



EQUUSOMA
TRAUMA-INFORMED HORSEMANSHIP

Beyond Behaviourism Video Analysis

With Sarah Schlote (SS) and Julie Lannen (JL)

Introduction

SS: Welcome everybody. This is *Beyond Behaviourism: Applying Behavioural Neuroscience to Working with Fear in Horses*. This is part 2 of our mini-series, and this part 2 will be focusing on the video analysis of two particular training sessions with a horse who has a fear of objects. My name is Sarah Schlote. I have a master's degree in Counselling Psychology, I am a Registered Psychotherapist, Canadian Certified Counsellor and a Somatic Experiencing® Practitioner in private practice in Ontario, Canada. Aside from my private practice, I have a separate business focusing on what I call EQUUSOMA™ – Equine-Assisted Trauma Recovery and Trauma-Informed Horsemanship.

SS: This particular video series has been produced with the permission of the Somatic Experiencing® Trauma Institute in Boulder, Colorado, which carries the trademark for Somatic Experiencing®. This video analysis will be taking place with Julie Lannen from the Australian Clicker Connection, featuring her working with her horse, Star.

SS: Before we begin, I want to review some of what we said in the last video, which is this idea of: Can we take a trauma therapy that was developed in a large part for humans and apply elements of it to working with fear and trauma in horses? I would say absolutely, yes, there is certainly going to be some applicability, especially given that Somatic Experiencing® as a trauma therapy for humans was founded on the neuroscience of working with mammals, mammalian fear and threat responses and so on. There is a shared genetic heritage since we are all mammals. Although there are clearly differences and some adaptations that would need to be made in applying this with horses, there is certainly a lot of good that can be taken from this, and I think this fills in a bit of a missing gap in what we are seeing in the animal literature. It is bringing this back around: so, starting with the animals, and going to humans, and back to the animals again.

SS: The book that is in my lap here as I am sitting with the herd where my horses are located is called *In an Unspoken Voice* by Dr. Peter Levine. It came out in 2010, but it's not his first book. His first book is *Waking the Tiger: Healing Trauma* which is a really great read, but it's his earliest work and it really gives the understanding of why I have a tiger in my logo with the horse. So, if you are curious about understanding that, feel free to check out *Waking the Tiger* but otherwise *In an Unspoken Voice* is a really a beautiful and elegant description of the Somatic Experiencing® approach and bringing in attachment and polyvagal theory and other components to the work. I certainly encourage you to have a read. It's a worthwhile book to pick up.

SS: This video analysis of Julie working with Star will be deconstructed from the theoretical framework that I outlined in the first [theory] video. I will be drawing on trauma-informed care principles, Somatic

Experiencing®, of course, polyvagal theory, attachment theory, developmental neuroscience and even some pieces from EMDR, which is a trauma therapy also created for humans.

SS: The second video will show progress in Star's developing resilience and confidence with regards to the scary object. The video analysis will also refer to learning theory, of course; you can't have a training video with horses without approaching learning theory in some way, shape or form. So, I will be talking a little bit about positive and negative reinforcement, as will Julie in this video, and we will talk a little bit about the Constructional Approach Training as adapted for use in horses as well. But the over-arching framework will not necessarily just be strictly behaviourist; it will be taking one step further, and bringing in somatics, polyvagal theory, attachment and other frameworks to enhance our understanding of what's unfolding. This is important, as I said again in the last video, where we need a more nuanced approach. Conditioning theory is excellent, it has its place, and we definitely want to include that in our understanding of working with horses. Learning theory is a really foundational component of this work, but it's more than just that. As we have seen with Payne, Levine, and Crane-Godreau, who say here:

Conditioning theory states that, in the extinction process, a conditioned fear response is not actually eradicated but only suppressed by competing (positive) conditioned experiences. The implication of this, born out by experience, is that, although fear de-conditioning is quick and effective, it is also easily disrupted, as re-exposure to trauma-related cues can easily reinstate the fear response (2015, pp. 6-7).

SS: I think you will enjoy how we deconstruct these two training videos, which are actually held about 5 months apart. What's really fascinating for me is seeing this one training session that occurred first and the one that occurred months later, and seeing the consistency over time that has created change for this particular horse.

SS: In treating trauma-related fear, as I said in the previous video in the series, it is really important to understand that trauma-related fear and anxiety are different from fear and anxiety that are not necessarily imbued with trauma. So, in humans, treating trauma-related fear and anxiety requires a very different approach than when just working with every day anxiety... although I would wager that there's probably not a lot of anxiety in the world that doesn't have trauma of some way shape or form, whether it be big 'T' or small 't', in its history. But, that said, when we are talking about big 'T' traumas we need to have a much more nuanced approach. And this interestingly has been observed anecdotally, at least, in animals who sometimes don't always respond to positive reinforcement when they are overwhelmed by fear, and so bringing in this extra lens to enhance behavioural theory is really useful. Interestingly enough, in the human therapy world, behaviourism came around in the 1940's, 50's, and 60's, and we've added since then, so some of the pieces I am bringing in have been added in since behaviourism. I think there is a lot of value in learning about behaviourism for use in working with animals such as horses (as that's often missing and I think that it is a piece we need to catch up on), **and** we can even take it beyond that. There is even more beyond behaviourism that's evolved since that time, and this is where I am hoping to bring these pieces in today.

SS: Julie, welcome!

JL: Hi, thank you! And thank you for looking at the video!

SS: Thank you so much for sending it! We've been messaging back and forth for quite a long time, and you've been asking me to look at your videos. And I'm so pleased that we took the time to do this today because there is a lot of richness that we can piece apart.

JL: Yeah, and I just want to learn more because I really feel that how you are applying the polyvagal theory to the horses with the somatic information is... to me, it's the missing link that I've been missing. Because Star, the gelding in this video, he's just a scaredy cat. He's got a lot of past experiences where we've gone over **threshold**. We've tried obviously to keep under, but what happens, happens. I've always felt that as much as I believe clicker training and positive reinforcement is the way to go for horses (and that is just a view), there's also room for negative reinforcement. But I found that no matter what I did, I just couldn't change his mind about certain things. And my gut feeling is that it has got something to do with this nervous system extrapolation that you are doing that is just so new to everybody, and it's just mind-blowing for me.

SS: Yeah, fabulous Julie. Maybe just so everyone knows, maybe you can explain a little bit about who you are and how you came to this work. And then we'll look at the videos that you've sent me.

