rest digest parasympathetic nervous system, and it is responsible for recovery and healing, those are the next words, of the body's many organs and organ systems. I'll say that one more time. Low tone, below tone dorsal of the parasympathetic nervous system. Low tone is the true rest, digest, and is responsible for recovery and healing of the body's many organs and organ systems. We could say all the cells, everything, which are the next four bullet points.

So, first one, support tissue repair. Supports tissue repair. So that's our skin, our hair, growth. All the cells that are considered tissues. Immune system response. Immune system response. So again, when system is very good at being in low tone, dorsal, when we're not in sympathetic or we're not in a stress mode, but we're just chilling, we're sleeping, when we're in this low tone dorsal, our immune system does its job, it works better. It seeks out cells that need to be killed through something called apoptosis. It's a fancy word for cell death. It goes into a kind of anti-inflammatory mode, all the things, all the things that it needs to do.

Next line down, barrier keeping of the gut. The gut. This is a fancy way of saying stitching up the gut. So our gut lining is really thin. Really thin. And every night when we sleep, we want it to repair. Just from the wear and tear of digestion and all that kind of stuff. And so, at night, we want this rest digest to occur, this healing. And literally it's like I envision, oh my goodness, knitting needles, right? Stitching up, creating a lattice.

But of course, what happens if we're not going into this low tone dorsal at night because our system is in dysregulation, our gut doesn't get repaired. And hence, this is why so many that have lots of dysregulation, or if they've lived with dysregulation for very long, the gut does not heal. It becomes irritated, becomes leaky. That concept of leaky gut. And it also doesn't digest as well. Because there isn't a strong barrier between the food that's being digested and then the capillaries that bring the nutrients into our bloodstream for cell needs, for that kind of stuff.

So keeping, people are always talking, "Oh, the gut's so important. The microbiome is so important." That yes, it's important, but it's really important because we need it to be healthy and robust so that we get nutrition properly to the system, to the cells. So you can eat all the great food in the world, have all the great prebiotics and sauerkraut and all the things, but if your gut lining is not strong and robust and being repaired at night, the food still isn't, it's just not going to do the job that it needs to. And I know a lot of you will say, 'I was doing all these things, but I still didn't have a good gut. My bowel movements still weren't good, even though I changed my diet, have anti-inflammatory foods in my diet," all that kind of stuff. So this is where that comes in.

And then the next line down, cell repair and regeneration. Again, this is all, in essence, in reference to us wanting to be in this rest digest, low tone dorsal of the parasympathetic nervous system. And it needs to be in that slow down mode for this repair to happen.

So for healing and health, next line down, and our smarts, meaning our brain to be restored. Because remember, the brain is also in this cell repair and regeneration. It's not just the gut and these immune system responses. It's every single tissue that you have, from the top of your head to your toenails. So cell repair and regeneration.

So for our health healing and our smarts to be restored, we want all three branches, all three branches to be in sync with each other. So in other words, we need this low tone, sympathetic, high tone. We want to have a threat response active when there's a real threat in the moment. We want to have our system go into the low tone when we're sleeping, so we repair. But we also need a little sympathetic juice when we want to get up in the morning and move our bodies and do the laundry and go for a walk and all those sorts of things. We need a little bit more of that activation. So, in other words, this is a fancy way of saying we just need harmony between all of our nervous systems. All of our nervous systems.

Someone said, "Does that mean I have to sleep without waking in order to repair?" It depends on what happens when you wake up. You can wake up in the middle of the night and go to the bathroom, but you can stay in that kind of low tone. You're kind of half asleep, you kind of fumble to the toilet. You come back and then you're back out. But if you're waking, and you're waking and you're alert, and you're popping yourself out of low tone, dorsal, then yes, that will disrupt your repair at night.

So sleep is a very interesting indicator of where we are with our regulation, and it's not always cut and dry. You might find that as you become more regulated, you might experience your sleep being a little more disturbed, because you're not hitting the pillow and you're passed out in what we might consider to be a high tone dorsal shutdown. Your system only knows high activation and high shutdown or big shutdown.

