How Somatic Experiencing and Attachment Principles Can Increase Safety and Welfare in Equine-Assisted Interventions and Horsemanship Approaches

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CHAPTER 23

Somatic Experiencing® and Attachment Principles

Increasing Safety and Welfare in Equine-Assisted Interventions and Horsemanship Approaches

Sarah Schlote

Equine-Facilitated Trauma Therapy is an integrative approach to trauma treatment for humans, which integrates principles of trauma-informed care with attachment theory, ego state work (Schlote & Parent, 2018, in press), and touch work, along with theory and practices from Somatic Experiencing® (the latter being referred to as EQUUSOMA).

The principles upon which this approach are founded have useful applications not only for the field of equine-assisted interventions but also horsemanship and training methods. In particular, Somatic Experiencing® is a psychophysiological approach to healing from trauma and chronic stress, based on mammalian stress physiology and other interdisciplinary fields of study. Developed by Dr. Peter A. Levine in the 1960s, it is based on the foundational premise that wild animals, though routinely facing threats, rarely exhibit signs of trauma. Although wild animals have the ability to naturally "discharge" the build-up of thwarted survival energy following the freeze/immobility response, domesticated or captive animals often do not, as a result of being restrained or prevented in some way from completing specific defensive actions or from acting on their natural drives for movement, exploring the environment, foraging, and social engagement (safety, bonding, soothing, play). When animals experience fear or are frightened when going into freeze, it takes longer for them to come out of tonic immobility

(a time-limited experience that is usually characterized by self-paced termination), or collapse (learned helplessness, defeat, shut down, submission).

Humans are in a similar boat as domesticated animals. Living in a "social cage", humans typically neo-cortically override the body's natural impulses or discharge/release through rationalization, fear, self-judgment, enculturation, and shame. Whether due to physical, emotional, or mental restraint, the outcome is similar: organic self-regulation is disrupted and the system does not re-set. As stated by Levine (1997), *"this residual energy does not simply go away. It persists in the body, and often forces the formation of a wide variety of symptoms, e.g., anxiety, depression, and psychosomatic and behavioral problems. These symptoms are the organism's way of containing (or controlling) the undischarged residual energy"* (p. 20). Levine proposes the concept of renegotiation as crucial to recovery from chronic stress and trauma. This idea of renegotiation is a foundational principle that can guide equine-based programs and horsemanship in a trauma-informed way. He states:

Renegotiation is not about simply reliving a traumatic experience. It is, rather, the gradual and titrated revisiting of various sensory-motor elements comprising a particular trauma. Renegotiation occurs primarily by accessing procedural memories associated with the two dysregulated states of the autonomic nervous system (hyper/hypo-arousal) and then restoring and completing the associated active responses. As this progresses, the client moves towards equilibrium, relaxed alertness, and here-and-now orientation. (Levine, 2015, p. 44)

Renegotiation is different from re-enactment. It supports a different outcome to a familiar situation or dilemma, experiencing oneself differently in a familiar circumstance, and experiencing relationships differently. When we "feel felt" by the other, when there is responsiveness and attunement to emotional, somatic, and relational cues, and when we are supported to take effective action in the moment based on our needs and what is wanting to happen, "corrective emotional experiences" (i.e., "corrective somatic experiences") are possible. This is quite different from having choice taken away, being silenced without a voice, having to override and shutdown in order to be in relationship, or having to block one's natural impulses towards safety and self-protection. As

discussed by Schlote[1] (2017), a trauma lens and trauma-informed care principles of safety, consent, choice, voice, empowerment, trust, collaboration and compassion apply as much to the humans in the intervention or the horsemanship approach as the animals. Within the context of Somatic Experiencing® as an intervention,

Individuals locked in anxiety or rage then relax into a growing sense of peace and safety. Those stuck in depression gradually find their feelings of hopelessness and numbness transformed into empowerment, triumph, and mastery. SE trauma resolution catalyzes corrective bodily experiences that contradict those of fear and helplessness. This resets the nervous system, restores inner balance, enhances resilience to stress, and increases people's vitality, equanimity, and capacity to actively engage in life (Somatic Experiencing® Trauma Institute).

A similar outcome is possible for the horses as well when related to from this perspective – greater aliveness, regulation, connection and agency as opposed to living in their survival brain as a baseline state. And, ideally, in horse-human relationships there will be a sense of reciprocity and secure attachment as opposed to one member of the relationship having all the control. This requires the ability to attend to what is occurring in the relationship and what is happening in the nervous systems of both horse and human.