JL: OK, well predominantly, I'm a clicker trainer and certainly taught from the traditional behavioural stance in relation to clicker training. But when I got Star, I noticed that using positive reinforcement and using treats as the reinforcer isn't always a good deal for horses that have got fear issues. And so, I started to do a lot of research and learned different methods to actually try and help horses overcome their fears. One of the earlier things I did was learn how to apply Constructional Approach Training to horses, where clicker training is not involved at all. It works on the premise that when a horse is afraid of someone or something, they basically get reinforced for distance [*correction: our horse is reinforced by taking distance*]. So, if they see something and they are scared of it and then they move away from that object or person, the actual distance that they create for themselves is reinforcing, and then they settle themselves down a little bit. So, Constructional Approach Training is based on that method by which we look for a calm signal under threshold or a calm-like signal, because some of them aren't really calming signals. They could be head bobbing, they could be all sorts of different processing that actually we wouldn't look at as an actual calm-like sign in our horse. But anything that showed that our horse is acting in a way that is inconsistent with fear (from a perspective of taking distance away from the object) is something that we would reinforce. So, we present the object, and when we had some behaviour from a horse we would actually move that object further away, so we are actually creating the distance for our horse rather than our horse creating the distance from us. It is operant conditioning, it is not classical because we are asking the horse to operate on the environment, including that which is causing the horse some fear. And eventually there comes a time when the horse realizes that this is a pretty good deal because we are getting closer and closer on the basis of what the horse is telling us, and the threshold is reducing more and more to the point where the horse wants to actually engage with the object of fear. So, it becomes that the horse wants to work towards the object rather than work away from the object. And it's only when we actually work towards the object that I would then use positive reinforcement, because the horse is not after distance any longer. The horse wants to work with the object. Negative reinforcement [moving the object away] in that situation would actually be punishing for the horse [because it wants to approach with curiosity]. The thing is that works so well with so many horses and worked beautifully for Star in relation to a horse rug, because that was what he was afraid of. But there is not the generalization that I had hoped for. We looked at generalization in respect to going to different areas on our property, and outside with the rug, and everything was fine. But when we generalized that to things such as a bareback pad or a saddle, it was basically that we were at square

one again. It felt to me that there was something about his fear that I wasn't able to help him overcome. And it wasn't until I started Intrinzen¹ work with him, with movement, crunches, panther walks, just getting him proud and feeling happy within his own body, that I realized that there seemed to be an overlap between when he was feeling proud and happy: he was actually more courageous. And we started to go for walks out and about on the property; if he saw something that worried him, he'd look to me and cue a panther walk. So that's what I was starting to take on board in the video that you are seeing here, and that's kind of where I started trying to explain myself to you in email exchanges... in that: Is there something in it for me that I'm seeing the proudness actually changes his nervous system to a point where he actually is learning to control himself and things are not as bad as he feels? And that's kind of where I'm at with it all.

SS: Yeah, and I love that you sent that because there is so much overlap between what you are doing and what we would do in Somatic Experiencing® working with humans. Which I'm proposing we can do with other animals as well, because a lot of this Somatic Experiencing®, which was created by Dr. Peter Levine, is founded on mammalian models of nervous systems and neuroscience, and it's also founded on Dr. Steven Porges' polyvagal theory, as you know, which is also coming out of mammalian neuroscience. So, we've got these human models that are based on animal models, that I go *"well, let's kind of bring that back around and look at the animals themselves that we originally borrowed from in creating these human trauma therapies, because they are based in working with mammals"*. So, I would love to go through this video with you and talk a little bit about what I'm seeing from the standpoint of a number of different theories and frameworks. So, Julie do you have the video cued up?

JL: Yes, I have it lined up. Let's play it from the beginning to the end without any interruptions.

VIDEO ONE PLAYED

First Video Analysis

SS: So, when you start this video, you are walking into a paddock that has an open end, so it's completely at liberty. Star can leave at any time. He's alert, he's orienting to his environment. And he's walking with you, like he's matching pace with you at the beginning there. And he pauses at the 4 second mark just briefly, seems to take notice of the object on the ground, but he's still not exactly in a high level of arousal. I think you and I talked about this before, where there's dials with the nervous system, the sympathetic nervous system response can either be low all the way up to high. These different branches of the nervous system can fluctuate to varying degrees. So, there's a certain amount of arousal involved in the fact that he's noticing this object, he's walking towards it, he's moving – as well as, in the beginning, a certain amount of parasympathetic tempering of that response through connection with you. So, the social and engagement branch of the nervous system also may have been modulating that a little bit. He paused briefly at 4 seconds, then continues at his previous pace. At that point, he's no longer matching pace with you: he's like, *"Oh there's this thing! I'm gonna go see this thing"*. So, he kind of leaves you as the **secure base**, as we would say in attachment theory, and he walks on towards the object. And then, interestingly, he starts to walk a little sideways as opposed to forward and that's where I would gauge as him finding the edge of his own **window of tolerance**. So that's that first **threshold** in response to that first stimulation of him walking forward, and then he

¹ Intrinzen is a process that helps the horse develop autonomy, mastery, and purpose through powerful postures and authentic movements. A panther walk is an exaggerated, effortful, and purposeful walk that, when done well, opens up the space behind the elbow. www.intrinzen.horse

reaches that threshold, walks a bit sideways and he stops at around the 16 second mark, and his head and neck go up and down. And what I thought was super interesting at this particular point in the video was that a number of things may be happening at this point. Julie, you told me originally that this lowering and raising of the head was a reinforced behaviour that you taught him through clicker training.

JL: Through Constructional Approach Training [*CAT Training video playing during this part of the discussion as a demonstration*].

SS: Oh, through the Constructional Approach. Yes. Right. So, the lowering of the head was in order to induce a more parasympathetic state or a calmer state to help him self-regulate.

JL: Yep, I think that that's right, because with Constructional Approach Training what we are always trying to do is reward our horse with distance, if there are any signs that our horse is coming into a more parasympathetic state. So, a lowering of the head, even just awareness – blinking the eyes, a little lower in the head carriage, anything that looks inconsistent with the horse trying to run away from the object. The important thing with Constructional Approach Training, from a behavioural perspective, it is looked at as a form of operant conditioning, not classical conditioning. In the normal classical conditioning mindset, we would say that the horse is afraid of the object and the fear was generated through classical conditioning. What we are doing is having the horse operate on the environment and operate on the scary object. So, if the horse offers a calming-like sign, we take the object further away. What we are trying to do is change the mindset of the horse, to turn that mindset into *"this object is a friendly object not something to be scared of"*. The important thing (and the difference between Constructional Approach Training and approach and retreat) is that we are never on the threshold; we are always under the threshold and our distance with the object and our horse is always at a distance where our horse notices the object but that sympathetic state isn't rising. So that is the difference and the Constructional Approach Training, as they say in behavioural terms, is operant conditioning: changing the mind of the horse about the scary object itself, so they are saying *"we are not afraid of the object, we are afraid of the consequences of the object"*.

SS: Right, I see what you are saying with that. That makes a lot of sense.

JL: Yep, so it is different from Somatic Experiencing® because, from what I am understanding so far, is that we do want our horses sympathetic state to rise just a little bit, at least that the nervous system is there. We are teaching our horse to work on our horse's nervous system.