I won't go into all the sleep pieces because it's complex and it's also quite simple, right? It starts to shift as we become more regulated, but eventually it's such that we want to fall asleep quite easily. Stay in that low tone for the six to eight hours to nine hours, depending, and wake up in the morning feeling refreshed, and like our body has gone through a process of regeneration and repair. That's what we want.

Okay. Page three. No, page two. I'm ahead of myself. The two ceptions. I'm going to have a little water. Take a second to pause, everyone, if you need to. The two ceptions. So the first ception... And this doesn't mean that one is more important than the other. I just named it this way. First one is interoception. Interoception, so the internal perception of our environment. This ties in beautifully with what I was talking about last week about feelings and sensations. Remember, I posed the question, where do feelings come from? They come from the body. They come from sensations. And then the brain interprets them. So when we're not connected to our interoception, it's very hard to be accurate in what we are sensing and feeling.

And it's hard to convey what that is like when it gets online. All I can say is when your interoception and you're really tuned into this internal physiology, your instincts, your impulses, your accuracy of what you're noticing is just sharp. And it takes time to get there. And, of course, we're built to have this, right? So a lot of what we're doing in this work, we're not only learning, but we're unlearning the patterns and behaviors and habits that have kept us from listening to this internal interoception area.

The second ception, neuroception. Neuroception. This is the perception of safety and/or danger. So it's perception of what's out there. So it's almost like we talked about the central nervous system and the peripheral nervous system. Again, this is not an accurate analogy, but I'll say it anyway. You could say the central. This is the intero. And then everything on the outside is the neuroception. So how do you perceive the outside world? And this is general, or it could also be specific. You walk down a path, and something says, "I don't think I should go down there. I'm going to go down here." That's your neuroception working.

Now, some people will say, "How do I know if it's accurate?" And that's a great question. You have to trial and error this. As we become more regulated, these perceptions become accurate. However, when there is quite a bit of dysregulation, it might be flipped. We might perceive something as safe, but it's actually the worst thing for us. Or we might perceive something as dangerous, and it's actually good. And we see this a lot in relationships, where individuals will fall into, literally, the same toxic, abusive, dysregulated situation because it mimics... It is what their system was wired for from early on, and the system only knows that. So that neuroception of healthy connection is a little skewed or a lot skewed.

And what will often occur when you start to have more regulation on board and more accurate interoception is your system will say, "Aha. Something doesn't feel right. This is really interesting. Something doesn't feel right. Something is off in this relationship that maybe I never noticed before was... I thought it was fine, but now I'm feeling all these sensations that are telling me there's something not safe here." And so this is where it can be a little confusing and a little scary when we start to see who is actually good for us and who is actually not good for us. So I'll just say that as you move through this work, relationships will grow, and some relationships will break off and end. And that's part of this work. It's just part of this work. So it's very important to listen to those spidey senses, that gut sense.

I'm going to read a little bit. Let's read a little bit before we get to the next page. So I'm going to read a little passage from... Again, this is Nurturing Resilience. My mentors Kathy Kain and Stephen Terrell, they're really specialists on early trauma. So sit back, relax, take notes if you want to. So this is page 26, the chapter Knowing When We Are Safe, Chapter Two. Okay.

"So interoception is the process by which we notice our internal state. We evaluate the combination of sensations and perceptions of physical processes to assess our internal milieu and decipher what it's telling us about what we are feeling and how we are and even who we are." I'm going to say that one more time.

"So interoception is the process by which we notice our internal state. We evaluate a combination of sensations and perceptions and physical processes to assess our internal milieu and decipher what it's telling us about what we are feeling, how we are, and even who we are. This includes our perception of physiological processes, such as heart rate, the digestive process, sensations of the skin, and other internally experienced sensations of our bodies. Using our evaluations of these sources of bodily information, we take action, make meaning, make predictions, like predicting our own illness by feeling the initial sensations associated

with the onset of a cold, and make adjustments about who we are and how we are. Are we hungry? Are we safe? Are we loved?”