1. The Activation Cycle Map

A number of authors have proposed that self-protective responses occur in a hierarchical sequence. This sequence is known by different names depending on the source, such as the activation cycle or defense response cycle (Foundation for Human Enrichment, 2007), the preparatory set (Payne & Crane-Godreau, 2015), and the defense cascade (Kozlowska et al., 2015). Schlote (2018, in press) describes the process as follows:

When faced with novelty in the environment, our first response is to arrest/startle and orient to the source of the stimulation. Herd mammals turn to group members to confirm or disconfirm whether or not there is danger, and also rely on one another for survival efforts

1 See Chapter 15 in volume 1.

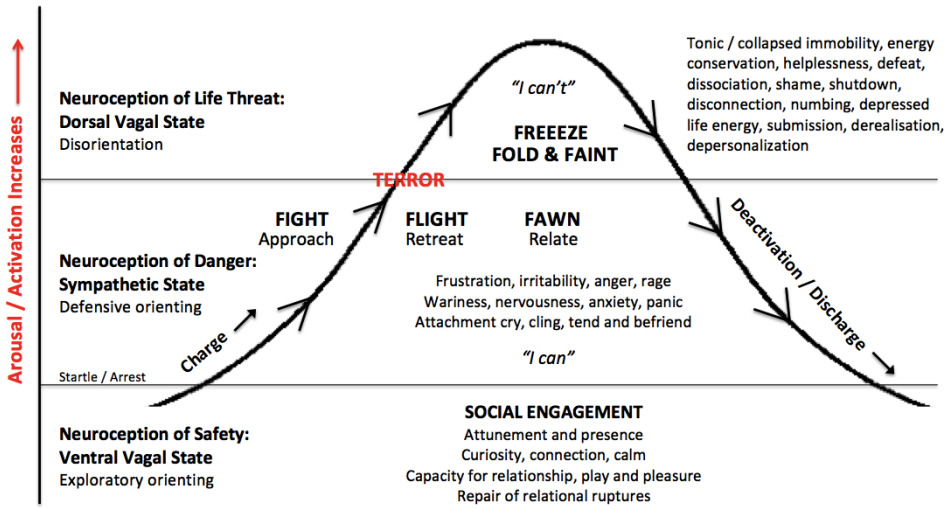
and safety. If a threat is identified, both horses and humans will engage in specific defensive actions (fight/flight), or freeze (immobilize) or submit if these are not successful or possible. This appraisal of safety or threat and hierarchy of responses occurs in rapid succession, often beyond conscious awareness, and rarely results in trauma in wild animals. The main difference between domesticated species and our wild cousins is that they are generally not exposed to the same long-term stressors as humans and domesticated animals are. They are also typically free to engage in natural behaviour and protective actions, and move through the immobility response by shaking and discharging whatever thwarted survival energy is left in the system to return to a state of balance.

Aside from orienting and the standard canon of fight, flight, freeze, fold, and faint[2], mammals also have an additional defense response strategy: fawn. According to Dr. Stephen Porges, creator of the polyvagal theory, social engagement is the primary strategy by which mammals ensure survival that distinguishes us from reptiles and other earlier organisms. Bonding, affiliative behaviors and secure attachment relationships are sources of safety as well as the foundation for healthy development. Social strategies can arise as defensive responses as well, whether before progressing to fighting or fleeing, or when it is clear that fight or flight is not possible. These include the attachment cry, clinging to caregivers, and tending and befriending behavior such as caretaking, appeasing, pleasing, and so on. Furthermore, the freeze response not only occurs when fight or flight are not possible, but also when social engagement strategies are not possible or do not feel safe (such as turning away from social contact as a survival response, like distancing, withdrawing, and shutting down, as opposed to turning towards social contact). Some have proposed other "Fs" as well, including fidget, fright, and fornicate. Fidget does not constitute a defensive response per se, but is rather a displacement behavior showing evidence of early fight or flight activation at the lower end of the activation cycle (such as when feeling nervous, uncomfortable or irritable), or of thwarted or uncompleted fight or flight energy (such as jittery legs or hands when highly charged but unable to leave or fight back in a particular situation). Fidget might

2 Faint, mostly commonly caused by vasovagal syncope, is not known to exist in other animals aside from humans. The reasons for this are currently unknown (Blanc, Alboni & Benditt, 2015).

also, at times, refer to self-stimulating activities when facing distress or shutdown (a form of management or coping strategy), or be evidence of both. In either case, fidget is not included in the activation cycle graph above but is nonetheless an observable action that, along with other stereotypical behavior (Schlote, 2017) can provide information about nervous system arousal or activation. Fright (referring to immobility states) is typically used to denote the freeze response by authors who instead use the word freeze to describe the startle/arrest response that occurs when first noticing novelty in the environment (Blanc, Alboni & Benditt, 2015; Kozlowska et al., 2015). In keeping with that particular language usage, then freeze would show up where startle/arrest is on the activation cycle graph, and the word freeze currently at the apex of the bell curve would be replaced with fright for an equivalent effect. Finally, although the function of sex is not primarily to be self-protective, fornicate could be considered a sub-category under "fawn", a form of social engagement strategy in the face of perceived danger in certain circumstances. As such, it too does not have its own denotation in the diagram below but is an example that falls within the model nonetheless.