SS: Yeah, in Somatic Experiencing® there is a place for keeping things low and slow and not a lot of juice to work with, and then there is a place to start working with some juice, so to speak. So, at smaller thresholds and gradually growing higher. There is a place for not having any stress at all and there is a place for building safety and having things come down. In Somatic Experiencing®, we talk a little bit about the importance of making sure there are good brakes in place before you hit the gas. And so, it sounds a little bit like that, but then we want to progress from being able to have a good brake system in place to be able to help grow the nervous system to be with more of those gas pedal states without getting stuck in those states.

JL: And that might be why I am not having as much success with new objects with Constructional Approach Training, because in that system I am not actually helping our horses grow their nervous system. We are actually changing the horse's attitude and their perception of the consequences with

that fearful object, and it is not generalizing. Whereas if I start growing the horse's nervous system... So, with Star, if he starts to learn he can actually handle a little bit of stress and he can deactivate², and we wait long enough and that resilience with the nervous system is going to grow, that might be why I am finding that this process is the missing link for him.

SS: Right, and I think one of the things too we were talking privately, separately, about is this idea of reinforcing a calm behaviour (do you click and treat when there is a calm response in the nervous system), and one of the things that you were saying to me is that we are not going to necessarily click and treat when the horse starts licking and chewing and combining those things together. Because that is its own response. Like you were just saying about bringing those two pieces...

JL: Blending reinforcers, yep. Because the horse is coming down and I just feel that I don't want to interfere with how the horse is physiologically reacting. The whole idea as I understand any of these responses when we are coming down, called calming signals or whatever we want to call them, that the horse is actually enjoying that state of coming down. So, I don't want to control that with a clicker and I don't want to control that through negative reinforcement. I just want the horse to learn and the horse to understand that he or she can deactivate and that's a good feeling. I don't want to be involved in that, I will sit and watch and that's what I am learning through your teachings.

SS: I will jump on that too before we continue: it just occurred to me something else as well. So, one of the things in [human] trauma recovery work is teaching grounding strategies, like teaching clients to take a deep breath or to find their feet on the ground. There is a place for those kinds of controlled behaviours to control the nervous system into a more regulated state. There is absolutely a place for that, **and** what we want to do is to progress beyond strategies like "find your feet" and "ground yourself" by doing breathing and all those kinds of things in the face of activation. What we want to do is not just simply support **down-regulation** all the time but the capacity again to be with these higher states. Because sometimes it is not so much about "oh, let's get you relaxed and let's do this 'thing' and then you're going to come down". Sometimes we have to work through the charged state to get to the calmer state, not to induce a calm state in the midst of the charge because then we are not actually growing the window. We are just learning how to control it. So, there is a place to learn those kinds of techniques in the beginning, with human work anyhow. Why do we teach the ability to down-regulate on cue, so to speak, like doing deep breaths and whatever, which is what you are kind of saying: why would we click and treat a relaxation response? It's kind of that same idea. There may be a place for it, but the goal with Somatic Experiencing® isn't necessarily to induce calm: it's to work through those incomplete self-protective responses in the nervous system. Which means that we have to be able to have the ability to have the brakes, but then have the confidence to let go of those brakes and hit the gas a little tiny bit (**titration**) and know that we are going to be OK because the nervous system will regulate itself. We need those strategies when we don't trust the nervous system is going to do the thing. Now that also doesn't mean we want to go **too** high. I think that there may be some people who go "oh, that means all stress is fine and I can just send my horse into flooding and as long as he comes down he's great". That's not true either – let's not go into extremes or throw the baby out with the bathwater. But let's come back around, because I think all the stuff around Constructional Approach Training, although it's very different from Somatic Experiencing® in some ways, there are certainly some elements that make

² The activation and deactivation (or arousal and settling) of the autonomic nervous system (ANS) is what Dr. Peter Levine calls one pendulation (some will use the terms charge and discharge in referring to this process). There are nuance differences between each of these expressions.

sense and that seem to overlap, even if they are used a little differently. But we will get to that as we go along.

SS: And that's what we are talking about here as well. He does this movement that's been reinforced to help himself to regulate [dropping his head]. And some of the pieces that I was bringing in with that is that there's also this element of **orienting**. So, when horses raise and drop their head there is a certain amount of orienting to the object. Their visual field is pretty narrow in terms of what's clear. So, there could be also this idea of wanting to get a different vantage point of it. [*Ethonova video clip³ showing the equine visual field and needing to adjust vision by lowering the head*]. And doing that kind of orienting allows us to stimulate the social engagement system [ventral vagal branch of the parasympathetic nervous system, or PNS] because we are using the parts of the face and the neck that are involved in social relationships. Right? We use our eyes when we are communicating or when we are looking at somebody or at another animal. We are using our neck to turn. Our neck is involved in turning towards another human being for instance, not just a source of threat or a source of novelty. And so, when that part of the vagus nerve (or the ventral vagus) is activated, that serves as a pacemaker on the heart to slow the heart down and modulate arousal so that we can be in connected relationships. So, even if you are not close to him, the very fact that he is utilizing parts of the body involved in the social engagement system may also be contributing to that calmer modulated state.

SS: The other thing that we know from Dr. Bruce Perry's work is that a repetitive, rhythmic pattern of movement can help support regulation as well in the nervous system. So, I'll talk a little bit more about that as we go along. Lots going on right there, which I think is really interesting.

SS: He starts to move away from the object at around 19 seconds. So, this is this idea of: we are still below threshold, he's on the edge of threshold. Being at the edge of threshold isn't a problem, that's where the growth happens: on the edge, right? It's going to occur, but not beyond threshold ideally. So, he makes his way to his edge of window of tolerance, he moves away from that edge and then he makes his way back to you, and in attachment theory we would consider that to be moving back towards the secure base of the **safe haven** relationship that he has with you. And that's what we do when we are little kids; other animals do this as well, including horses. When we are babies, we go out and explore the world and we come back to our secure base (usually our mother or some other attachment figure or an alloparent within the herd for instance), when we want reassurance, soothing, and calming or protection. He does that, he comes back to you, in part that may also be a reinforced behaviour because of the clicker training, coming back to you for a reinforcer. So, there could be both those things playing out. But I don't see that reinforcement as necessarily inconsistent with attachment, although they are different processes. Attachment isn't just because of conditioning and reinforcement, as we know from the works of Dr. John Bowlby and Dr. Mary Ainsworth, and others. So, once he's back to his secure base, you don't treat him and interestingly he doesn't look for a treat either, which is where I kind of go: there is a secure base going beyond reinforcement at that particular moment. He licks and chews around the 31 second mark and, as we know, licking and chewing is usually a sign that a horse is back into more parasympathetic dominance. Not that there wasn't there parasympathetic on board prior to that, as we know it's dials and they function by degrees. But we know that there is perhaps more parasympathetic dominance at that point, which brings in the salivation, the licking, the chewing, and so we know we are in that state. This is really as you were saying with the Constructional Approach training: Star is determining where his thresholds are, **approaching and retreating** of his own volition. That's supporting this deactivation in the

³ © Ethonova (Claire Neveux), Equispher project (in collaboration with Martine Villain). All rights reserved. Used with permission.

nervous system to happen, right? We go up to a threshold and then there's the settling that comes after having reached that threshold [pendulation]. He has a lot of choice in this process. Anything else you'd like to say Julie, about this first pendulation before we move into the second one? Anything I may have missed?

