Therapeutic Presence: Neurophysiological mechanisms mediating feeling safe in clinical interactions

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Abstract

Therapeutic presence is an empirically validated concept that involves therapists bringing their whole self to the engagement with the client and being receptively attuned and fully in the moment with the other. Therapeutic presence facilitates a sense of safety in the client, which can deepen the therapeutic relationship and facilitate effective therapy and clients' healing. The Polyvagal Theory provides a neurophysiological framework to understand therapeutic presence and the profound impact of feeling safe in a therapeutic setting. The theory emphasizes three relevant points: 1) the brain and the visceral organs of the body are in dynamic bidirectional communication, 2) feeling of safety is both mediated by and mediates physiological state, and 3) the nervous system is constantly evaluating risk without awareness and triggering adaptive physiological responses to match this "neuroception" of safety, danger, or life threat. Thus, a physiological state associated with feeling safe, such as therapists' presence provides, may be mediated by social interactions and promote spontaneous social engagement behaviors. From this perspective, present centered relationships have the potential to promote neural and physiological regulation that can stimulate growth, healing and restoration. This paper explores a neurophysiological model of how therapeutic presence may facilitate an optimal therapeutic relationship by evoking a sense of safety in both client and therapist.

Effective therapeutic work is only possible when the client feels safe and secure in the therapy setting. Research has demonstrated that the therapeutic relationship is central to positive change for clients in psychotherapy, given that differential therapeutic outcomes may only be minimally attributed to specific techniques (Duncan & Moynihan, 1994; Lambert & Ogles, 2004; Lambert & Simon, 2008; Martin, Garske, & Davis, 2000; Norcross, 2002, 2011). Further research has identified therapeutic presence as a core therapeutic stance that contributes to the development of a positive therapeutic relationship and client safety (Geller, Greenberg, & Watson, 2010; Geller & Greenberg, 2012; Pos, Geller & Oghene, 2011). It is clear that facilitating safety and security for the client emerges through therapists' ability to be fully present and engaged, which is core to the development of a healthy therapeutic relationship (Geller & Greenberg, 2012; Lambert and Simon, 2008; Mearns, 1997; Rogers, 1980; Siegel, 2007, 2010). However it is less clear the how or why therapists' presence leads to clients' safety and hence effective therapeutic work. This paper attempts to answer this question through the lens of neuroscience.

Current neuroscience research supports the notion of a neurophysiological pathway of feeling safe resulting from therapists' presence (Porges, 2011; Schore, 2003; Siegel, 2007, 2010). Neuroscience researchers, such as Cozolino (2006), Siegel (2007) and Schore (1994, 2003), describe one such perspective as central to this process: The Polyvagal Theory (Porges, 1995, 1998, 2007, 2011; Siegel, 2007). The Polyvagal theory has received significant interest in it's explanation of the neurophysiological mechanisms of safety and has been cited in several hundred peer reviewed publications across disciplines and by numerous different research teams (e.g., Ardizzi et al., 2013; Beauchaine, 2001; Beauchaine, Egizio et al., 2008; Gatzke-Kopp, & Mead, 2007; Hastings et al., 2008; Perry, Calkins, Nelson, Leerkes, Marcovitch, 2011; Travis &

Wallace, 1997; Weinberg, Klonsky, & Hajcak, 2009; Schwerdtfeger, Friedrich-Mai, 2009; Whitson, El-Sheikh, 2003). The theory has been used as a core theoretical explanation to explain the biobehavioral shutting down that occurs following trauma (Bradshaw, Cook, & McDonald, 2011; Levine, 2010; Ogden, Minton, & Pain, 2006; Quintana, Guastella, Outhred, Hickie, & Kemp, 2012) and has informed stress researchers of the important contributions of the parasympathetic nervous system and its component vagal circuits in understanding the neurophysiological mechanisms related to defensive strategies associated with reactivity, recovery, and resilience (Brown & Gerbarg, 2005; Evans et al., 2013; Kim & Yosipovitch, 2013; Kogan, Allen, & Weihs, 2012; McEwen, 2002; Scheatzle, 2009; Wolff, Wadsworth, Wilhelm, & Mauss, 2012).