Figure 1: The Activation Cycle



The activation cycle corresponds somewhat to the idea of working with the window of tolerance, a concept created by Dr. Daniel Siegel (1999), which is the better known of the two maps. The window of tolerance model provides a useful visual representation of hyper- and hypo-arousal and the range between the two extremes. For some, the range is narrower, while for others it is wider. The activation cycle, on the other hand, depicts the hierarchical progression in the defense cascade, and conveys the "as they go in, so they come out" quality of the freeze response. As such, the defense response activation cycle provides a helpful map for gauging where both equines and humans are in the context of equine-assisted interventions (and, indeed, with regards to other human-animal interactions, like when training or competing in various disciplines). Being able to tell if a particular activity is within a tolerable range, at the edge where growth occurs, or if it is taking a person or animal beyond their capacity or threshold, sending them into survival physiology, is important in order to ensure that equine-assisted interventions and horsemanship activities are mutually beneficial and that the wellness or safety or growth of one does not come at the expense of the other. This is not always easy to do, of course. For instance, a state of quiet or stillness can be misleading, and there are subtle physiological, behavioral and relational cues that indicate when it is indicative of being calm and connected, bored and tuned out, dissociated and disconnected, suppressing or masking emotion (more exclusively a human behavior, often due to shame), or shutdown and compliant. Important information about a horse's or human's state can be missed if we are not paying attention to the nuances of the somatic experience as it arises moment by moment in the course of relationship. For instance, Hunter (2017) describes her experience of misinterpreting stillness as cooperation when in fact her horse was in a freeze state and merely compliant due to pain from a large insect that had burrowed its way into the horse's sheath. Missing out on these cues can result in situations that do not feel good for either member in the dynamic – in terms of the pain the horse was overriding to go along with his human's request, the pain or injury the human might have endured when the horse thawed out of freeze into reactivity in response to being bitten (had the horse bucked in reaction to the discomfort), and the overall experience of misattunement and not being seen or heard accurately by the other.

Becoming attuned to the difference between compliance, which comes from the survival part of the brain, and cooperation, which comes from the "thinking" part of the brain, begins with noticing the contrast between an individual who is frozen vs. one who is consciously choosing to cooperate with a request. Rather than being attuned when Partner got very still, I became task-oriented thinking it was great that things were going so smoothly. And yet he was hurting inside the entire time... if I had just noticed that his eyes were a bit vacant, or his breathing a bit shallow, I might have continued exploring whether that fly had really gone away. Sometimes we have to stop and consider whether we are really attuned to the other and accurately interpreting their signals in order to build and deepen our relationship (Hunter, 2017).

This example shows how a thwarted self-protective response in the activation cycle might become a safety concern in a horse-human interaction. If an animal is prevented from completing a particular impulse (especially towards survival or self-protection – trying to swat at the fly) by shutting down to comply with the human, there can be potential risks for both individuals. For instance, there are programs that require horses to always be tied on a lead line, with no ability to escape or choose to move away when feeling uncomfortable. The prevailing belief within some of these programs is that the horses must be on a line to ensure safety for the human participants, and that horses must be under control at all times, meaning activities that take place at liberty are considered to be at increased risk. However, the opposite is often true. By preventing the animal's natural ability to move away or create distance in relationship, especially when feeling uncomfortable or scared, a build-up of frustrated or thwarted fight or flight response energy under the shutdown of compliance could lead to explosive responses that place humans and horses further at risk when the horses eventually thaw out of the frozen submission into aliveness and begin voicing their opinions.

Similarly, stress arousal does not mean that an animal (or human) is in survival activation. While all activation involves arousal, not all arousal is considered activation. Indeed, beyond pain, confusion and distress, one can experience stress arousal in the sympathetic nervous system that is either pleasant or enjoyable (such as excitement,

anticipation of something desired, play or sex, aliveness, and so on), or unpleasant but not intolerable (such as getting an injection, building confidence around objects that seem unfamiliar or spooky, etc.). Energy can be misleading, and it too requires an ability to notice subtle cues that would help determine if it constitutes arousal or hyper-arousal, stress or distress, vigilance or hyper-vigilance, and so on. There are also individual differences to consider – what might be tolerable arousal for one might be activating for another. It is important to take each organism's history, personality, species, needs, nervous system, and capacity for social engagement into account when facilitating equine-assisted interventions, and attune to the nuanced ways the personality and nervous system express themselves emotionally, cognitively and somatically moment by moment.

