



Facing the Trauma:
How the Face Reveals and Processes Unexpressed Suffering
Sharon A. Stanley, Ph.D.

Abstract

Emerging research in the neurosciences has stimulated a creative interdisciplinary approach to trauma psychotherapy, a new paradigm (Schoore, 2009a). Psychotherapists, faced with copious amounts of information related to the mind, brain, and body, struggle to integrate this new knowledge into clinical practice. An integration of emerging neuropsychological theories including *attachment theory* (Main & Hesse, 2000, Schoore, 2008; Tronick, 2007), *polyvagal theory* (Porges, 2009a), trauma (Schoore, 2002; Levine, 1996; Ogden, 2006; van der Kolk, 1996) and neurological *fixed action patterns* (Llinas, 2001), combined with traditional wisdom creates a strong theoretical scaffolding for the growth of new clinical interventions. Face-to-face encounters co-construct the intersubjective field and support processing of deep visceral sensations, feelings, and emotions. The metaphor of the polyvagal nervous system provides a theoretical frame of orientation for an embodied intersubjective therapeutic relationship and right-hemispheric processing of trauma using somatic psychotherapeutic practices. This article offers, as a response to the emerging new theoretical paradigm, a clinical perspective into a somatic model of trauma resolution with a brief case vignette.

Keywords

Attachment - Polyvagal theory – Somatic – Intersubjective – Face

An ancient tale from Sierra Leone (Beah, 2009) described how the people of a village, each day before sunrise, would gather at a nearby abundant river to fetch water, to bathe, and to engage in a daily face-washing ritual to ensure happiness. Together they washed faces—their own, and those of the very old and young—with the intention to wash away tears, sorrow, and unhappiness. Anyone who failed to wash or have his or her face washed “would cry uncontrollably all day and the village would be sad” (p. 37). This ancient practice shares essential principles with an emerging new paradigm for healing emotional suffering (Porges, 2009a; Schoore, 2008, 2009c).

This article reviews aspects of this new paradigm and the adaptive value of emotions (Schoore, 2009a), intersubjective therapeutic attachment relationships (Bromberg 2009; Schoore, 2008), the polyvagal theory of the autonomic nervous system with the *face-viscera-brain circuit* of neural regulation (Porges, 2009a), research into the *still face* of mothers with their infants (Tronick, 2007), and *neural fixed-action patterns* (Llinas, 2001); after that, proposing a clinical response for practitioners, with somatically focused, right-hemispheric, intersubjective practices.

This paradigm invites practitioners to create clinical strategies; “new interventions are needed to strengthen social engagement behaviors and dampen defensive strategies” (Porges, 2009a, p. 20). Right hemispheric practices of somatic empathy, inquiry, intervention, and reflection (Stanley, 2009) are described to process implicit traumatic memories (Mancia, 2006). A brief clinical vignette illustrates somatic practices within an intersubjective relationship, shifting fixed action patterns in the face and supporting social engagement in a couple.

Early concepts of somatics emerged out phenomenology (Merleau-Ponty, 2002), with respect for one’s own subjective, lived experience and knowing simultaneously the subjectively lived experience of another *in the other’s own terms* (Stanley, 1994), a process known as intersubjectivity.

Somatics studies, “the body as perceived from within by first person perspective” (Hanna, 1995, p. 341) while using the mind to observe immediate sensory-motor, emotional, and imaginal experience. Somatic awareness opens the flow of sensory information between the brain, the mind, and the body (Behnke, 1995) and somatic

practices target the physiological imprints of trauma in the body and allows for the integration of intense survival emotions (McNaughton, 2004; Levine, 1996; Ogden, 2006).

Trauma, Affect and Emotions

Intense affect involves survival emotions which remain active, yet dissociated, in the body-mind (Bach, 2009). Emotional affects are sub-neocortical (Panksepp, 2010) and are primary processes of the body with a “neural platform” in the autonomic nervous system (Porges, 2009a; Porges, in press). At the time of a traumatic experience, extreme or conflicting stimulation may overwhelm attempts to process intense stimuli; the memory of the event then becomes frozen in time, distorting incoming information and emotional processing (Bach, 2009; van der Kolk, 1996).