The Polyvagal Theory provides an understanding of how the client's physiological state provides an optimal portal for effective therapeutic work when the client feels safe with the therapist. According to the Polyvagal Theory, this optimal "therapeutic" state naturally emerges when the nervous system detects features of safety through neuroception, a process that evaluates risk outside the realm of awareness (Porges, 2003, 2007, 2011). In this state of safety, the client feels sufficiently safe with the therapist to engage in the necessary therapeutic work.

This paper will focus on (a) articulating the value of therapists' presence in creating safety for clients and in deepening the therapeutic relationship, and (b) presenting the Polyvagal Theory to explain how presence supports neural processes that enable feelings of safety, which is the foundation for healing. First, we will provide a definition and description of therapeutic presence, followed by a presentation of the Polyvagal Theory. We will then discuss therapeutic presence as a contributing factor to the development of a neuroception of safety for the client.

The therapeutic presence theory of change will be described in the context of the Polyvagal Theory, so that a neurophysiological understanding of relating with presence and the resulting process of change will begin to be illuminated. A clinical vignette will then be presented. Finally a suggestion for training in therapeutic presence will be offered supported by neuroscience research, which argues for the integral value in creating a sense of safety with and for the client.

What is Therapeutic Presence?

Therapeutic presence involves therapists being fully in the moment on a multitude of levels, physically, emotionally, cognitively, spiritually, and relationally (Dunn, Callahan, Swift, Ivanovic, 2013; Geller, 2001, 2009, 2013, in press; Geller & Greenberg, 2002, 2012; Geller et al., 2010; Geller, Pos & Colosimo, 2012, McCollum & Gehart, 2010). Therapists' presence provides an invitation to the other to feel met, understood, and safe to open and become present within their own experience, which allows for deeper therapeutic work to occur.

The experience of therapeutic presence involves (a) being in contact with one's integrated and healthy self, while (b) being open and receptive to what is poignant in the moment and immersed in it, (c) with a larger sense of spaciousness and expansion of awareness and perception. This grounded, immersed, and expanded awareness occurs with (d) the intention of being with and for the client in service of their healing process. An empirically validated model of therapeutic presence is described more fully in other publications (see Geller & Greenberg, 2002, 2012).

Therapeutic Presence involves accessing the essence of relating in the moment with the client - as a mode of understanding the other and in turn offering attuned responsiveness (Geller

& Greenberg, 2012). Presence is experienced through the senses and expressed via direct engagement with the other. It involves a readiness to meet and be met by the client and supports being in receptive contact with one's self, others, and what is emerging in the between. Therapeutic presence requires the therapist to be first grounded in the self, open, nonjudgmental and receptive to the whole of the client's experience. In the moments of engagement, the therapist is simultaneously in contact with the self and with the client as well as with one's own resonance to the client's experience and the emergence of clinical wisdom.

Effective therapists' responsiveness and use of intervention or technique emerges from the 'in the moment' connection and resonance with the client's experience, which allows the client to feel heard, met and ultimately safe to open and move towards health and healing in the therapeutic encounter (Germer, Siegel & Fulton, 2005; Greenberg, Rice & Elliott, 1993; Goldfried & Davila, 2005; Lambert & Simon, 2008). Research has suggested that therapeutic presence is a necessary foundation for empathic responding (Geller et al., 2010; Hayes & Vinca, 2011; Pos et al, 2011). There is evidence that attuning to one's self and one's felt sense of the other, as therapeutic presence entails, is the basis for attuning to and understanding the other (Siegel, 2007, 2010). Through this self-other attunement, the client 'feels felt' by the therapist and his or her physiology calms as feelings of safety are evoked (Goleman, 2006). Presence is a relational stance that is fundamental to evoking an experiential and neurophysiological sense of safety in the client, which in turn can promote a positive therapeutic alliance and effective clinical work across different therapeutic approaches.

What is the Polyvagal Theory?