Another reason why it can be difficult to ensure that the horse-human relationship does not rely on one member of the relationship benefiting at the expense of the other is that a number of horsemanship methods tend to promote either end of the continuum of reciprocity as opposed to the center. For instance, many horsemanship models continue to promote dominance and control of the horse, under the guise of "leadership" or using gentler methods, where the human is in charge (as seen with certain natural horsemanship methods), while other models promote a view where the horse has all the choice and control (such as certain liberty training approaches). When the relationship is entirely on the human's terms or entirely on the horse's terms, at least one member of the relationship's needs are not getting met, which results in an imbalance in the relationship dynamic. As stated by Jobe and Shultz-Jobe (2016), "if it is not a good principle for building healthy relationships with people, then we do not use it with horses, and vice versa" (p. 32). Indeed, if being in relationship requires one member of the relationship to not have choice or a voice, feel deprived, or have to resort to survival strategies (fight, flight, fawn or freeze) in order to be with the other member, then this is not a sign of a healthy, secure relationship. In human-to-human relationships and human therapy, this would be a given, yet somehow this seems like a radical idea when building relationships with horses or in horsemanship, where the things are typically one sided and physical and psychological control (viewed as abuse

in human relationships) are more common. Although there continues to be a prevailing opinion that being safe around horses requires the human to be in control, bringing in the understanding of the activation cycle and progression from safety in connected relationships, to danger (fight, flight, fawn responses), to life threat (freeze, fold, faint) helps provide a much more nuanced map from which to gauge the horse-human relationship.

2. Fostering Safety Via Titration

An understanding of the activation cycle map does not imply that it is advisable to avoid higher states of arousal or activation altogether. However, it does mean that working more gradually to build capacity in the nervous system is recommended before progressing to higher thresholds, whether pleasant or unpleasant, in order to be able to experience them without dissociating, shutting down, overriding or engaging in other defensive accommodations to manage. Doing activities that involve higher degrees of connection (proximity, touch, attunement) or the mobilization of greater intensity (such as with boundary setting exercises or approaching something that is anxiety- or fear-inducing) can bring both horse and human closer to the "trauma vortex" (Levine, 1997), where there is a greater amount of bound activation coupled into horse-human experiences that could be uncomfortable but helpful, or might even be considered life-enhancing (such as being approached, intimacy, relationship, separation, assertiveness, joy and even calm being over-coupled with fear or shame). The closer to the centre of the "vortex", the more dysregulation and the more survival responses (hypervigilance, fighting/resistance, fleeing/avoidance, fawning/appeasement/clinging, or freezing) or management strategies[3] kick in to cope (like addictions, stereotypies, shame, and so on). Proceeding with caution and curiosity is important and involves two concepts taught in Somatic Experiencing®: titration and pendulation. Titration refers to the idea of working with smaller amounts of stimulation before proceeding to larger amounts, including the related concept of working at the periphery before

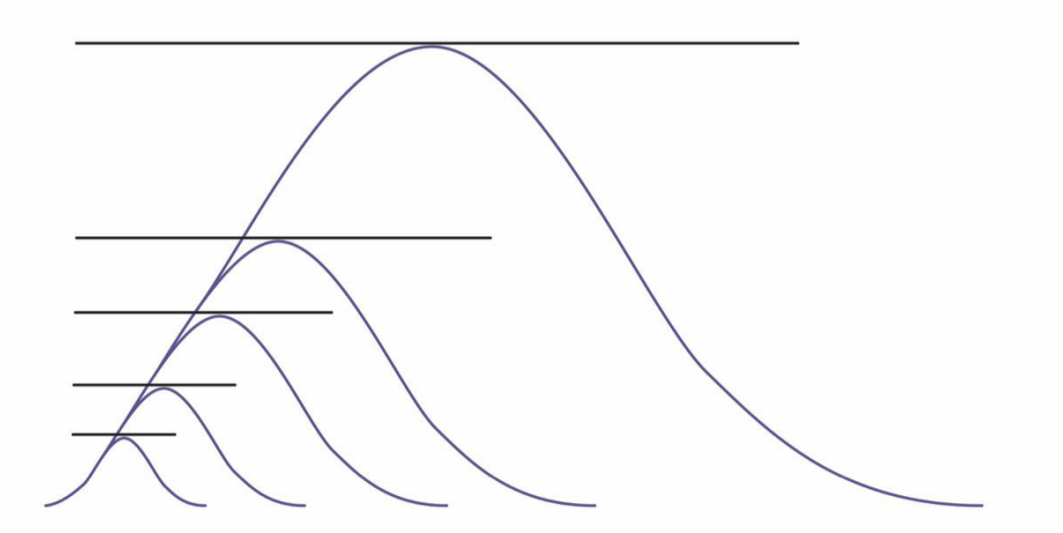
3 This does not mean that management strategies are evidence that an organism is always beyond threshold. Some strategies become habit and occur even at lower thresholds of stimulation or activation, having been potentially useful in the past at higher levels and now a familiar and automatic strategy.