JL: No, it's great.

SS: Ok, great. So, the second pendulation begins around the 37 second mark, more or less, and this is where, Julie, you come in and you cue Star to begin the panther walk, which is his reinforced behaviour, as you said, that usually brings him a sense of confidence and pride that's a very resourcing kind of experience for him. [Cueing the panther walk could be seen as regulating the nervous system through externally-directed movement.] What I think is really interesting, before we go into the rest of the video: it's so important from Dr. Bruce Perry's standpoint that we regulate the nervous system from the **bottom up**, as I was saying earlier. Often the way that happens with humans, when we think about caregivers and their children: if a child is dysregulated or experiencing something distressing, oftentimes we want to regulate; the parent or caregiver will regulate the child first through externally-directed movements. So, the parent will be the one to rock the child or stroke the child, or walk around with the child, move the child's body, which regulates the brain stem, and then as that regulation of the brain stem kicks in the diencephalon⁴ will start to be the next phase to be regulated. You can tell you are shifting to that phase because the child will start to self-direct movements themselves. As a result of being rocked, and so on and so forth, you might notice a child start to move their hand back and forth or rub their leg, or rub their caregiver, or engage in their own little movements. And that's a sign that they are now regulating the diencephalon. Then from that standpoint, we are able to come into connected relationship and be a little bit closer, so we would call that **limbic regulation** where we are able to kind of co-regulate with one other. This whole experience is co-regulation, but the limbic system is much more available, we are able to talk about emotions, and express – have emotional expression when the limbic system is more regulated, and then move up to reasoning where we are able to talk about what's happened, make sense of it, and discuss the learning experience and so on [in order: regulate, relate, then reason]. And, interestingly enough, panther walk, because it's rhythmic and it's patterned and it's chosen, may serve a similar function, especially since it's being cued by the caregiver [Julie] first, inviting him to into his own self-directed movement. So, there's a piece there that I think is very interesting⁵. Julie, I'm curious about your thoughts.

JL: It's fascinating because until I learned more from you and your recommended readings, I actually was fitting this into a more of a Panksepp model. And I'm seeing some similarities again with what you just said, because where again if we go back to what he says in relation to the primary structures, the ancient structures of the brain, that is actually where all this coupling/pairing movement/play comes from, before we actually get to that secondary layer where most of the work is done in relation to operant conditioning and classical conditioning.

⁴ The diencephalon connects the midbrain to the forebrain. The main structures include the hypothalamus, thalamus, and epithalamus. Movement can alter the brain's stress response systems, which originate in part in the hind brain (brainstem and diencephalon).

⁵ The panther walk also utilizes the parts of the body that are involved in the flight response, only without terror. Utilizing some of that bound activation in a less scary way can also help build confidence and a sense of being able to move through the response without getting stuck in it. The panther walk may be an example of a resource that Star draws on that helps him to build confidence in moving towards the scary object (a counter-vortex in the face of the trauma vortex). Cueing the panther walk also creates a sense of pride and confidence for Star: "I can do this!"

SS: Yeah, and it's interesting how all this stuff flows together, because Dr. Stephen Porges and Dr. Jaak Panksepp knew of each other and referred to each other as well. There's certainly a certain amount of overlap between the concepts and places where they aligned. There's also places of difference, but they are building on each other, let's just say. I mean mainly the difference would be that Dr. Panksepp is considered an affective neuroscientist and Dr. Porges a behavioural neuroscientist, I believe is the distinction. I may be wrong on that, but there's certainly a lot of overlap.

SS: Another thing that I think is interesting with you thinking about cueing the panther walk at this point, from a Somatic Experiencing® standpoint, this would be about bringing in a **resource** or what Dr. Peter Levine would call the **counter-vortex**, which can help deactivate some arousal in the nervous system while allowing the nervous system or the person (or in this case the animal) to build some confidence that supports them, that's almost acting like a buffer to move towards the **trauma vortex** as Dr. Peter Levine would call it. And so, we need a combination of both those things, and often, in Somatic Experiencing® work we are weaving them together; there's this very nuanced process of working with resources and working with the trauma, or working with the counter-vortex and working with activation. And so, this weaving back and forth I could see as also being also another piece playing out when you went to cue the panther walk, which again, as like you said, brings him a sense of price and confidence and Peter would talk about this as saying "**I can**". This is a sense mobilization, "I can do this" which is very different from the shutdown of "**I can't**", right? Learned helplessness is an "I can't" state. Submission is an "I can't" state. And so, Dr. Levine would talk about **renegotiation**, this idea that we want to renegotiate trauma as opposed to relive it or re-enact it (which means the same outcome every time). With trauma we are wanting to transform, we want it to be a different outcome.

SS: And the other thing I thought was really interesting, with this idea of the panther walk (and I want to name it up front before we continue because we'll see it throughout the video) is that Dr. Francine Shapiro created a trauma therapy for humans called EMDR... Which, incidentally, I heard recently has been adapted for use in other mammals to do trauma recovery work. I don't know enough about it yet, but I have heard that there are some researchers in France who have been adapting EMDR for work with non-human animals, which is interesting. But if we take Dr. Shapiro's work with EMDR, in her method there is a place for something called **bilateral stimulation**, where we engage in movements or stimuli that cross the midline of the brain and the body. Walking, for instance, is one form of bilateral stimulation because we are using our arms and our legs to move, and horses are obviously engaging in bilateral stimulation as they are moving their legs, and that kind of bilateral stimulation can reduce arousal. It's often seen to support regulation when something is very distressing and so that's another piece that may be playing out with this idea of the cueing [of the panther walk]. While that's not the reasoning why you brought the panther walk in, I find it fascinating that there's all these other implications for what that might be providing in this process.

SS: So, he takes the cue to move forward with you but doesn't actually do the panther walk, which I think is really fascinating. He moves closer to the object than last time, a bit more determined, the second pendulation if we think about it that way. He does pause, so he's on his next threshold of tolerance, he stops himself at the 48 second mark, and then makes his way back to you. And what's interesting this time around as he circles back around and comes back to his secure base is that he notices the person who is filming the video, which didn't happen the first time around. He was still very much in a "*I've got to get away from this thing*" mode; still not in [full-blown] fight or flight activation necessarily, but enough that he's not able to make meaningful social connections. And in this second round, he's connected enough to the social engagement system that he's able to make actually eye contact with the video filming person

[i.e., there's more parasympathetic response and social engagement available in the second pendulation of approaching the bareback pad]. That's already a big change that didn't happen in the first round. So, when he gets back to your side, he starts to raise and lower his head again around the 1-minute mark, but this time he goes much closer to the ground compared to the previous round, which I think is really interesting. His head and neck were a lot higher in that previous round; he doesn't go as high this time⁶. He also looks away from the object and then begins his licking and chewing. His licking and chewing this time goes on for a much longer period. It's unclear if that's because you are allowing him more time to deactivate and you are not cueing the next round right away, or if it's because there is just more to come out this time. And this particular phase of licking and chewing also has some jaw releases. We see that happening a number of times. I think there's 4 or 5 jaw releases, including one that I think is rather comical where he turns to the video camera person and opens his mouth, which I thought was really sweet⁷. Then orienting back again to the object, but again with a lot of that parasympathetic deactivation happening. Interestingly, with this particular pendulation at the 1 minute and 39 mark, he turns to you looking for a click and treat, which he didn't do in the previous round but he is doing here. And so, I was curious about your – not that it's right or wrong – I was just curious about why you didn't treat him here. I think this is from the perspective of your CAT model.