The Polyvagal Theory describes how one's physiological state contributes to an individual's ability to feel safe and to spontaneously engage others. The theory articulates how each of three phylogenetic stages in the development of the vertebrate autonomic nervous system is associated with a distinct and measurable autonomic subsystem that is retained and expressed in humans (Porges, 2009). The autonomic nervous system is responsible for regulating involuntary functions in the body, such as heart rate, digestion and respiration. These autonomic subsystems are phylogenetically ordered and behaviorally linked to global adaptive domains of behavior, such as social communication (e.g., facial expression, vocalization, listening) and defensive strategies associated with both mobilization (e.g., fight–flight behaviors) and immobilization (e.g., feigning death, vasovagal syncope, and behavioral shutdown). The subsystems are represented neuroanatomically and form a response hierarchy based on phylogenetic emergence during the evolution of the vertebrate autonomic nervous system. Consistent with the construct of dissolution proposed by John H.Jackson (1958), as newer circuits evolved they inhibited the function of the older circuits. Thus, the newest circuit associated with social communication has the functional capacity to inhibit the defense strategies of fight/flight or shutdown behaviors. The newest circuit, the social engagement system, is operationally only during a neuroceptive state associated with feeling safe. Thus, one of the keys to successful therapy is to down regulate defensive by engaging the client's social engagement system. Prior conceptualizations of the autonomic nervous system highlighted the opposing features of the sympathetic and parasympathetic components (i.e., a sympathetic nervous system that supported states of high arousal characterized by mobilization strategies of fight or flight and a parasympathetic nervous system that supported calm states of immobilization that were associated with health, growth, and restoration). This "autonomic

balance" conceptualization has been the dominant metaphor for autonomic function until the introduction of the Polyvagal Theory. The Polyvagal Theory informs our understanding of autonomic reactivity by introducing and emphasizing the hierarchical nature of adaptive autonomic reactivity and by identifying two defense strategies; one supported by the sympathetic nervous system associated with the increases in metabolic output necessary to mobilization to express fight and flight behaviors and the other supported by a phylogenetically ancient vagal circuits associated with the massive decreases in metabolic output necessary to immobilize to express death feigning, fainting, and a global behavioral shutdown.

The Polyvagal Theory emphasizes the distinct roles of the two distinct vagal efferent pathways identified in the mammalian autonomic nervous system. The vagus is a cranial nerve that exits the brainstem and provides the bidirectional communication between brain and several visceral organs. The vagus conveys (and monitors) the primary parasympathetic influence to the viscera. Most of the neural fibers in the vagus are sensory (i.e., approximately 80%). However, most interest has been directed to the motor fibers that regulate the visceral organs including the heart and the gut.

Unlike other vertebrates, mammals have two functionally distinct vagal circuits: A phylogenetically older unmyelinated circuit that originates in a brainstem area called the dorsal motor nucleus of the vagus and a uniquely mammalian myelinated circuit that originates in a brainstem area called the nucleus ambiguus. The phylogenetically older unmyelinated vagal motor pathways are shared with most vertebrates and, when not recruited as a defense system, function to support health, growth, and restoration via neural regulation of subdiaphragmatic organs (i.e., internal organs below the diaphragm). The "newer" myelinated vagal motor pathways are myelinated, observed only in mammals, and regulate supradiaphragmatic organs

(e.g., heart and lungs). Myelin is a fatty coating over the neural fiber and is associated with faster and more tightly regulated neural control circuits. The newer vagal circuit slows heart rate, supports states of calmness, and functionally manages the coordination between the sympathetic and the "old" vagal circuits in maintaining homeostatic function of the subdiaphragmentic organs. Through brainstem mechanisms, the phylogenetically newer vagal circuit is neuroanatomically and neurophysiologically linked to the cranial nerves regulating the striated muscles of the face and head, which are the primary structures involved in social engagement behaviors.

This face-heart connection provides mammals with an integrated "social engagement system" that conveys to others through vocal prosody and facial expression the individual's physiological state (i.e., whether their "mammalian" vagus is functional and they are calm or whether this circuit is withdrawn and they have a low threshold for defensive behaviors). When the mammalian vagus is working well (i.e., functionally inhibiting the sympathetic excitation that promotes fight/flight behaviors), emotions are well regulated, vocal prosody is rich, and the autonomic state supports calm spontaneous social engagement behaviors. This face-heart system is bidirectional. Thus, the newer myelinated vagal circuit is, not only influenced by social relationships, but is an enabling mechanism through which positive social interactions may optimize health, dampen stress related physiological states, and support growth and restoration.