The face displays emotions with specific facial configurations (Tronick, 2007) and subtle, barely perceptible communicative cues (Schore, 2008). As the ancient tale of Sierra Leone implies, facial expressions of emotions are vital to lifeenhancing social connections (Porges, 2009a; Schore, 2009b; Tronick, 2007). Our strongest emotions occur within attachment communications with the expressions of the face, the posture and gestures of the body, and the tone of the voice (Schore, 2009b).

Attachment Communications

An infant’s arousal and affective states are regulated through rhythmical interactions with caregivers to form attachment bonds and emotional patterns of communication (Malloch & Trevarthen, 2009). “Through visual-facial, auditoryprosodic and tactile-gestural communication, the caregiver and infant learn the rhythmic structure of the other and modify their behavior to fit that structure” (Schore, 2009b, p. 4). Emotional communication requires visual-facial interaction, as the mother attunes to the rhythms of her infant (Schore, 2009b). Early attachment patterns endure in later relational communication interactions (Main & Hesse, 2000; Porges, 2009a; Schore, 2008, 2009b; Tronick, 2007) and the psychotherapist becomes a relational partner where interactions are implicit and non-verbal modes are rapid, subtle and out of awareness (Schore, 2008).

Attachment states of insecurity, anxiety, ambivalence, withdrawal, disorganization, depression and dissociation are physiologically rooted in the body (Porges, 2009a; Schore, 2008) with fixed action patterns (Llinas, 2001) and generate relational pain and suffering throughout the lifespan (Main & Hesse, 2000; Porges, 2009a; Schore, 2008; Tronick, 2007), and beyond through the dynamics of multigenerational trauma (Danieli, 1998). Adults with different attachment orientations have differential brain responses to facial expressions (Zang, 2008); thus early relationships affect how we perceive different facial cues. Trauma, within the early attachment relations and later significant relationships, disrupts the harmonious rhythm necessary for neural affective regulation, authentic facial expression, and effective relational communication. Emotions are expressed in nonconscious facial expressions, tone of voice, and unconscious gestures (Schore, 2009b), and trauma truncates this fundamental rhythm, depleting relational ability and social engagement (Porges, 2009a).

Trauma forms an implicit, body-centered memory wherein the emotional reactions of the past are experienced as if the threat is present in current time (Bach, 2008). The confusion of past traumatic events with present-moment lived experience can be differentiated in an empathic, intersubjective relationship, where the right hemisphere of one is attuned to the righthemisphere of the other (Schore, 2008). Somatic awareness, a right hemispheric perception, allows for spontaneous change where the body is experienced as one’s own and dynamic, where sensations move along in time, restoring the organism toward wholeness (Behnke, 1995).

In psychotherapy today, intersubjectivity is considered a relational dynamic wherein “the reciprocal process of active involvement with the states of mind of the other person allows a patient’s here-and-now perception of self to share consciousness with the experiences of incompatible self-narratives that were formerly dissociated” (Bromberg, 2009, p. 357). Facial cues to intense emotions and dissociated neural states that affect intersubjectivity may appear as a shift in color of the skin, a movement or fixity of the eye, twitching of facial muscles, the set of the jaw, a quiver in the chin, a repositioning of neck muscles, or a barely discernable change in the voice (Stanley, 2009). These subtle movements carry nonverbal messages directly from the right hemisphere of one person to the right hemisphere of the other, and profoundly affect one’s sense of feeling and being felt by the other. These communications are carried instantly throughout the face-brain-viscera circuit, enervating the face, ears, eyes, larynx, pharynx, brain, viscera, heart, and lungs, and can spontaneously shift neural states (Porges, 2009a).