JL: Yeah, in my view at the time he was actually seeking distance from the object. I took the jaw releases, especially one or two of them, as "fake yawns", which may be displacement, or may not be. But certainly, to me, he was high in that dorsal area and I did not believe at the time that giving him positive reinforcement would have been reinforcing for him. It may be that he felt that he'd given himself a good enough jaw release, that he was proud of himself, that he didn't move back any further and that he felt that deserved my acknowledgment. Perhaps in hindsight I could have treated him, but I just felt at the time, and I think you see in a moment, the fact that I didn't treat him didn't appear to be punishing to him.

SS: Oh no, no, no. Yeah, and it's not clear that that was even needed, I mean I don't think it would have been damaging at that point to do it but it certainly doesn't look like it was necessary, I agree. He got the reinforcement by the fact that he got to choose to move away from the object at his own pace. He got a chance to lick and chew and come down. It's hard to say in this particular round if he went a little bit above threshold, which is what we were wondering about. Because, as you were saying, dorsal would be more of that freeze state, and it's hard to say because he is also socially engaged and connecting with you and the camera person, which would be incompatible with a dorsal, a high tone dorsal shut down response. So, it's hard to say exactly what's happening in this particular pendulation, but we do know he is coming back down into parasympathetic, that rest and digest and/or the ventral vagal social engagement with you by the end of this particular round. We can see for sure. The jaw releases are interesting as well because we will use, I mean humans do this all the time, when they've been through somewhat of a stress response, even low-level stresses, we often clench our jaws. Right? Jaw clenching is, clenching other joints as well, are ways that we respond to arousal and activation, intense emotion, fear, and so on. And so, oftentimes after coming through a really challenging experience, even if it's a low-level one, we may still have had really low-level amounts of tightening on subconscious levels. A tightening of the jaw muscles, tightening of various other joints. With humans you'll often see people

⁶ His head bobbing is less rapid for two possible reasons: because he is less activated (feeling safer, less need to defensively orient so intensely), and also perhaps because he is closer to the object and this reflects his proximity to it.

⁷ **Note:** I did not think that he did it on purpose to be sweet, of course, just that it was a cute moment in the video. He's simply releasing and noticing other things in his environment than the scary object, shifting from **defensive to exploratory orienting**, to some degree.

after a really stressful experience release their jaw, right? And they'll be like "Oh my god, my jaw is so tight" and I just want to be able to work with that. In Somatic Experiencing®, if I was working with a human I might actually **titrate** some of that jaw release a little bit slower. You can't ask a horse to do their jaw release slower or smaller. So, this is where we have to adapt the method, right, based on the species, because there are some things we can't do.

JL: The titration that you are talking about, could that actually be what I'm reading as fake yawns?

SS: Well, that's what I'm wondering about: That fake yawn could be just him releasing his own jaw after he it was tight for a little while.

JL: But he gets larger and larger, so the first couple are just tiny attempts and then he gets larger and larger. I'm just wondering whether...

SS: Yeah, that's possible that he titrated. It's funny, because we would start in Somatic Experiencing® with small amounts of jaw movement and we might move to larger amounts. Sometimes you don't need larger amounts because you get a lot out of these little micro-movements. But you are right, it does look as though he is doing that himself, where he is doing smaller jaw openings and then eventually they are able to get a little wider. Theoretically, we could surmise that his jaw is loosening more as he becomes more deactivated, and he's more in that calmer state, the muscles are relaxing, he has more range of motion in that jaw. He's out of the hyper-tonicity or the stronger tonicity; he might not be in hyper-tonicity but he's out of that strong muscle tone gripping back into a calmer state. It's hard to say, the jury's out of course, but if we base this on what we see in with others animals working through these cycles, based on humans working through these cycles, these are pretty consistent things that happen at these different points in these sequences. So, again, we never know 100% for sure but there, theoretically, it fits the model, it fits the framework. Like the first pendulation, this was a self-directed titration of stimulation brought upon by Star, he brought himself forward to the thing, figured out where his threshold was, moved away and then deactivated once again. So, he approached then retreated. In Somatic Experiencing®, we'll do a lot of approach/retreat work as well, sometimes directed by the client sometimes directed by the therapist. In this particular case, we have the horse directing this particular approach/retreat pattern [and the human following the horse]⁸.

SS: The 3rd pendulation begins at around 1 minute 42 seconds, where you, Julie, re-cue the panther walk another time and, interestingly, yet again, Star moves forward again without the walk. My guess is, is that this is in part because he's still very focused on that object and not so much focused on what you are cueing him, like he's still got a certain amount of his brain attention on that focus over there. The **dual attention** of being able to be with you and the object, or more with you in the face of the object, isn't quite there. It still feels he's walking with you, I mean he's joined up enough that he can move with you. He's still not cueing the response, though. That was my take on that. I don't know if you had a

⁸ In Somatic Experiencing®, this progression from allowing the human client to have the control first in sorting out their threshold helps them build the confidence they need in their nervous system and capacity to sit through pendulation cycles (provided, of course, that the client is not going past their own thresholds into hyper- or hypo-arousal, further reinforcing dysregulation). This, in turn, helps them feel more prepared to relinquish a little bit of that control as they build more resilience in the face of activation. Similarly, Star experiences this process at liberty first, determining his own thresholds (more control) and building his capacity. Once his confidence is more secure, this process could be attempted on a lead rope (less control). Knowing when to direct and when to follow is part of the art of the Somatic Experiencing® process.

different take on that particular... if there's a sense that you have about why he might not be cueing the panther walk yet?

JL: No, I honestly, there's no reason not to, except what you are saying. I don't have an explanation. From my perspective at the time, it was just: "OK, he's not comfortable enough yet to be feeling really proud and ignore it." I mean, that was just my...