The human nervous system, similar to that of other mammals, evolved not solely to survive in safe environments but also to promote survival in dangerous and life-threatening contexts. To accomplish this adaptive flexibility, the human nervous system retained two more primitive neural circuits to regulate defensive strategies (i.e., fight–flight and death-feigning behaviors). It is important to note that social behavior, social communication, and visceral

homeostasis are incompatible with the neurophysiological states and behaviors promoted by the two neural circuits that support defense strategies. In addition, it is important to note that the two more primitive neural circuits, when NOT recruited for defense, serve important roles in regulating our health state and in maintaining an appropriate homeostasis that supports health growth and restoration. It is ONLY when the social communication system (including the inhibitory influences of the myelinated vagus) is dampened and the functional inhibition on of this system on the sympathetics, is withdrawn are the sympathetic and the "old": subdiaphragmatic unmyelinated vagus available to support defense strategies. As long as the supradiaphragmatic myelinated vagus maintains its functional role in the hierarchy of autonomic circuits as "regulator" and "coordinator," then the sympathetic and "old" vagal pathways can functionally be optimized in their support of our visceral organs and not be diverted as systems that support defense. Thus, via evolution, the human nervous system retains three neural circuits, which are in a phylogenetically organized hierarchy. In this hierarchy the circuits follow a sequence of predictable and adaptive responses in which the newest circuit (i.e., social engagement system and myelinated vagus) is used first; if that circuit fails to provide safety, the older circuits (i.e., sympathetic and unmyelinated vagus) are recruited sequentially.

Functionally, when the individual feels safe two important features are expressed. First, bodily state is regulated in an efficient manner to promote growth and restoration (e.g., visceral homeostasis). This is done through an increase in the influence of mammalian myelinated vagal motor pathways on the cardiac pacemaker that slows the heart, inhibits the fight–flight mechanisms of the sympathetic nervous system, dampens the stress response system of the HPA axis (e.g., cortisol), and reduces inflammation by modulating immune reactions (e.g., cytokines). Second, through the process of evolution, the brainstem nuclei that regulate the myelinated vagus

became integrated with the nuclei that regulate the muscles of the face and head. This link results in the bidirectional coupling between spontaneous social engagement behaviors and bodily states. Specifically, an integrated social engagement system emerged in mammals when the neural regulation of visceral states that promote growth and restoration (via the myelinated vagus) was linked neuroanatomically and neurophysiologically with the neural regulation of the muscles controlling eye gaze, facial expression, listening, and prosody.

Neuroception

Neuroception is a novel construct proposed by the Polyvagal Theory as a mechanism through which neural circuits detect safety, danger or life threat outside the realm of awareness (Cozolino, 2006; Porges, 2007, 2009; Schore, 2003; Siegel, 2007, 2010). Neuroception takes place in the brain, most likely involving areas of the temporal cortex with projections to the amygdala and the periaqueductal gray (Porges, 2003), as an unconscious process that is manifested in our autonomic nervous system as an adaptive mechanism to turn off defenses or to prepare us for defensive strategies associated with fight-flight behaviors or shutdown.

The nervous system evaluates the state of safety or threat and activates the areas of the brainstem that regulate autonomic structures to respond to a sense of open receptivity with others when features of safety are detected or to a closed state when threat is detected (Porges, 2003, 2007). For example, if a person senses threat then the nervous system either goes into a state of fight-flight through the activation of the sympathetic nervous system, or a behavioral immobilization often with symptoms of dissociation through the activation of the more ancient branch of the vagus creating a state of collapse. Alternatively, in the presence of someone with whom an individual feels safe, a person experiences a neuroception of safety and the inhibition of defense occurs as physiology calms, and defensive strategies are replaced with gestures

associated with feeling safe such as prosocial spontaneous interactions that reduce psychological and physical distance.

The Polyvagal Theory (Porges, 2011) explicitly describes the bidirectional communication between the brain and the visceral organs in our body. The bidirectionality explains how the therapist's social and emotional responses to the client can, by shifting the physiological state of the client, mediate either an expansion or restriction of the client's range and valence of socio-emotional responding. Similarly, the client's socio-emotional responses can impact on the therapist's physiological state and functionally bias the therapist's interpretations of the client's responses from support to reactive.