moving to the core (or center of the "vortex"). Pendulation refers to the organism's natural ebb and flow between arousal and settling, activation and deactivation, charge and discharge. The activation cycle, if seen through to deactivation and settling, aliveness, and reconnection with others, would constitute a complete pendulation. Being able to tolerate smaller titrations of a particular stimulus and sitting through pendulations of arousal and settling at lower thresholds helps build capacity to experience activities or interactions at progressively higher thresholds (see Figure 2). It is by experiencing the completion of incrementally larger pendulations that the window of tolerance grows and supports resilience when opening up to more of what life has to offer, whether positive or negative. The degree of attention given to the threshold of the activity or request, and the degree of attunement to the organism's capacity to sit through the associated activation and deactivation of the stress response, help reduce the likelihood of flooding, overriding, dissociation or shutdown (through excessive stimulation or pushing for more than is possible at the moment) as well as avoidance (no stimulation provides nothing to work with). Finding that edge between too much and not enough is where the growth and renegotiation occurs.

For instance, an activity involving leading a horse could involve a number of smaller steps that could be worked through first before actual leading – in fact, the goal of leading may be secondary to working on the negotiation of activation and relationship leading up to it. Tracking and working through anticipation activation (pre-emptive charge present in the body) related to simply the idea of approaching and leading a horse is worth exploring first before beginning, then inviting the clients to notice what is happening in their bodies as they approach along with noticing the response of the horse to being approached (non-verbal signs of aversion/no, attraction/yes, maybe or other signs of where the animal might be at on the activation cycle). Taking the time to map out and track through nervous system responses can provide a different experience for both client and horse – a renegotiation as opposed to an unconscious and emotionally unsafe re-enactment of past experiences where both may have had to override or comply to be in relationship. Paying attention to the subtlety of non-verbal cues when approaching one another in the "dance of relationship" is not only promoted within

Somatic Experiencing® and attachment-oriented models of human trauma therapy (Kain & Terrell, 2016), but also in certain horsemanship approaches. One example is what is taught in certain liberty training models, where building relationship at liberty starts at a distance, noticing one's own emotions and noticing horse body language, approaching when detecting signs of consent and stepping back and pausing when noticing activation or signs of aversion, waiting for non-verbal cues within oneself and externally in the horse that it is safe to proceed with approaching and, eventually, creating contact (Resnick, 2005; Wright, 2017). This idea of approaching one another recognizing thresholds or boundaries is consistent with the principles of titration and pendulation and similar to boundaries exercises as taught in Somatic Experiencing®. One important consideration, however, will be ensuring that the dance of relationship at liberty does not solely favor the horse's needs and includes the human's needs as well so that both are finding fulfillment in the relationship (Jobe & Shultz-Jobe, 2016).

Figure 2: Titration and Thresholds of Intensity



Another example consists of boundary setting exercises where humans may have to increase their energy in order to communicate a boundary effectively with a horse that is less respectful of personal space. For some, raising their energy and mobilizing assertive movement in their limbs can be over-coupled with a lot of unresolved, bound activation (fear, shame, flashbacks to times they were punished or harmed for defending or asserting themselves, etc.). Being able to titrate at smaller thresholds (such as tracking through the activation related to imagining raising one's arms), then working with smaller segments of the movement sequence that would lead to eventually being able to raise one's arms with more intensity with confidence, would also be an example of a renegotiation leading to both greater safety and clearer boundaries in the world, in relationships and with the horses. This is similar but different to the idea of exposure therapies with horses and humans; while both feature a graduated approach, the focus is not on deconditioning of a response to desensitize, but rather on building capacity to work through whatever unresolved charge is left, resulting in changes at a neural level in the nervous system's response patterning. Although the following description by Payne, Levine and Crane-Godreau (2015) focuses specifically on trauma memory work in humans, the description may potentially also have relevance to doing anything that approaches the "trauma vortex" or connects with unresolved activation overall:

Somatic Experiencing specifically avoids direct and intense evocation of traumatic memories, instead approaching the charged memories indirectly and very gradually, as well as facilitating the generation of new corrective interoceptive experiences that physically contradict those of overwhelm and helplessness. [...] Fear conditioning extinction is the canonical model for recovery from PTSD, especially through exposure therapy; however 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 easily reinstate the fear response. By contrast, clinical experience in SE demonstrates a very robust change in fear responses which are remarkably resistant to re-evocation; this is consistent with the theory that clinical changes mediated by the SE process are not primarily due to fear conditioning extinction

but to a discontinuous alteration in core response network dynamical functioning. [...] This going back and forth between charge/activation and discharge/deactivation needs to be finely tuned. Too much of one or the other, and the process of re-establishing balanced functioning is interrupted. This distinguishes SE from exposure therapies, which do not tend to avoid extremes of activation. SE terms this back and forth process "pendulation". When skilfully nurtured it tends to occur spontaneously as the system seeks to restore balance [pp. 1, 6, 7, 8].