SS: Yeah, that's exactly it, that's my thinking too. He's still predominantly focused on this object, he's still unconfident enough to be kind of affected by this object. He's moving with you so he's got enough connection with you on board that he is following the cue and moving with you. That may be a reinforced behaviour, because he's worked with you a lot, but there is still that sense of connection. And so, similar again to the previous two [pendulations], he begins to move toward the object and then he pauses at his own threshold at around 1 minute 51 seconds. And this time, when he approaches though, his head and neck are much lower during the approach. He's well below the withers this time, he does not go above the withers with his head bobbing. It's much slower, it doesn't have that more urgent kind of quality to it, it's not as fast, right? It's not as "what's going on? what's this thing". It's more like, "ok, up and down". It's smoother. We would talk about flow, right? It feels more organized and flowing as opposed to disorganized and jolting, so to speak. And there's more time between each bob of the head up and down. He did drift sideways a little bit in this segment but he's mostly able to stay focused on the object facing it as opposed to "I'm sort of drifting and I'm turning away". Like, he's able to stay focused. He also doesn't need to retreat this particular time, and there is no licking and chewing for this particular pendulation. And I wasn't sure if that is because he is mostly already in parasympathetic dominance; he doesn't really go into any major kind of arousal. Again, he is pretty calm in this particular one; he stops at his threshold but he's doing quite well compared to the last two. And so, it's possible that he's already in that parasympathetic [dominated] state so there is no extra salivation that would induce sudden licking and chewing. It's unclear, or if it's because the next pendulation begins before he's able to come down enough to have licking and chewing occur if we had delayed the next pendulation another few seconds, so it's hard to say. But because he's so much calmer in this particular pendulation, it doesn't go as high and it's not as intense, he's much more curious this time. Waiting longer may not have been necessary, or at least the opposite may also be true: Not having waited longer may not have been detrimental. Although there was not a lot of time for that sort of deactivation and integration to happen, I don't see that was necessarily problematic given how low this particular pendulation was. Anything else Julie, before we move to the next one?

JL: No, it's great.

SS: So, 4th pendulation begins around 2 minutes and 9 seconds, roughly. And this is where you are cueing him to panther walk another time. Each time you are cueing him, it's a stimulation. A stimulation can either be in the direction of a counter-vortex, which is a resource, or a stimulation could be in the direction of the trauma vortex, which is activation or arousal. Arousal when it's not trauma and activation if it starts to go into those higher states. So, you cue him to panther walk, which is a stimulation bringing in social engagement, a resource that he knows how to do and again that bilateral stimulation that might lead to bottom-up regulation. He doesn't do the panther walk really in any significant way again, but he does walk with you, so you click and then you give him the treat around 2 minutes and 16. He orients to the object, you re-cue the panther walk again and then this time he does it a little bit with you, and he approaches a little bit closer. Then he pauses once again, looks again at the object... So, each of these pauses, it's hard to say if they are part [of one pendulation] or they are all separate pendulations. I would

say no, we are still in the same one because he's still in action, right? He's still in "moving towards"⁹. He lowers his head twice, you walk on, he joins up again with you and then this third time he does not actually lower his head, which is interesting. At the 2 minute and 38 second mark, when he pauses again, he doesn't actually need to lower his head at this point. Right, that bobbing isn't necessary, whether that's to orient his visual field or to self-regulate; he's not engaging in it this particular time. So, you can see how much further ahead we are with his comfort in his nervous system with this process. He's not having to do the things that would keep him calm [in other words, he has shifted from the **neuroception** of danger to the neuroception of safety]. In Somatic Experiencing®, we would call those **management strategies**¹⁰. If you know, sometimes you think of those as fidget behaviours, so a fidget could be, from our standpoint, a thing that you do that's attempting to try to keep you regulated but, really, it's just this thing. Ideally when we have true regulation, we are not needing those fidgets anymore. Right? The nervous system is organically calm, and we are no longer need to use an outside strategy to get to that.

JL: And maybe, because just after that his panther walk improves, the behavioural signals to me at the time on the ground at the time should be *"well, I don't need this anymore, let's go a little bit further, I'm a little bit braver now"*.

SS: That's right.

JL: So, these are signs for me when I'm out there with him, working out just what to do and how to do it, and what to do to help him. That those things, not needing the resources that he did for himself for his nervous system, he actually felt prouder and could get more into movement.

SS: That would be my assessment as well, and that's what we see with humans, too. And this where I find that it's so fascinating, because the Somatic Experiencing® model was grounded on mammal science first, adapted to humans, we are now taking that back around, like I said earlier, full circle to reapplying it to horses in this particular video. And it's not surprising to me that it's very similar, and again, why wouldn't it be, right? So, for me it's interesting that we can actually take this, superimpose it on a different species and go *"same!"* Right, so, again some species-based differences, of course, there's going to be some things that we have to adapt but, overall, the overarching patterns and process unfolds very similarly.

SS: So, he joins up with you again, he doesn't lower his head, you cue him to panther walk and he finally, like you said, engages in that movement again around 2 minutes and 50 seconds. So, he starts to actually do the panther walk and at that point, I agree with you, he's much more resourced, he has much more capacity in his nervous system. He's not as distracted by the object and/or he also has more ability or confidence in himself to be around this object and do this thing with you that you are asking him to do. But we had to build up to it, and so the building up occurred over the first few pendulations. Now we are at technically, if we could lump this particular segment of the video as, the fourth pendulation (it might actually be a number of smaller ones). For argument's sake, we'll call it the fourth pendulation. So,

⁹ It becomes more difficult to count the number of pendulations as the training session progresses. There could be numerous smaller pendulations occurring, or one longer pendulation with a number of mild fluctuations in it. Ultimately, what is more important is noticing how much more capacity is available in his nervous system as he approaches the object, with a decrease in intensity of his pendulations with each successive approach attempt.

¹⁰ Head bobbing to orient visually to the environment may not be a management strategy, but an organic response to the neuroception of danger. But if the head bobbing is a reinforced behaviour that helps with self-regulation, that could instead be considered a management strategy in this context.

he starts to engage in that movement, you click and treat at 2.54, so four seconds into the panther walk, so it's like "yeah, great this is awesome", here is another counter-vortex. You are reinforcing the behaviour, but it's also a resource and it's also engaging the social engagement system when he gets a treat, he licks and chews. He activates the part of the body that is involved in the social engagement, which brings in the ventral vagus, which allows him to be in a more parasympathetic state. So, all these pieces to me are playing out as we are watching this. [The click and treat could be considered another counter-vortex in this scenario.]

SS: You pause together and then that's around the 3 minute and 2 second mark, at that point. So, we could have waited and allowed more deactivation to occur, but again he's not super charged. I'm not seeing any major issues with having proceeded into yet another stimulation. Where I'm concerned about **stimulus stacking** is when he's at higher thresholds or at higher levels of intensity earlier on. Where there isn't enough capacity in the nervous system, stimulating without allowing a chance for deactivation to fully occur becomes a problem, because that's where we start to see the learned helplessness, and flooding, and the shutdown and all that kind of stuff because the nervous system never has a chance to reset, as we saw in that previous [theory] video of those perpetually increasing thresholds. But because he's had a chance to titrate through increasingly growing levels or thresholds of tolerance, and he's been allowed to pendulate completely or more or less completely, he's been able to move through and build his tolerance. And so, I don't know that it's necessarily too problematic that he's not getting full deactivation before this next one occurs, because he's so much more resourced and he's got such a wider capacity now. From a nitpicky sort of subtle standpoint, or nuance-y standpoint, we could have paused longer here but, again, he seems to be ready for it. So, it's not necessarily a bad thing.