"Stephen Porges refers to interoception as the infant's sixth sense. An infant cannot accurately perceive whether or not he is hungry or thirsty, if he needs sleep, if he is too warm or too cold. Then he cannot accurately communicate his needs or distress to the care providers. That, in turn, can prevent care providers from responding properly to the infant's needs, which may then increase the infant's distress and instill a feeling that safety and connection are lacking. In this way, it is critical that the infant or small child develop an accurate interoceptive language for communicating her most basic needs to care providers. It is an essential component of the healthy attachment and bonding process. As the care provider meets the needs of the infant, attachment is strengthened." I'm going to read that one more time.

"It's an essential component of the healthy attachment and bonding process. As the care provider meets the needs of the infant, attachment is strengthened. As we mature, our need for nuanced interoceptive vocabulary becomes even more critical. We need a reference system for understanding how we feel about different people, different circumstances, and different types of needs. It's easy to assume that the system of reference develops on its own accord." I'm going to say that again. "It's easy to assume that the system of reference develops on its own accord. But in fact, it develops contextually, requiring regular feedback from our social system in order to calibrate points of reference and rely on them with confidence."

I know that was a big chunk of words there. But what I want to say about some of these pieces is what they say here about this cannot develop on its own. Now, this is for infants. You all as adults, mature adults, you can do this with yourself. This is why you're learning about the theory. You're learning to actively engage with orienting, actively touching your body parts, talking to your kidneys and adrenals, moving your body, all these sorts of things. You're developing that attunement to yourself that maybe did not occur when you were an infant, when you were a child.

But here's what's interesting. Let's just say you had the worst attachment and attunement in the world, and I will agree that some of us will have had that, but you're still here because someone was there. It wasn't perfect. It was all the attachment problems that psychologists write about, but you had some form of attachment and connection. It might not have been great, but it was something. When an infant is left and never connected with, and there's stories of these, unfortunately, where children are left in kennels and left, that is

unrecoverable. You need some form of connection, some form of talking, holding. It might not be perfect, but it's there. So I say that to say, if you are here learning, then you can rewire this stuff and restore regulation.

The process is unique for each of us, of course, you're learning through the curriculum here, but it can occur. And these little things, as they said here, like predicting our own illness by feeling the initial sensations associated with an onset of a cold... Has anybody found... I know the context is a little different these days. But you feel that tickle in your throat. You know that you're a little run down now. You know that you might be getting something. "Ugh. I feel a little hot." Or you eat something that's not good, that beginning feeling of food poisoning. You just know. It's like, "Oh, I shouldn't have had that thing." Right?

If you can notice these things and really shift gears to take care of yourself, you'd be amazed at how the immune system will help you get better quicker. But when we feel these things, often, we ignore them. We keep working. We don't take care of ourselves, and we pretend that we're just going to be fine. Or we go into awfulization and, "Oh, doom and gloom," as opposed to, "Ah, interesting sensation that I'm having. How can we make it neutral? Let's just take care. I haven't been taking care of myself as well."

It's the same as my example of stubbing my toe on the coffee table. "Oh, that hurts." That's your cue to feel that interoceptive pain. And if you do that and if you sense it and you work with it, the body will go into that low-tone dorsal. It will repair. But if you override it and go into the old habit of rushing, rushing, rushing, and not paying attention, the system isn't going to have a chance to heal. You'll hear folks who will come down with really bad illnesses, cancers. They will say, "I had no idea." But if you were really to ask them, they will say, "Yeah, my gut was off for five years." Or, "I wasn't sleeping well for a long time." Or, "I had a stressful event, and I shut down." So when you shut down, you're not hearing what the body is needing. So much of what our system says to us gives us the clues for how to course-correct so that we can heal before things get really bad. I hope that makes sense.

So not only are we learning to regulate our nervous system, we're learning how to be, again, this concept of our own medicine because we're listening to the body's signals that says, "Something's off. You better listen to me because something is off." And up until now, I would say most of humanity in the Western world, we ignore it until things are really bad. And then the question is, can we recover this? And sometimes, yes is the answer. And sometimes, no is the answer.