Within the context of therapeutic presence, the Polyvagal Theory provides a neurophysiological perspective to explain how bodily feelings and emotions can be influenced by the presence of others. Thus, not only is there bidirectional communication between brain (i.e., central nervous system) and body, but also there is bidirectional communication between the nervous systems of the people who constitute our social environment (Cozolino, 2006; Porges, 2011; Siegel, 2007, 2010). Often this bidirectional communication operates outside the realm of conscious awareness and we are left with a "gut" (visceral) feeling that alerts us to the discomfort of the social interaction. This process of evaluating risk in the environment without awareness is labeled neuroception (Porges, 2003, 2007).

The attachment literature documents that trauma and early lack of attunement (i.e., a mismatch in neuroception) from the caregiver results in emotional dysregulation (Schore, 1994, 2003; Van Der Kolk, 1994, 2011). For example, a person with a trauma background may have an autonomic nervous system that precludes the down-regulation of defense strategies and predisposes them to feel unsafe even when there is no observable risk. Hence, challenges in the

social world of these clients occur as they respond defensively even when there is no risk. This strategy has a profound effect on the individual's social world by removing the individual from the naturally occurring reciprocal positive reinforcement of social interactions. Instead, it creates a negative feedback loop as others step back or turn away, which then heightens the sense of isolation or lack of safety.

Consistent with the Polyvagal Theory, the regulators of emotions and physiology are embedded in relationship. This concept of regulators of physiology being imbedded in social interactions was introduced by Myron Hofer (1994) to explain the role of mother-infant interactions in facilitating the health and growth of infants. The core of the social engagement system in mammals is reflected in the bidirectional neural communication between the face and the heart (Porges, 2012).

While a lack of attunement in early relationships may cause emotional dysregulation, attunement and connection in current relationships can heal or exercise the neural circuits that support feelings of safety. From this perspective, arousal can be manifested as physiological activation and/or emotional dysregulation and can be stabilized through social interaction that includes warm facial expression, open body posture, vocal tone, and prosody (rhythm of speech).

Therapeutic Presence and the Neuroception of Safety

How can the Polyvagal Theory help us to understand how therapeutic presence can deepen the therapeutic relationship and hence contribute to effective therapy? The Polyvagal Theory posits a 'neural love code', which reflects the evolutionary and biological quest for safety in relationship with others (Porges, 2012). The upper part of the face, eye contact, prosody of voice, conveys information to the nervous system. In the presence of someone who feels safe, the client experiences a neuroception of safety and the inhibition of defense occurs and instead is

replaced by gestures of feeling safe such as softening and opening. Hence as therapists it is imperative to offer ourselves in a way that helps to turn off the defenses, through listening, warmth of voice, eye contact, and directly meeting the other in their experience in a calm and safe therapeutic environment.

Offering a consistent presence that is open, grounded, and accepting to the client is essential to the development of a positive therapeutic relationship. Therapeutic presence allows clients to experience their reactivity with acceptance, develop safety (through regulation of the nervous system) with the consistent presence of the therapist, and hence facilitate healing and deepen self-understanding. Presence also allows for an attunement that helps therapists to recognize (i.e. in the facial expression of the client) when the client is not feeling safe and to regulate one's own reactivity to maintain authentic consistency with their client.

The Face

According to the Polyvagal Theory, the face is one of the main sources of communication that can elicit safety in the other. This is in keeping with the notion that the face is where presence is communicated to the client (Geller & Greenberg, 2012). Even without saying a word, fully encountering another person with presence expresses a vast amount of information. In the view of Levinas (1985), faces are information centers, and offer encounters with the other that are direct and profound. Looking at the face of the other is central to human relating, dialogue and presence (Geller & Greenberg, 2012). Levinans (1985) emphasizes facial contact along with language and speech in an effort to transcend the foreignness of the *other* and establish a deep connection and relatedness among individuals.

For Levinas, coming face to face with the *other* as we do with therapeutic presence, reflects a non-symmetrical relationship in which I am responsive with and for you without

knowing that you will reciprocate (Geller & Greenberg, 2012). Thus, according to Levinas, approaching with this direct facial connection and presence, there is a responsibility for the other's wellbeing without knowing what the outcome will be. This is the type of relationship created by presence in therapy; a relationship in which I am being there for the other without knowing how the other will respond. This face to face encounter requires a grounding in self to be unattached to the client's response, so that the therapist can remain open and available for the client.