This brings a new perspective to exposure-based approaches, not only with humans with trauma but also in working with horses in terms of horsemanship training, the goal being to build capacity in the nervous system as opposed to simply tune out and tolerate. Horses and humans who learn to simply shut down or numb out in the face of certain stimuli (such as facing feared objects or situations) are likely to be re-activated again in the future into the same response again when they experience enough stimulation that wakes them up out of freeze or dissociation. Tracking the activation cycle and paying attention to the completion of pendulations in equine nervous systems are helpful principles to follow when working within a gradual exposure framework as opposed to strictly doing "desensitization". That is, using subtle nervous system cues indicating the horse is deactivating and settled before moving to a higher threshold builds trust and confidence, as opposed to continuing to escalate into flooding, helplessness and shut down without resolution. Although Somatic Experiencing® has not been formally studied in use with horses (beyond informal anecdotal use) and while the author is not a professional horse trainer[4], an understanding of mammalian nervous systems and the idea of tracking the activation cycle is worth exploring further by those who are in the industry who may be curious about a neuroscience view and alternatives or ways of adapting existing approaches.

4 The principles proposed by the author are also largely shared by the Natural Lifemanship approach to building relationships with humans and horses, both in terms of equine-facilitated interventions but also horsemanship "training" methods promoted by Tim Jobe, a seasoned and well-respected horse professional (Jobe & Shultz-Jobe, 2016).

3. Attachment as a Somatic Experience

The ability to attune accurately to what is happening supports safety in relationship because of "getting gotten" and "feeling felt" by the other. In human infants and young children, as with animals, language is not available as a way to read what is happening for the other. Instead, attunement in relationship occurs by attending and responding to somatic cues that occur in response to interactions and dynamics – whether with horses or with humans. Even when words are available, listening to the somatic current beneath the words (listening to the body story) often provides more accurate information than what has been filtered before being spoken. Attachment ruptures involve the varying degrees of misattunement that occur when relating to others (human or animal) as a result of misreading or avoiding these sociosensual and psychophysiological cues. The repair of these ruptures is an important part of renegotiating trust and security in connection. When misattunements occur without repair, this reinforces the neuroception in horses and in humans that relationships are not safe, along with the subsequent experiences of ambivalence, anxiety, avoidance, or confusion about how to respond in relationship.

Bowlby (1958) describes the nature of the attachment of young mammals (including humans and other animals) as comprised of various components, including the importance of a caregiver being a safe haven (showing responsive attunement to the child's needs); a secure base (knowing that the caregiver will be there to come back to when out exploring the world); as well as proximity seeking for safety, soothing and nourishment; and separation distress from the caregiver as source of survival. One particularly potent way of working with these components involves tracking the activation associated with how we arrive and depart in relationships. When there is insecure attachment, either closeness or separation can be activating depending on the organism's attachment experiences. Some humans or horses show evidence of discomfort with closeness and touch (such as bracing, rigidity, aversion movements, resisting/avoiding, disconnecting, fidgeting, or tense expressions and gestures, and so on), while others show evidence of discomfort when there is physical distance (appeasement, clinging,

protesting, resisting, anxiety, acting out, shutting down, or stonewalling/avoidance/disconnecting, etc.). This activation can even arise in relation to the thought of or anticipation of closeness or distance. Being able to help build a human's and horse's window of tolerance with regards to attachment and detachment helps build the capacity for relationship as well as grows the ability to feel connected to another even when not physically close. When we attune to the subtle somatic responses that occur in relationship that indicate where a human or animal is at in the activation cycle, and respond appropriately and consistently, a different experience of relationship is felt. This sets the foundation of relational repair, which can in turn result in deactivation as neuroception begins to detect evidence of safety, the nervous system becomes more regulated, and the conditions for secure attachment begin to fall into place.

Security in relationship is further enhanced by our ability to recognize where we ourselves are on the activation cycle map when interacting with others. As facilitators in equine-assisted interventions, or when working with our animals within horsemanship activities, being able to attend to our own sensations, impulses, emotions, neuroception, and activation patterns is crucial in order to provide a source of co-regulation for the humans and equines we are engaging with. Although one of the advantages of equine-assisted interventions is that human participants may find it easier to relate and attach to the animals, there is nonetheless a goal of restoring security in human relationships as well in order to increase safety and functionality in society. This requires the ability to hold space through our therapeutic presence, a foundation of secure attachment. The caregiver's ability to monitor and modulate their own arousal helps them to not cross boundaries by projecting inappropriately onto others and creating re-enactments that are reminiscent of a participant's early attachment dilemmas (having to regulate a parent, having to sublimate their own needs and emotions to prevent rejection, and so on). Recognizing when we are personally triggered by something that is happening with a human participant, a horse, their interaction, our interaction with them, or our interaction with any co-facilitators allows us to address any potential counter-transference before it externalizes and impacts the emotional safety of those around us (a skill that also relates to horsemanship approaches and being with horses