The Polyvagal Theory

The polyvagal theory of the autonomic nervous system identifies two discrete branches of the parasympathetic system; the ventral vagal and the dorsal vagal (Porges, 2001) as well as the sympathetic system. To sustain social engagement, the ventral vagal system must be activated. This finely tuned, responsive system is myelinated and directly connects the face, neck, eyes and ears; and the brain and viscera; the heart, bronchi and guts (Porges, 2009a). The dorsal vagal brain circuit generates immobilization allowing for deep sleep and prosocial engagement such as lactation and sexual intercourse (Porges, 2009a). The sympathetic system mobilizes a complex physiological arousal sequence, with high metabolic activation, to prepare for danger.

If defenses for life threat are insufficient, the dorsal vagal circuit of immobilization overlays sympathetic arousal creating a neural state of freeze (Schore, 2010); “immobility with fear” (Porges, 2009a). When *frightened to death*, imposition of the dorsal vagal immobilization on sympathetic defense mechanisms (Porges, 2009a) produces a terrified powerlessness. This “lethal” neural state reduces metabolic output, slowing digestion, respiration and circulation and is associated with dissociation, depression, and withdrawal (Porges, 2009a; Schore, 2008, 2009a).

The polyvagal theory offers clinicians a frame of orientation to comprehend the bibehavioral substrates of emotion. “All affective or emotional states are dependent upon lower brain regulation of the visceral organs (e.g., the heart) mediated through the autonomic nervous system” (Porges, 2009a, p. 3).

Face-Brain-Viscera Circuit of the Polyvagal Theory

The neural structure for social engagement, the face-brain-viscera circuit, can provide a vagal brake to defensive reactions (Porges, 2009a). With emotional communication through facial cues, traumatized patients can dampen defensive reactions and remain in the intersubjective relationship. The movement of the face influences how others respond. When regulated, people “make eye contact, vocalize with appealing inflection and rhythm; (and) display contingent facial expressions” (Porges, 2009a, p. 22).

The face-brain-viscera neural circuit, a myelinated ventral vagal system, allows for bidirectional and instantaneous transmission of information and energy between visceral organs, the brain, ears, and eyes, and the striated muscles of the face and neck. “Observable facial movement and concurrent subjective visceral experiences that characterize the expressions, feelings, and perceptions of emotion and affective state” have “profound positive impact of social interactions and interpersonal behaviors on the neural regulation of body state and behavior” (Porges, 2009a, p. 2). The neural state of social engagement directly influences the ability to regulate intense emotions and inhibit the decline into unhealthy metabolic states of defense and withdrawal characterizing the vagal brake (Porges, 2009a). Similarly, in the tale from Sierra Leona, attention to each face allows transformation from sorrow into happiness.

The Still Face

The *still face*, a research model that studies the effect of a mother’s intentional facial stillness on the behavior of her infant, lends valuable implications to facial expression, emotions and dissociative processes. Infants learn to regulate interactions through attention to adult facial cues. In laboratory studies, mothers were instructed to hold their faces still after a period of interaction with infants (Tronick, 2007). Initially, the infants attempted to seek their mothers’ attention, but after a few minutes, when unsuccessful, they withdrew into sadness and constriction with immovable facial configurations similar to the neural states of immobilization with fear (Porges, 2009a).

Tronick (2007) reports that infants of withdrawn mothers develop facial configurations that appear sad and depressed; they attempted and failed to regulate interactions. “Infants who experience neglect suffer under the constant demand to selfregulate...[T]he effects of chronic neglect may be more compromising because it limits the capacity of the child to engage with others and to be an active participant in a therapeutic process” (p. 374).

Conversely, this research indicates that intrusive mothers create consistent disruption of the infants’ activities. The infants turn away from their mothers as they learn a defensive style of coping; the facial configuration of this pattern is constricted and tight (Tronick, 2007) with fixed action patterns in the muscles of the face and neck, eyes and ears.

Facial Configurations and Fixed-Action Patterns

Fixed-action patterns are the firing neural pathways that carry habitual information and energy throughout the body and mind. Facial muscles record instinctive reactions to danger and life threat and produce fixed-action patterns of active protest and passive withdrawal (Llinas, 2001).