So I like how they form this and also how they said, again, this infant. Warm, too cold, thirsty. If you notice, all these things are the things I taught you all early in the course. Are you hungry? Are you tired? Are you cold? Are you too hot? Regulate your temperature. Listening to those impulses is the process by which you start to reattach to yourself and treat yourself the way that, perhaps, did not occur when you were an infant and a toddler. All right. So that's interoception. I'm going to have a bit more water here.

Let's go to the next portion, neuroception. So this is page 32, same chapter, talking about neuroception. So neuroception is a term coined by Stephen Porges, who summarizes the term this way. So this is his pure definition. "Neuroception describes how neural circuits distinguish whether situations or people are safe, dangerous, or life-threatening." I'll say it one more time. "Neuroception describes how neural circuits distinguish whether situations or people are safe, dangerous, or life-threatening." He also describes neuroception as a dynamic and interactive process whereby we respond to cues about safety and threat while simultaneously transmitting similar cues in our social interactions.

Interoception and exteroception... So exteroception is just a fancy word for noticing what's out there. Intero is internal. Both inform neuroception. So interoception and exteroception both inform neuroception. "If we have a healthy, well-developed safety system, our interoceptive and exteroceptive systems will work in an integrative fashion to help us differentiate information and determine when we are safe and when we are not. Likewise, our social systems will have helped us experience a sense of safety and security in our relationships, which reinforce our ability to perceive safety and experience a sense of belonging and security. Neuroception refers specifically to the neurophysiological processes involved in the perception of threat and safety, what Porges refers to as the neural platforms that support certain categories of behavior." That was a little wordy there.

But basically, neuroception is the perception of safety and danger. I'm going to give you an example. So I think I've given you this example before. But to refresh your memory, a couple years ago, about five, I started to have severe panic when I was stuck in certain spots. It was usually in traffic. Some of you may remember my story of going over a bridge here in Vancouver and going into complete panic, heart, sweating, "Oh, my goodness," shaking. I had to undo my clothing. I had to roll down all the windows. I had to take my shoes off while I was driving because I needed my feet to not get as sweaty. Everything was getting really intense.

And I have no fear of heights, none. And I have no fear of driving. I love to drive. So it had nothing to do with driving, and it had nothing to do with going over this bridge. That came down. And then it was almost like that was a big ball in my swimming pool, to go back to the analogy from the first training call, that dislodged for whatever reason. So after that... And my heart was fine. There was no nothing wrong with me physically. It was completely old survival stress.

After that, I had these little blips where, if I was driving and I could see the traffic was slowing, I would get panicky. And I had my resources in my car. I had candies to suck on and music to listen to, water. I'd roll down the windows. I'd breathe the air. I'd resource myself. I would always be fine. I also have that a little bit on planes. I have no fear of flying. Never had. And again, just, this is really interesting. So my perception of danger was skewed. It wasn't accurate. One could say, "Yeah. Well, we shouldn't be driving in cars." Yes, okay. But my history is such that it's fairly safe.

Just recently when I was traveling with a friend, we came into this town in Germany. And the traffic was horrendous going into this town. Passau, if you know where that is, this long, winding street. And I noticed myself to be completely fine. It was wild. And I said to my friend, "Wow. A couple years ago, I would be sweating right now. I'd be wanting... I'd have to get you to pull over." And he got a little worried. He said, "Well, we can turn around." I'm like, "No, no, no. I'm fine. I'm just saying, about five years ago, there's no way I would've been able to have handled this. We would've had to have pulled over or gone another route." So my perception was accurate. It was a nuisance. We were in traffic. But there was no old threat saying, "Get out of this car. Pull over. You're going to die." Essentially, when that panic comes in, there is a sense of, "You're going to die. Something is wrong. Get the heck out of here."