SS: The fifth pendulation would start around 3 minutes and 3 seconds, where you again cue the panther walk. There is less and less space and time between these, and again, it's unclear if it's because we are just not allowing the time or because he's just that much more resourced. It could be a combination of both. You intuitively might be reading the fact that he is more resourced and are just continuing with this process with him based on that read.

SS: So, cue the panther walk, we know what all that is, he turns, and you turn to face the object. And what I find really interesting at this point, you cue the walk (there's the counter vortex), and you are turning to face the object (which is the trauma vortex stimulus). Star does it with you, his head at his withers, he doesn't increase higher, he's still in that same connected state, and he joins you with that movement in a rather easy flowing kind of way. It isn't jarring, it's not activated, he's just very much with you, and you click and treat. And then the 6th pendulation, which I would say, is the last one in this particular video, starts at the 3 minute and 15 second mark. So, we are flowing from one to the other; from about the 4th pendulation onward, they are happening much closer together. There is much more capacity in being able to move towards this thing that we would consider the trauma vortex. So, you again cue him the panther walk a final time, he does that with you up to the object, he gets himself within a braced position to kind of explore it around 3 minutes and 27 seconds. He does that for a few minutes, and it's like whatever little bit of charge may have been there with the bracing, it's low, because he's much closer and he's not leaving the scene. He could leave if he wants to, he's not retreating and then instead of retreating, he moves forward, he shifts his weight forward on those front feet, he moves forward at 3 minutes and 34 seconds and appears to get very, very close to the object. I don't know, Julie, if he actually touches the object in this video or if he gets really close to be able to smell it, but here is where we finally make our way up to the thing. Do you remember, Julie, if he actually made contact with it physically, or he just got within very, very close proximity?

JL: No, he did make contact with it, and that's when I decided to stop.

SS: He did touch it? Perfect! You know what? In a really good Somatic Experiencing® session, we don't want to do too many pendulations, especially if the capacity is not there. But his capacity was there, a beautiful process from my standpoint, and then at that point, absolutely, walk away, *"leave the pad, let's go, let's go do something else"*, end the training session there for the day. It's possible that with a different horse, you might have had to pause the pendulations earlier. You might not have been able to go beyond 2 or 3. Or even just one, some horses are so activated and they are so much in an over-coupled trauma response that you may have had to just have done one, and that one would have taken a really long time, and that would have been your one for the day, kind of idea, and then back off and that's it. We grow the nervous system capacity by small increments; those little titrations really make a difference. Dr. Peter Levine would say, and a lot of people would say this, but Dr. Peter Levine for sure would say this: **we get there faster if we go slower**. And a number of horse trainers have said that. I know Ray Hunt has certainly said that, I know a number of people have said that. Some colleagues of mine, Bettina Shultz-Jobe & Tim Jobe, who have a model called Natural Lifemanship, will often say, *"a good principle is a good principle regardless of where it's applied"*. And so, principles like, *"we'll get there faster if we go slower"*, seem to apply across the board in a lot of different areas. So that's certainly true here.

SS: One thing I thought was really neat with this whole process was: in Somatic Experiencing®, titration occurs through different methods. Approach/retreat is a form of titrating in the nervous system, titrating tiny thresholds. We can over-do approach/retreat, you can blow past multiple thresholds, in which case we are reinforcing stress and survival in the nervous system if it's too much too quick. But another principle of titration is this idea of **periphery to core**, moving into the heightened thing from the edges. So, we start furthest away and gradually move towards, and back off. We approach and retreat, and as we approach and retreat we gradually move from the periphery to the core. And that was what I saw in this particular video, which is why I was so excited to unpack this with you, because it is essentially a Somatic Experiencing® session in a nutshell or a series of Somatic Experiencing® sessions in a nutshell, but with a horse. So, I love that we've done this, Julie. Any other comments about this first video before we move into the second video analysis, where we see what happens the second time at a different training session where you bring Star to the pad again?

JL: No, I know I need to work on my timing and give him more time to process, for sure. And, it's interesting because at the end there, when I was adding the click and the treat, I was looking at it as another asset for him, not really understanding at the time until I read more what that meant. And every time I watch this video and read more and more about what you've recommended, I just think Star already read all those books and he knows what to do.

Second Video Analysis

SS: This next video Julie sent me is really lovely. So, this comes after the first video on a completely separate day correct?

JL: Oh yes, months after.

SS: Months later, OK. This happening much, much later and, Julie, this is what we can call round 2 of approaching the bareback pad. We will watch it together; we won't do a break down this particular time, I'm not going to stop it with each pendulation. We will just watch it straight through and we will add

some commentary as we are watching. But it's going to be interesting to see what happens this second go around as we re-approach this trauma vortex "stimulus".

SS: One of the things that was interesting, Julie: I think what prompted this [second] video was that, in a previous conversation, I had said to you that after watching the first video I would anticipate that the next time (based on past experience), the process of getting from start to finish – from the periphery to the core – would take much less time. It would involve a lot less (not that there was a lot of arousal to start with in the first video), but less arousal, more calm, not as much needing to resort to strategies. More ability to connect with you. And so, I think a very different process which would be evidence of what Dr. Peter Levine would call the "renegotiation". We are renegotiating as opposed to repeating and reliving, or reenacting the same traumatic process over and over again with flooding and shutdown. Let's watch the whole first video in one fell swoop first, and then let's watch the second video and see just what's different the second time around.

VIDEO ONE IS REPLAYED, FOLLOWED BY VIDEO TWO

[There is no voiceover for video one. The transcript below accompanies video two.]

SS: So, I'm watching it as well. And you are walking with Star, starting the step.... Panther walk. Oh yeah, very different this time. Very different, brings his head down again, not really above the withers. Not by much anyway. A little more panther walking, away from the object, which we do in Somatic Experiencing® as well, we back away. Click and treat. Approaching and retreating. This is a very different approach and retreat. Then we have that fake yawn again, Julie?

JL: Yes.

SS: But, the approaching and retreating is different this time, where it does not involve a marching away from or getting away from. It is very much chosen, a quiet calm: *"I'm following you away from the object"* as opposed to *"I need to get away from the object."*

SS: Then we have him coming all the way forward... Yeah, no bracing... What I think is really lovely too, Julie, is that you just backed away. In Somatic Experiencing®, we often ask practitioners to make sure they are sitting back in their chair and not leaning forward or being too invasive with their energy because the nervous system can come down on its own, often. We can just be there and hold the space.

[in response to Julie raising both her arms] Is that a join up cue for you?