Traumatic experiences imprint the implicit memory system with fixed action patterns that inhibit the responsiveness of the social engagement system, providing obstacles to interactive, contingent communication in relationship with others (Llinas, 2001).

Facial and head muscles influence social cues and can reduce or increase social distance. “Neural regulation of these muscles can reduce social distance by making eye contact, expressing prosody in voice, displaying contingent facial expressions and modulating the middle ear muscles to improve the extraction of human voice from background sounds” (Porges, 2009a, p. 36). When the muscle tone of the face and neck has been reduced by fixed action patterns, a person can lose awareness of the social engagement behaviors of others (Porges, 2009a).

Fixed-action patterns predict mindless states, such as dissociation from body awareness and addictive trances (Mate, 2009), which, if created in moments of intense fear and terror, resist change, even in safe environments. The *qualia* of fixedaction patterns are the subjective sensations that generate feelings and constitute the core of conscious experience. “Neuronal activity and sensation are one and the same event” (Llinas, 2001, p. 218); awareness of incoming sensation, the *qualia* of human lived experience, allow for more accurate anticipation and prediction of safety in the environment and are a core component of somatic psychotherapy.

Integrating Emerging Theories

The psychotherapist’s challenge as a reflective scholar-practitioner (APA, 2007; Schön, 1995) is to integrate emerging theoretical knowledge and create new practice mechanisms to enhance spontaneous social engagement (Porges, 2009a), intersubjectively process intense emotions (Schore, 2008), stimulate engagement in the world (Porges, 2009a) and nature with profound wonder, curiosity, respect, and action (Sardello, 2008). The polyvagal theory and dynamics of the face-brain-viscera circuit (Porges, 2009a) offers a frame of orientation for developing intuitive ways of assisting people suffering unbearable losses (Stanley, 2009) while the intersubjective field aids psychotherapists in attuning to the specific neural states of the patient and within which the therapist and patient can explore previously dissociated experience (Porges, 2009a; Schore, 2009a).

Psychotherapists using the polyvagal theory (Porges, 2009a) to decode neural states can discern the message value of facial communication, respond with accurate somatic empathy, then explore implicit traumatic memories within the scope of each patient’s optimal arousal zone (van der Kolk, 1996; Levine, 1997) and specific windows of tolerance (Schore, 2010; Siegel, 2006; Ogden, 2006). An open, fluidly moving, soft face, combined with verbal prosody, may indicate a bid for social engagement. Constricted, fixed muscles of the face, jaw, eyes and neck suggests sympathetic arousal. Withdrawal, reflected in a still face, a flat tone of voice, and dissociation may indicate freeze states. Within the context of an embodied intersubjective relationship, the *qualia*, the sensations, of those memories begin to move and gradually dissolve fixed-action patterns (Llinas, 2001) of dysregulated neural states (Porges, 2010).

Somatic awareness of the intersubjective dynamics between the psychotherapist and patient reveal subtle shifts in skin tone, movements of the eye, face, jaw and unconscious postures of the neck and shoulders, in even the most still-faced patients. Close monitoring of muscles of the face and neck that do not move provides rich cues as to the nature of the trauma. The theory regarding the face-brain-viscera and its neural bidirectional and instantaneous connectivity (Porges, 2009a) invokes the possibility of modifying fixed-action patterns (Llinas, 2001) to restore regulation to the heart, the lungs, and the viscera, and reengaging the social engagement circuit.

Somatic Practices

Somatic practices of awareness, empathy, inquiry, intervention and reflection provide alternative memory experiences that can directly activate muscles of the face, intervening in the face-brain-viscera circuit, immediately affecting the smooth muscles in the viscera, and creating a shift in neural states (Porges, 2009a). These dynamics facilitate alternative perceptions in the brain to allow previously dissociated aspects of the self to emerge and stimulate processing of intense emotions from trauma into adaptive responses (Bromberg, 2009). Over time, and with intention, psychotherapists can cultivate precise somatic awareness of the facial, auditory, gestural, and sensory cues to maladaptive neural states and become skilled at subtle somatic practices, such as face-brain-viscera interventions, to promote shifts in sensations that lie at the heart of emotions.