So I share that to show how it can sometimes take years for these big boulders in our swimming pool to come out, because this occurred for me years, years after I finished my trauma training with Peter and Kathy and all those people. So even though my digestion was good, my immune system was good, there was this old, old survival stress ball that was waiting for it to come out when I had enough of a swimming pool to handle this stuff. Does that make sense? I hope that makes sense.

When we hear of people who go to retreat settings and they have... And I hate to say this. They have heart attacks. They have massive flares of their autoimmune conditions. What do you think is happening there? The work is fine for one person, but another person, and they get

blown out of the water. Their swimming pool is too small. They've just tried to move a big ball out of their system. But the physiology, if we go back to page one, that communication and harmony between the central nervous system, the peripheral nervous system, the hormones, the heart function, the cardiovascular system, the posture, it isn't able to match to this big ball coming out. This is why it's so important to me and all of our moderators that you go slower than you think you have to. I know it can be painful to go that slow, but you're building up capacity so that when these big boulders or balls come out, it's going to be a bit intense, but you handle it. And your physiology doesn't go into alarm mode and more stress mode. I hope that makes sense.

So again, this is why the foundations are so important. I can't stress that enough. All right. Page number three. Oh, yeah. So I don't know exactly what this was related to, I think it was a combo of things. I have a history of a lot of surgeries, one of which was quite traumatic when I was five, I was held down by a nurse and sedated against my will. That was one. And I think the other one might have been, this is no hit against my parents, I grew up in an animal hospital, I'll talk about some of this in the future training calls. And I know through the stories that they would put me in the kennels when I was a baby, because that was the safest place for me where the dogs and cats were. And there was at least one instance, they haven't told me if there was more, where they forgot me, and they got home and realized Irene was still at the clinic.

So I have no memory of this, but it's possible that I woke up and cried and nobody was there and I rolled and moved and I was trapped in this kennel. I don't know if that's accurate. And I say it now with a smile because I've processed it, I don't blame them. Worse things have been done to children, but it's like that kind of sucks to think about that and I'm fine, and they didn't do it maliciously. There was no ability to pay for babysitters back then for my parents, so that was the safest place for me. So that's what I think it was. But I don't know, maybe in another three years there's another memory that comes out that I still am not aware of. So that's the other thing. If you don't have the memory, how can you just not worry about it and just work with the physiology and be open to knowing about it if it should arise. But when this is pre-verbal, often there won't be a memory because your brain isn't making memory and meaning at age six months old or age one year old.

Okay, page three. Primary wiring. So this again is going to be some review. So primary wiring. So the ventral vagal branch, that social engagement portion of our autonomic nervous system is not fully refined, I'm going to use that word, refined nor mature when we are born. So I say

refined because it's there. That ventral vagal branch, it's there. But think of it like it's super thin and it isn't like a strong wire, it's just it's not refined, it's not robust. So to make it more refined and more robust, and we would also call myelinated, so myelinated is a fancy word that's used for nerve conduction in our body where the nerves have a fatty sheath, it's basically made of lipid, and we could say it's slippery, and so it makes the conduction go quicker and more refined through our system.

The fact that we can soften our hands and we're going to do some work with the hands and later labs. I mean, you can play with this. You think of all the things and refinement we do with handwriting and playing instruments and knitting, and this is because of myelination of the nerves, it makes it more refined, makes it more controlled. So the ventral branch of our parasympathetic nervous system, the social engagement branch also has this capacity to be refined like if you were writing, playing music, chopping vegetables, but we have to use it for it to grow properly. Just like if you don't practice writing or chopping vegetables, you get a little clumsy, but then you can pick it up as you start to learn again.

So the first bullet there, we have to learn how to use it. This references nicely to what I read in that book about the infant needing connection, needing attunement when they're hungry, when they're cold, when they're scared. So as infants, we learn how to use our nervous system by how we are handled and treated. Next line down, the refinement and wiring. Wiring must be built up. The refinement and wiring, that's the word, must be built up. Be a social engagement from another more mature human. So it is so important that little people and infants are talked to, are smiled at, are attended to all the time. When they are looking for you, we need to look to them. That builds up the nervous system, that builds up the social engagement system. If wiring was not optimal in early life, we need to build, that's the word, build the foundations and teach the body. That's the next word.