in general). Tracking our own activation is related to neuroception, Porges' term for an organism's ability to detect safety, danger, or life threat and to respond accordingly. Neuroception in mammals is honed in relationship, where we look to our tribe or herd for evidence about environmental conditions and how to react. As described by Kain and Terrell (2016), the basic underlying question can be simplified to whether something is a snake or a stick – determining the difference requires having other trustworthy nervous systems around us at early stages in development whose perception is accurate. This helps us to know at an implicit level if it is safe or necessary to approach or if it is best to retreat. However, when this is not possible, or when others or our life experiences have taught us that the outside world is unsafe or not to trust our perception of things, neuroception can go awry. Neuroception can either become hyper-aroused, stuck on "on", always responding as though there was danger or life threat, even when there is no evidence to support this (false positives, "everything is a snake"), or hypo-aroused, stuck on "off", and never perceiving danger or threat in spite of evidence to support it (false negatives, "there are no snakes"). How we interact with one another, including the subtlety of our expressions, posture, movement and gestures, can further reinforce a sense of threat (and activation) or support a sense of safety (and settling) in relationship, which is true across species. In fact, horses are known to be able to recognize facial expressions not only in other horses, but also in humans, an ability previously only documented in dogs. In a recent study by Smith, Proops, Grounds, Wathan and McComb (2016), horses were found to be able to differentiate between positive and negative human emotions, showing greater sympathetic activation in response to photographs showing humans with angry expressions. Similar to people, this response pattern may even be stronger in horses with past negative experiences involving humans, as a result of a process known as kindling in the human trauma literature[5]. This lends even more credence to the importance of tracking activation and neuroception states in horse-human interactions to foster emotional and physical safety for members of both species. This also speaks to another important relational principle, that we cannot control another being but we can only be responsible for

5 Kindling refers to the sensitization of the nervous system to subtle cues that trigger a threat response as a result of prior stressful or traumatic experiences. These cues lead the nervous system to quickly spark to a flame in service of self-protection (Post, Weiss, Smith, Li & McCann, 1997).

ourselves. Helping humans shift out of trying to control others and instead become responsible for their own behavior and responses (moving from an external to an internal locus of control) is a common goal of therapy. Tim Jobe describes this as one of his goals when building relationships with horses as well – that the human can only be responsible for his or her own responses, which include trusting the horse to also be responsible for him or herself (personal communication, October 19, 2017). This is similar to one of the foundational principles in Somatic Experiencing®: that the human therapist must hold and convey the belief that the client's body knows how to heal, which helps start to set the conditions required for the client to respond differently. Furthermore, similar to how Somatic Experiencing® unfolds with people: if the human is regulated and attuning accurately to the horse's non-verbal cues, which supports the animal to perceive safety in the relationship, the animal's nervous system is more likely to deactivate and settle, and come back down into social engagement, connection and willingness to respond to the human's requests. This differs significantly from the more common practice of avoiding noticing one's internal states and activation and instead focusing externally and trying to control the animal, triggering neuroception of danger or threat and associated survival energy like fight, flight, freeze, shutdown and compliance as a way to get the job done. Just as good therapy is about setting the conditions of safety and security to support healing in the client and their capacity for relationship (as opposed to fixing the client), so too is good horsemanship about setting the conditions to support "healing" (regulation and connection) in the horse, trusting that the horse too will respond differently when the conditions are different.

Re-patterning neuroception also requires the caregiver, trainer or facilitator's ability to activate and deactivate appropriately in response to internal and external stimuli (such as responding without fear, judgment, or shame towards one's own feelings, sensations, needs, impulses, reactions and those of others), in order to help remap what is safe, dangerous or life threatening and respond more effectively in the moment. The more we are able to weather our own internal storms with equanimity, the more we are able to be with the activation of others, which in turn supports regulation, settling, curiosity and connection – that is, helping shift from activation to deactivation back down to

social engagement in the activation cycle. As stated by Levine and Kline (2007), and adapted for the context of equine-assisted interventions (and equally relevant to horse training),

The way to develop a calm adult presence is through experiential exercises that increase your ability to restore equilibrium, quickly and naturally, so that you are more likely to experience grace under pressure. Once your body learns "what goes up" [activation] must come down [deactivation], you are on the way to a more resilient nervous system that can weather the ups and downs of life [...] Through the mechanism of body language, facial expression and tone of voice, your own nervous system communicates directly with the [participants' and animals'] nervous systems. But before we attune to [their] sensations, rhythms and emotions, we must learn to attune to our own (p. 85).