Somatic Empathy

Somatic empathy involves embodiment, attunement, resonance, and nonverbal communication. Wonder, curiosity, and caring can guide psychotherapists to feel into their own bodies and the bodily experience of the other “with heart and mind connected” (Stanley, 1994, p. 2). Face-to-face contact allows the patient to discern the intention of the psychotherapist, to endure and gradually transform unbearable sensations of trauma, the biological substrate of survival emotions (Panksepp, 2010). Somatic empathy animates intersubjective relationships and opens up the opportunity to process a trauma memory through subjective sensations of gestures and emotions (Llinas, 2001).

Somatic Inquiry

Somatic inquiry, a phenomenological approach to collecting subjective data, can facilitate therapeutic processing of significant face-brain-viscera phenomena and other expressions of trauma memories. Phenomenology “seeks to discover the consequential in the inconsequential, the significant in the taken-for granted” (van Manen, 1990, p. 8).

Somatic inquiry is respectful of subjective experience and allows psychotherapists to interact intuitively through states of unknowing and surprise at the unique dynamics of each person’s lived experience. Therapists initiate a somatic inquiry by tuning into their own bodies to discern current sensory perceptions and simultaneously, gently inquiring into the internal state of the other. This embodied investigation can assist in attuning to the subjective neural state of the patient, and facilitating further resonance that can lead to deeper exploration of trauma phenomena and the restoration of adaptive neural states.

Somatic empathy and inquiry assist psychotherapists to perceive and participate in highly distressing states of the patient. Descending into states of defense and deep immobilization, the psychotherapist is able to *taste the poison*, to sense patients’ suffering. As therapists listen carefully, and softly observe the patients’ faces and bodies, they may enter into inquiry within their own bodies, feeling the visceral stirring, and finding resonance with the internal experience of the other. The therapists’ embodied selves come to know, in a nonverbal way, the horror and terror concealed by the other as dissociated torment in order to survive.

Somatic Interventions

Intuitive somatic interventions can be explored for the “strengthening of social engagement behaviors and the dampening of defensive strategies” (Porges, 2009, p. 2) and facilitate processing the intense bodily-based emotions of trauma. Somatic interventions include invitations to notice and monitor particular sensations (Behne, 1995; Porges, 2009a; Levine, 1997), proposals to explore micro body movements (Da’Oud, 1995), oscillate attention between different right-hemispheric phenomena (Rossi, 1996), and encourage the patient to allow the face to express sensory activity of the gut, lungs, or heart, “giving the viscera a face” (Porges, 2009a; Quillman, 2009, personal communication).

Being Felt Through the Face

The human face is capable of expressing dissociated emotions held in the viscera from traumatic experiences (Porges, 2009a). The following case vignette illustrates dynamic somatic practices of face-brain-viscera neural circuit within the intersubjective field. The individuals have given their express consent to use the case vignette; identifying information has been eliminated.

Gordon and Sarah: Healing and Growing Together

Gordon and Sarah practice precise skills in verbally communicating left-hemispheric cognitive concepts, yet have had difficulty effectively communicating intense emotions.

This couple came into psychotherapy, in Sarah’s words, “To help Gordon with his childhood trauma.” After a year, Gordon had made progress integrating his early trauma, and Sarah now expresses confusion about her childhood. She believed that she had been raised without trauma, although her family of origin “strenuously” avoided emotional communication.

As we opened the session, both Gordon and Sarah expressed a deepening of intimacy in the relationship with less defensiveness and withdrawal. A new issue had arisen. Sarah reported, “As Gordon is recovering from his

trauma, I find that I am more protective of him. This doesn't feel right to me and Gordon objects, but it just seems to happen spontaneously."