This facial connection and prosody of speech is affirmed in the Polyvagal theory. From this perspective, the face to heart connection provides a portal to exercise the neural regulation of physiological states through social engagement (see previous section for a detailed explanation of this process). Therapeutic presence offers the client the therapist's warm facial connection along with an open heart and listening presence to help the client to feel safe and hence to precipitate a neural regulation of the client's physiology. Over consistent present centered encounters in therapy, the ability to emotionally regulate strengthens and the client's physiology begins to shift towards one of safety and engagement. However, repeated engagement by the therapist is necessary, which include the ability to be self-regulated, open and available in the face of the client's defense and pain.

Therapeutic Presence Theory of Relationship

The therapeutic presence theory of relationship proposes that therapeutic presence is the essential quality underlying an effective therapeutic relationship and that regardless of theoretical orientation, or type of therapeutic approach, presence promotes good session process and outcome, as well as enhances the therapeutic alliance (Geller, 2013, in press; Geller & Greenberg, 2012; Geller et al., 2012). This theory suggests that it is the therapist's presence that

provides the therapy relationship with the type of depth and connection needed to help clients feel safe to access their deepest feelings, meanings, concerns and needs. Therapeutic presence provides the type of environment in which these feelings and needs can be most effectively attended to, explored, and accepted or transformed. Presence also promotes the therapist's ability to respond in an attuned manner that best fits the moment.

From this perspective, present centered engagement with the client, from a place of feeling grounded, open, spacious, receptive, immersed with the intention of being with and for the other - facilitates healing. Being attuned to the client and what is poignant in the moment, stimulates regulation of the client's neurophysiology and allows them to feel safe with their present therapist and hence in the relationship. Therapists' presence is communicated both verbally through attuned responsiveness, timing and pace; as well as nonverbally through open body posture, warm gaze and tone of voice.

From the perspective of the Polyvagal Theory, the facial and warm gaze and the prosody of voice by which a present centered therapist meets the other, activates a neuroception of safety in the client (Porges, 2007, 2009, 2011). This neural assessment of safety provokes a physiologic regulation where by the defense system is inhibited and instead metabolic responses that reflect calm, openness, and trust can emerge. Hence, feeling met and heard by their receptively attuned therapist allows clients to drop their defenses, and instead feel open and present within, which is not only healing in and of itself but allows for the possibility of deeper therapeutic work conducted in the safety of the relationship.

The theory of therapeutic relating based on presence also suggests that although the experience of presence by the therapist and its communication to the client is important, it is healing only if the "client" *experiences* the therapist as being fully there in the moment (Geller &

Greenberg, 2012). This is based on research suggesting that it is the clients' experience of their therapists' presence, not the therapists' experience, which promotes positive therapeutic process and change as well as a strong therapeutic alliance (Geller et al., 2010; Pos et al., 2011; Dunn et al., 2013). Hence it is the clients' experience of their therapists as present and authentically engaged in a relationship with them that promotes the type of depth of connection and significance to the encounter that is therapeutic, as well as promotes greater presence in the client. From the perspective of the Polyvagal Theory, neuroception of safety is encouraged through repeated encounters in the presence of a safe person. This suggests that therapists need to maintain a grounded, yet open and receptive posture and engagement with the client through the realms of experience and pain that the client may encounter.

There is a reciprocal relationship between therapists' felt and communicated presence, clients receiving and feeling therapists' as present with them, and both people developing greater presence within and between them, that allows for the development of relational presence. Relational presence provides the conditions for an I-Thou encounter between the two, and ultimately it is this mutual presence that leads to therapeutic change (Buber, 1958; Geller & Greenberg, 2012).

Further, with neuroception of safety elicited in the client, oxytocin may be released, which may enable immobilization without fear (Porges, 1998, 2001, 2003). We propose that this process supports the client to become softer and more open. This release of oxytocin contributes to the creation of a safe social bond and loving relationship between the therapist and client (e.g., see Carter & Porges, 2013 ….). Moreover, oxytocin may play an important role in regulating the brainstem area that controls the unmyelinated vagus and further enables the individual to immobilize in the presence of another without fear and without collapse or shutting down. The

type of mutual presence that arises from this kind of meeting provides a sense of connecting, of being seen and seeing as no other human experience does.