Tracking the somatic experience of the activation cycle and attachment relationship is not only useful in equine-assisted interventions, but may help inform negative reinforcement strategies as used in various natural horsemanship approaches. Natural horsemanship has suffered from a negative reputation in recent years by those who have seen its methods applied in ways that result in increased fear activation, learned helplessness, submissive compliance, dissociation and shutdown, resulting in many individuals turning towards positive reinforcement as an alternative and avoiding pressure-release methods altogether. Yet many also find negative reinforcement to have been very successful with their own horses, where the horses are more responsive, connected in relationship and have wider windows of tolerance. One possible explanation for the wide range of outcomes with negative reinforcement is the subtlety around the timing and intensity of pressure-release. If negative reinforcement methods:

- are used with an understanding of the components of secure attachment (safe haven, secure base, and the nuances of working with activation associated with approaching and distancing)
- incorporate tracking behavioral evidence of where a horse is in the activation cycle[6]

6 That is, are they socially engaged, experiencing tolerable stress arousal and still connected, engaging in active defensive responses or management strategies to cope, in freeze, or in deactivation and settling?

- work in a titrated way with incrementally larger thresholds of activation and deactivation (that is, starting small and increasing requests from there)
- wait for pendulations of activation-deactivation to complete before proceeding (that is, timing pressure-release with where the horse is at in the activation cycle)

– this might result in more positive outcomes.

In other words, instead of a common re-enactment of learned helplessness, shut down and compliance to be in relationship with the owner/trainer, the experience might instead constitute a renegotiation of working through optimal levels of stress response while retaining a sense of connection (remaining socially engaged), resulting in a wider window of tolerance, trust and confidence. This does not mean that attending to this type of information will be easy, as reading horse body language is subject to interpretation and misattunements will certainly occur, as they do in human relationships. However, coming back to these principles and maps may provide new opportunities for repair in the horse-human relationship and starting places to begin again. If these are principles used in building healthy relationships with humans and in trauma therapy with humans, which are founded on an understanding of how mammalian nervous systems function and how mammals are relational creatures, then these principles are also applicable to equines as well. This is especially true when bringing horsemanship groundwork methods into equine-assisted interventions, in particular with trauma survivors, who are sensitive to coercion and power and control dynamics in relationship. How healing is it for a client to have to dominate a horse through methods that induce psychological control in order to achieve an outcome? Again, the aim is for renegotiation as opposed to a potentially traumatic re-enactment.

Tracking the subtleties of the activation cycle in horses may be facilitated by the recent work of Wathan, Burrows, Waller and McComb (2015), who created the Equine Facial Action Coding System. This categorization of body language in horses describes all possible facial expressions and movements related to emotional expression (for a total of 17 compared to 27 in humans, with a number of them corresponding to one

another) and was found to be easily learned and applied with a high degree of accuracy even by individuals without horse experience. This study provides evidence that reading equine body language is not a talent reserved for a few but a skill that can be honed as a tool to improve horse-human relationships.

Attending to the somatic and attachment features of what is transpiring in the context of equine-human interactions in general, and in particular of equine-assisted interventions and horsemanship methods, helps build new neural templates for safety and security, regulation, and relationship. Regardless of the kind of equine-assisted model or training approach being used, these principles can be integrated as an additional lens through which to view what is happening. Whether one is engaged in activities that are more directive and focus on doing things with horses, or more non-directive and focus on being with horses, or anywhere in between, this perspective can yield rich new opportunities and avenues of exploration. Further research on the integration of these principles and frameworks into equine-assisted interventions and horsemanship is highly encouraged.

About the Author

Sarah Schlote, MA, RP, CCC, SEP is a registered psychotherapist, Somatic Experiencing Practitioner, and founder and director of The Refuge: Centre for Healing and Recovery and the EquuSpirit: Healing with Horses program. She is the creator of Equine-Facilitated Trauma Therapy, an integrative approach combining attachment theory, touch work, polyvagal theory, ego state work and trauma-informed care principles into equine-assisted interventions along with Somatic Experiencing® (referred to as EQUUSOMA). She completed a trauma-focused master's in Counseling Psychology, conducted her thesis research on animal- and equine-facilitated interventions, and was involved in the development of ethics and standards for AAT in Canada. She has pursued training in trauma neuroscience, mammalian stress psychophysiology, touch work, and table work, including Somatic Experiencing®, EMDR, Body Memory Recall, attachment-focused therapy, parts work for structural dissociation, trauma-focused Integrative Equine-Facilitated Wellness, nature-assisted therapy and is currently

learning the foundations of Natural Lifemanship. Her work is experiential, relational, depth oriented, somatic and embodiment focused, and promotes safety, consent, choice, voice, and empowerment for all sentient beings involved. A seasoned and sought after speaker on trauma-informed care and trauma-specific therapy, Sarah is also a longstanding mindfulness practitioner, SE training assistant, and perpetual student of horsemanship.

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