Sarah described a group activity in which she had spontaneously suggested that Gordon be included. When the leader said no, Sarah described how she felt shut down, and "went dead." In that moment, I observed Sarah's face drop into passive withdrawal, and she moved back in her chair. Unexpectedly, I felt a shock in my body. I asked Sarah what it was like for her when her request was denied. "I was so surprised," she said, as she put out her hands as if to resist, and then dropped them to her lap in a gesture of defeat. We explored the gesture, and then I invited Sarah to observe her body, to notice her sensations and feelings.

After some time, Sarah reported that "nothing is there. It is dead." Sarah's face had become mottled with gray and some splotches of red. I recognized this skin tone as a possible shock reaction, *immobilization with fear*, and asked Sarah if Gordon could support her with touch. Sarah agreed, and I asked where she would want his touch. Sarah indicated that she wanted Gordon's hands on her knees. With a gentle movement, Gordon put his hands on Sarah's knees, and I invited Sarah to imagine what it might feel like to take in support from Gordon's touch. Sarah reported that she could feel Gordon's support as a "stream of love and light." I asked where she felt that stream in her body, and she reported that it came up to her neck and then felt stuck, a possible fixed action pattern. I invited Sarah to imagine *what expression her face might make if the stream of love and light could come into the muscles in her face*. The small muscles in Sarah's face began to spontaneously dance and I suggested that she simply allow the involuntary movement as she watched Gordon's face. I observed Gordon's face, wreathed in a broad, loving smile, and kindness shone out of his eyes. I felt the intersubjective field embrace the three of us.

Sarah interrupted the nonverbal dialogue and said, "This is just what it was like when my babies were learning to smile! They kept trying to move their faces when I smiled at them and finally they could smile at me. This is wonderful!" As Sarah attended to Gordon's touch, shyly and softly gazing at him, her face reflected more organized gestures. Slowly, Sarah's face came into attunement with Gordon's face. Smiling within, I felt the growing intimacy. Suddenly Sarah's face shifted and sadness swept over her as she spoke: "I just realized that my mother never has smiled at me or much at anyone. No one has ever done this for me before." In a moment, the sadness left her face and the three of us entered a few minutes of silence. Sarah then reported emotions of gratitude, and I suggested that Sarah nonverbally express her feelings to Gordon. The couple enjoyed connection with a soft gaze as Sarah's face became rosy and luminous.

As the three of us reflected on the session, we recalled Sarah's protection of Gordon and her experience of freeze, Gordon's touch and the restoration of life force within Sarah's body and face. Sarah expressed fascination with the "direction" of this session and intended to go home to "face this issue" by attuning and resonating with facial movement in her interactions with Gordon.

Summary

This article attempts to integrate recent neurological theory and a glimpse of ancient wisdom regarding the human face with intuitive somatic approaches for therapists. The neural "platform" (Porges, 2009b) for traumatic memories are formed in the early attachment relationship with caregivers and may endure throughout the life span. Trauma leaves fixed-action patterns of defense and withdrawal on the implicit memory system, disabling the neural mechanisms of social engagement, the brain circuit that enervates the face, neck, eyes, ears, brain, and viscera. Without an opportunity to process intense emotions from trauma, these fixed-action patterns endure, affecting facial configurations and seriously eroding future relationships and the ability to be happy. In conclusion, somatic practices of awareness, empathy, inquiry, intervention, and reflection touch deeply into the biological substrate of intense survival emotions, gently releasing fixed action patterns and restoring the innate flow of information and energy through the body-mind.

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Biography

Dr. Sharon Stanley has educated thousands of health care professionals internationally in the principles and practices of somatic psychotherapy. Building on her research on empathy with traumatized youth, Sharon founded Somatic Transformation, a trauma model and professional curriculum. ST is based on emerging research in Interpersonal Neurobiology and a phenomenological, intersubjective approach to transform relational and shock trauma. Sharon participates in Dr. Allan Schore's Seattle Study Group and her work with First Nations, the study of Afro-Brazilian healing with on-going research into clinical practice has led to a fluid convergence of neurological research and professional skills. Sharon has a clinical practice on Bainbridge Island, Washington.
sharonstanleyphd@gmail.com www.somatic-transformation.org