In summary, a relationship theory based on therapeutic presence suggests that therapeutic presence will lead to the development of a synergistic relationship in which the client develops greater presence and there is a deepening of relational presence. This is understood through the lens of the Polyvagal Theory, as the client neuroceptively reacts (without cognitive awareness) to the present centered therapist as safe, the client's physiology becomes regulated and calmed, allowing for more openness and presence in the client. Hence, it is important for therapists to practice and skillfully develop presence in life, as it can help to heighten attunement and self-regulation when in session.

Clinical Vignette

Present moment awareness and self-regulation are helpful for therapists to not only maintain presence in session but to notice when they or their clients are closed down and to bring that awareness to the moment in order to shift to engagement. Following are two examples depicting (a) non-presence and (b) a return to therapeutic presence. The example of non-presence reflects how the moment the therapist shuts down is the moment the client begins to feel unsafe and pulls away. The example of presence reflects how the therapist used his or her awareness of their internal barriers to reconnect to the moment and the client and reestablish safety. Some neurophysiological signs of connection and disconnection are provided in parentheses to illustrate what happens in the brain and the body when the therapist is not present and when he or she is fully with and attuned to the client.

Non-Presence: Vignette Reflecting the Barriers to Presence:

Michael cried as he talked about the guilt he felt since his wife Sally had died. He described a fight he had with Sally a few weeks before her death where he walked out of the house in an angry huff. When he returned that evening her health had taken a turn for the worse and her speech was now permanently compromised from a stroke. He cried with remorse wondering if the stress from their fight and his leaving caused her health to decline. As I was listening to him I began to feel anxious and overwhelmed, doubting my ability to help him with his complicated grief (*beginning of disconnection and therapist withdrawal).* My anxiousness grew as I began to hear my own internal voice say "you can't help him…you fought with your own mother before she died and you still feel guilty…...who do you think you are?" (*Therapist's sympathetic nervous system is activated and a relational disconnection occurring*). My responses to him were concrete and flat and my facial features tightened as I battled with my own critical voices (*loss of mylienated vagal tone reflected in a loss of neuromuscular tone to upper part of the face with a resultant flat face – voice would also lose prosody – and likely muscle tone would increase to the lower face as part of a more hardened aggressive stance. Also as neuromuscular tone is reduced to the upper face there is a parallel reduction of neuromuscular tone to the middle ear muscles and the therapist starts to lose contact with the syntactic and affective content of the client's vocalizations*). Michael went silent and his tears stopped (*neuroception of a loss of safety as the client subtly felt the therapist withdraw*), while he shifted the conversation to the demands at his work and all the tasks he had to complete. I felt the disconnection between us and did not know how to proceed (*loss of safety and connection*).

The disconnection and loss of safety that is referred to in the previous example is a result of the emergence of the therapist's own barriers (self-doubt and unresolved issues from her mother's death).

Therapeutic Presence: Vignette Reflecting a Return to the Moment:

Therapeutic presence is not just about being fully in the moment with a client, but having a moment to moment awareness of the barriers to presence and bringing one's full awareness back to the client when these barriers emerge. The following example reflects the therapist's awareness of both the self-doubt and the disconnection, which helped her to bring her attention back to the moment. This therapist continues:

> As I became aware of the disconnection and my anxiousness, I took a few deep breaths to help regulate my emotions and bring my attention back to the room. (Exhaling slowly influenced the myelinated vagus on the heart, resulting in greater calm). As I started to talk to Michael, I could feel my facial expression soften (the upper part of my face provided warm cues to my client), my voice was rich with prosody and I sensed our connection as he calmed and spontaneously engaged me by leaning forward with a facial expression that I experienced as open and feeling understood. My prior practice in presence primed me to silently imagine putting my doubts and my unresolved issues with my mother aside for the moment. I noticed how Michael's distance and shut down reflected my own internal distancing. I invited my attention back to the moment and was able to return with my full awareness to my client. As I looked in Michael's eyes I reflected in a soft and warm voice: "The pain is so deep…pain and regret at wishing it

could have been different…." Michael's tears began to well up again as he looked to me and said "yes I feel deep sadness…I miss her so much."

I shared with Michael the sense of helplessness in the face of grief, and this open and compassionate sharing not only allowed him to open and express his layers of grief and despair, but also deepened the bond between us. (As long as my social engagement system was "on-line," I was present and could support Michael with the appropriate cues to trigger in his nervous system a neuroception of safety that would enable him to process his profound grief.)