We need to build the foundations and teach the body what self-regulation and co-regulation is. Again, it can be a little doomsday when we are like, "Yep, I know I didn't get good co-regulation when I was young," but I again said this before, if you're here, if you can nod your head as I nod my head, if you smile if I try to make a joke, these sorts of things. If you can manipulate your facial structures into funny places and show your teeth, you have the ability to socially engage, to move with that. It might be a little scary, but it's possible. So that shows that that wiring is there waiting to be built, waiting to be fused. Okay.

Notes on self-regulation and co-regulation or co-regulation/self-regulation. So this primary wiring is how we learn to self-regulate. A bit of review. So this is how we learn to self-regulate when we're infants. Maybe you can add that to your notes there. When we're infants. Interestingly, we learn self-regulation via co-regulation. So again, that connection with another teaches us co-regulation. There's a situation on our hands currently in humanity where too many infants, in my opinion, are being put in front of screens to soothe themselves. They're not getting soothed, they're going into shutdown. It's so important that little people have human connection and not these devices that have just been really put in front of them as a way to co-regulate them, but it's not co-regulation. Nothing wrong with a device when we're a little older, but at that ripe young age where these things are being wired, they need to have that human connection.

Let's see here. What time are we at? This is a story I've told before, just to give you an example. So there's one story I definitely want to tell. And this connects with this importance of movement and working with our bodies as well as working with the survival stress, learning about our nervous system. So when I lived in a town called Whistler, British Columbia, it's a ski town, I was teaching Feldenkrais classes at the community center, and one of the ladies that attended my class, she was a nurse, that her job was to go to homes that had had newborn babies and do follow up checks.

I had no idea that that happened because I haven't had my own baby. I'm like, "Whoa. Well, that's great." So she would go and she'd meet the mom and the babies and then she'd follow up probably every six months or so. And she said after one class where we were working, I don't remember what we were working with, something to do with developmental movement, maybe rolling, maybe crawling. You will do some rolling lessons in this curriculum a little quite soon actually.

She said to me, "This is so interesting, Irene. Because when I go to the homes in Whistler, which we could say is more affluent, the babies were more engaged, they were just a bit more lit up in their attention, but their motor skills weren't the best, they were a little clumsy, they weren't very balanced. But then when I went to the native community in an area called Pemberton in Lil'wat, we would call it the reservation, the babies there had such amazing motor skills, but they weren't able to connect. Why do you think that is?"

And so, what she said to me was, in the more affluent, we could say Westernized households, the babies were talked to a lot, they were read stories even though they were six months old,

they were engaged with, they were picked up, but they were also put in a lot of manmade devices like jolly jumpers and walkers and those little, I don't even know what they're called, they're like these little hammocks that you put a baby in because it's fairly safe, but what happens is that restricts their movement. Remember the baby live videos from the potent posture lessons back in like lab two or three, that rolling, she was given the space to move and to roll and to push and to find her body and explore.

So that is what develops not just our movement, but our ability to be in the world with stability and strength and balance. Someone had mentioned proprioception a little while ago, that's proprioception, the ability to feel ourselves in space. Whereas the children in the native communities, the reason they had such good motor skills is they were left alone all day long by themselves just on the floor because there was no money for these contraptions. So while they were neglected emotionally and social engagement-wise, in that neglect, they developed these robust motor skills because they weren't put in these contraptions, they didn't have strollers where they were connected to and not able to move. So it's kind of a weird paradox there, but that shows you how important we need both.

We need to move and develop and crawl and crouch and fall and get up and not be held up on our tippy toes to be forced to walk. And we also need engagement. We need play and patty cake and games and all the things and hide and go seek and all the things that naturally come with raising a child and an infant. So I wanted to share that because it just perfectly represents why, at least for me in SmartBody SmartMind, we're not just doing nervous system regulation work, we're not just going to work with a vagus nerve, we're also working with the movement and all those aspects in relationship to our bodies.