JL: No, it's actually my shoulder was sore that day. It was to cue him to take charge of his posture for the panther walk, but my shoulder was not working, so that was all.

SS: Right, so it's definitely a very different process this time from start to finish. It took less than half as long.

JL: It was probably a third. If you counted beginning to end, a third (if you divided the video into thirds, it was two thirds as long as the other one. We spent a lot more time at the end with him sniffing the bareback pad).

JL: I was interested to see what would happen, because I really know my next job is going to be to pick up the pad in some way, and try and help him understand that the experiences of the past where he would freak if it was on his back are not going to happen again. So, the next time is going to be very challenging for me, looking at that concept. Do I have a lead rope on? Do I leave it the way I am doing it now, because it is not so much because I can't trust myself if I put a lead rope on not to give him control, but whether he sees a lead rope on with me as a different set of circumstances?

JL: For example, if we go out on the road, there is no way I would never have a lead on him. There are times when I will take control if there are issues in relation to safety: when a motor bike is coming up the road, or when a car coming too fast, or something like that. So, I can't guess what he sees the lead rope meaning to him. I don't want to be in a position where I am actually taking away his perception of control. So, I am still not sure whether I really want to put a lead rope on. I think would like to try without and see what happens. And now, that I have read a lot more, see if I can take the lead a little bit because he may leave and all his "book reading" will be out the window.

SS: So here is the thing: this is a new stimulus. It will potentially be a new set of thresholds that you can work through in potentially the same sort of way. I think that my inclination, based on my understanding of Somatic Experiencing®, would be to do it at liberty again. Because in Somatic Experiencing®, we [the client] need to have the control **first**, before we can let go of the control and feel OK with letting go of the control, and feel safe letting go of the control [that is, at liberty gives Star a sense of control, before upping the ante and doing it on line, which involves Star not having as much control].

JL: Yes.

SS: And then, over time and the more experiences he has with the deactivation, the more capacity grows in the nervous system, so that may start to generalize in other situations. But you have to start and let it grow first, if that makes sense. My inclination would be **not** to do it with a lead rope just yet, because him having the ability to determine his own thresholds I think is important and that is what allowed him to grow the first time. I can see adding in a lead rope after he has built that tolerance, because then you are changing the conditions. It's like "oh, I can't actually get away as easily." Because part of trauma is the thwarted self-protective responses. If he was not allowed to get away in the past, then adding in the stimulation of a lead rope which holds him closer may be too much. It's adding an extra stimulus to the process. My inclination would be, based on Somatic Experiencing®, do the process with pad first – lifting it, and then after that maybe a whole new sequence of bringing it to the side, touching him with it, and then on his back, and so on. Each of those may require their own deactivation before doing that on a rope where he recognizes that he can't get away, so that not being able to get away isn't a stimulus he has to contend with **on top of** the pad being a stimulus. The rope will be a stimulus too, and that's too much stimulus stacking.

JL: Yep, that makes total sense.

SS: Ok, that would be my prediction, that would be the process next. I think behaviourists would call that **shaping plans**. I'm not doing shaping here, we are working with growing the nervous system, so this would be like the "treatment plan" [or intervention plan] in Somatic Experiencing®, as here is where we would go next: to continue growing that window of tolerance as opposed to classic [as in typical, not classical] conditioning-based behaviour shaping. Not that there isn't some behaviour shaping happening

in these processes, of course; that can be happening also. But we are talking from a larger standpoint, beyond just straight behaviourism.

JL: Yes.

SS: One final thing I want to mention before we wrap up is that as we approach the trauma vortex, so to speak: it's not always that everything will be this lovely and deactivated. So, it is important to recognize that as well, that when we do Somatic Experiencing® work with humans, when we get closer to the trauma vortex, people's capacity grows [provided they experience complete pendulations building up to it, the ANS is resourced enough, and the conditions support it]. What that means isn't that they are always calm; it is that **their capacity** to be with the largeness of all the emotional arousal states that occur as we get closer to the trauma vortex **increases**. Meaning that as they get closer to the trauma vortex, arousal increases, they go into activation, but they do not get stuck in the freeze response. They are able to go up into that activation and mobilize the response that maybe they were not allowed to mobilize in the past, work through that fight or flight energy, and deactivate down the other side. So, there is a place in this process for larger, higher states of arousal, and having those states not necessarily be detrimental. Because, again, from the slides that we looked at earlier, the process is not so much that going into states of stress creates an allostatic load which is detrimental to the nervous system (which is the old two branch model of understanding the ANS). But, rather, that it is a dynamical system and what we are wanting to do is help the nervous system have a flexible, resilient response in the face of arousal and activation, so that the nervous system knows that it can activate and it can deactivate without it getting stuck in a shut down. Or without getting stuck in submission, or just going into dissociation, and staying there in a **functional freeze** for decades.

So, the idea is that yes, sometimes there is a place for these higher states, but we want to make sure as we grow the threshold of tolerance that we are doing it with connection, we are doing it with attunement, we are growing the window, and arousal and deactivation are occurring. So, when we get to the centre of that trauma vortex, if there is a larger response that is meant to happen, the capacity is there to move through that response and not get stuck. And also, not get punished on the other side. This is the piece around trauma. How we end up having trauma in humans and in captive species is that, often, we go into those responses and we are punished for them – we are harmed further. We get in trouble, we are shamed, and so on and so forth. So, we prevent the deactivation from occurring; we prevent the flight or fight from taking place because it is not allowed, or not deemed to be appropriate, or OK socially, or what have you. Or it is viewed by the human as being a sign of aggression or dominance, and not understanding the fear beneath it.

I am not saying we should not be protecting ourselves in the face of a horse, because obviously there are certain risks involved and safety concerns. But if we take this lens that if they are working through a fight or flight response and it has to do with trauma – that is very different from, say, more run of the mill behavioural things we may be seeing. If this thing that hasn't had a chance to complete, and the horse is coming out of freeze after being in a shut down for a long time, and starts to be more opinionated, starts to have more aggression or more flighty type responses, the horse is starting to come back into a sense of "I can". It is a disorganized "I can". It's coming out of the "I can't" into "I can", and if we interrupt the "I can" process and shut it down, you may send the horse and the human (or the human) back into that freeze state and then we are bouncing in and out of shut down and **hyper-arousal**. Hyper-arousal, **hypo-arousal**, up down, up down, never fully completing. And so, if there were to be a higher level of arousal,

the goal is not necessarily to get that to shut down or to punish it or to suppress it; it is to support in a nuanced way the completion of that cycle, so the horse deactivates and comes down the other side.

JL: We will take it further, and we will get onto the next step, and we will see what happens. I know that no matter what happens, it will be good for him and good for me because I think he is such a great teacher and he is much further ahead with this stuff than I am.

SS: Thank you so much, Julie, for your time. I really, really, truly appreciate you sharing these videos with me and us and I look forward to connecting again.

JL: OK, thank you!

We gratefully recognize the efforts of Jennifer Teis in transcribing this video.

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