The therapist's present moment awareness served to notice the disconnection and her prior presence practice allowed her to self-regulate (through deep breathing), put aside self doubt and unresolved issues, and return with full open presence to the client. In this example, the therapist's inward attending and contact with her experience, which is a part of therapeutic presence, allowed her to notice her own barriers and distancing with the client. She was then able to use her presence practice to return her attention back to the client and open to the difficult feelings that he was experiencing, which allowed for a repair in the relational disconnection. This reconnection invited the client back to a place of safety with the therapist where he could then grieve fully the loss of his wife.

Final Remarks

Feeling safe is a necessary prerequisite to establishing strong social bonds (i.e. a therapeutic relationship) and for that relationship to be helpful or healing for a client. Through present centered relating, such as eye contact, softening and warmth in voice, prosody, emotional attunement and in the moment engagement, the client can learn to feel safe and eventually to

shut off defenses, which is not only healing in and of itself, it also helps to engage in therapeutic work.

In this vein, therapeutic presence and creating safety is viewed as trans-theoretical (Geller et al., 2012). It is powerful in and of itself, but can also promote the greatest efficacy when accompanied with modality specific techniques (Geller, in press; Geller & Greenberg, 2012). When a response or intervention is provided to clients, which is scripted and not reflective of the client's in the moment experience, as well as detached from the humanism of the person-to-person encounter that psychotherapy entails, the client may feel defended and the intervention will be limited in its efficacy. Alternatively, offering the intervention in a way that is infused with therapeutic presence and attuned to the readiness of the client, promotes client's safety and optimizes the window through which effective therapeutic work can occur.

We propose that cultivating therapeutic presence and understanding the neurophysiological underpinnings of creating safety needs to be viewed as essential in therapist training programs across modalities. Psychotherapy training typically focuses on intervention and techniques without attention to therapists' state of being and how to relate in a way that creates a neuroception of safety. Understanding and cultivating therapeutic presence needs to be an equal adjunct in psychotherapy training as it is foundational to promoting client's safety, which is the core prerequisite for effective therapeutic work regardless of the therapeutic approach. It is important for therapists to maintain a calm presence in the face of pain or struggle, hence training can include ways of supporting this state through attention to bodily and emotional regulation as well as barriers to positive relating. Including findings from neuroscience that reflect the neural correlates that occur between therapists presence and clients safety, can help therapists' understanding and promote greater therapeutic attunement.

Cultivating presence is also necessary as part of therapists' ongoing self-care as attention to this quality can allow for sustaining a way of relating that is most helpful to clients. Clients may also benefit in and out of session with neural exercises that promote inner safety. Neural exercises that promote the neuroception of safety for both therapist and client can include slow exhalations following deep abdominal breathing (i.e., the influence of the myelinated vagus on the heart is optimized during exhalation), play, music, being in nature, yoga and meditation. In session promotion of safety can also be beneficial for both therapist and client and the relationship between. For example, beginning the session with deep breathing or a mindfulness exercises that the therapist and client engage in may help to soften the defenses and promote deeper engagement.

Overall the cultivation of therapeutic and relational presence in order to evoke a safe therapeutic encounter both in and out of session is imperative in order to promote real and lasting change. Understanding presence through the lens of the Polyvagal Theory deepens our understanding of the bidirectional neural feedback circuits both within the brain and body and between human beings in relationship. This can help us to approach therapeutic relating in a way that promotes optimal health and wellbeing by cultivating, communicating and being present with and for the client.

We hope that this paper offers the impetus for future research in therapeutic presence and the neurophysiological underpinnings of presence, attunement and creating safety. For example, observing the upper part of the face, vocal quality and posture, and patterns of breathing in both the therapist and client, in moments of presence and non-presence, may help to illuminate therapists' optimal communication of presence in psychotherapy as well as track clients' safety in relation to presence. As well, monitoring changes in the visceral components of the social

engagement system (i.e.,vagal regulation of the heart by quantifying the respiratory sinus arrhythmia component of heart rate variability) as clients receive therapists presence may help to illuminate the neurophysiological regulation and healing that present centered therapeutic relating can evoke.

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