All right. I wish I could remember that nurse's name because I use that example all the time. I would thank her. So yeah, such a good story. That was real. So for example, this is just a little way to tie up this training call on regulation, these neuroception and interoception. So again, I've already sort of said this. For example, number one, the baby does not have self-regulation when born. Just doesn't happen, it's not regulated, you need to teach. So number two, she learns how to regulate, self-regulate by co-regulating with mom, dad, caregiver.

This is just one of the hallmarks to healthy attunement between infant and adult, having connection to a more mature and regulated nervous system, so the infant gets those primary wirings from the start to form a self-regulating and more emotionally intelligent human being. I can't stress enough for those of you that are about to have babies or have access to babies or

you have grandchildren, it really becomes fun when you have this lens and you can play with them in that engaged way. It's really fun because you see how much they perk up to even the energy of, "Oh, this person is paying attention to me." And when the baby is not wanting engagement, you don't engage. They show you what they need and then you follow suit.

So three, she learns how to self-regulate based on how she is taught in the co-regulation dance. That's the final word. It is a dance. It is a dance. She is borrowing her caregiver's ventral vagal parasympathetic nervous system. What does that mean borrowing? It doesn't mean baby is taking the ventral vagal nerve out of parent Indiana Jones-style, it's not like that, it's the energetic of, she feels or he feels, that ventral engagement. And this is why it's so important for moms and dads and grandparents and aunties and uncles and teachers to not omit that safety and that connection, because when you have that, especially at a young age, those children really, really feel it, and that's a gift to give them that.

Even if you see a little one on the street and you just smile at them, sometimes they'll engage. You'll know a lot from how a baby is in their regulation by whether or not they engage. You smile at them at the grocery store or you do a little of this, they'll perk up and they'll be like, "Oh, someone's playing with me."And that shows how raw and real and open those systems are to that kind of connection.

All right. Thank you everyone. Lots of information, lots of review, of course. I do have on page four, these are like extra credit videos. Some of you have maybe seen these if you've been watching my YouTube channel for a while, The Story of Teddy, The Story of Ryan and How to Tame a Tantrum. Both The Story of Teddy and The Story of Ryan come from books. The Story of Teddy is an account of Peter Levine, but also my research into, oddly, Theodore Kaczynski. For those who don't know who that man is, he was named the Unabomber. It's a weird way to end this call, but he was named the Unabomber. He did bad stuff in America, and he's in prison. And if you want to see what occurs when early trauma happens and it's never addressed, watch that video. Peter Levine actually interviewed his mother and found out what had occurred to him as an infant, and it explains everything in a really interesting way.

And then The Story of Ryan is from a book by Bruce Perry called Born for Love. Again, a very intense story, but an explanation of how misattunement can happen even in well-meaning parents. I think it's important to know these stories because it gives us an element, a look into humanity and to have kind of, we could say empathy for these things that occur that just seem so atrocious and we think how could that possibly happen, and really it all pops back, in my

opinion, to the nervous system and how it's wired. And then How to Tame a Tantrum is just a fun story of mine when I was visiting Rome a few years ago and how I helped a little boy not have a complete meltdown before he went into the Colosseum. So there's fun stories and intense stories in those three videos, if you want to have a little extra learning.

Thank you, Mark, for hanging in the chat, it's good to see you all the way over in New Zealand. Bonnie, thanks for being here, and thanks to all alum and newbies. Seth will do his Q&A on Thursday. We'll do part two of Anger and Healthy Aggression next week, same time, same place. Keep practicing, and as I mentioned at the top of the call, really, really practice pausing as much as you can during the day and practicing those basics over and over and over again. Just like when a baby is a baby, you do the same thing with them over and over and over again. It's the same thing, you're just an adult and you can choose. So that's the difference. You can choose to do these things more frequently and frequently, and I encourage you to do that. So we'll see you all next week. Have a lovely rest of your day or evening. Bye everyone.