

DANCING WITH GRAVITY

USING THE TUNING BOARD TO PROMOTE VERTICAL EMBODIMENT RESOURCES AND VERTICAL INTEGRATION

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ABSTRACT

The Tuning Board is a somatic tool that encourages vertical integration and resourcing using a subtle, yet potent, balancing task. It can enhance Structural Integration by supporting improved alignment and somatic awareness, thereby increasing the client's capacity to use his or her own body as a primary resource, and positively impacting psychological aspects of well-being. Vertical integration, verticality, and vertical embodiment resources are explored in relation to psychological aspects of experience. Tuning Board history, methodology, and means of impact are presented. Research is cited describing the value of standing on an unstable surface, along with preliminary research and case descriptions specifically relating to the Tuning Board.

INTEGRATION AND VERTICALITY

Ida Rolf spoke about the psychological benefits of Structural Integration and improved alignment (1977). Indeed, SI practitioners often witness or learn of emotional impacts occurring during or after their work. This has inspired many practitioners to explore practices that holistically integrate structure, function, and emotional experience. The Tuning Board is a somatic tool based on verticality that emerged from such an exploration. It has been in use for over 20 years by Structural Integrators, and movement and trauma therapists. It can be used in either brief or full session interventions to improve vertical integration and the client's capacity to use his or her own body as a primary resource.

This article explores why and how vertical integration impacts the psyche. It offers a resource-based framework for talking about those impacts and

describes how the Tuning Board accelerates vertical integration and promotes emotional well-being. It touches on theories and research relating human verticality with psychological aspects of experience.

Additionally, seven vertical embodiment resources (balance, grounding, orienting, spaciousness, connection, centering and tone) are explored. The Tuning Board history, methodology, and impact are discussed, and research presented describing the value of standing on an unstable surface. Preliminary research and two brief case descriptions relating to the Tuning Board are also presented. Beyond describing a useful somatic tool, it is hoped the perspectives presented here may enhance the ability of Structural Integrators to explain our work and its value to the larger therapeutic community.

VERTICAL INTEGRATION

Dr. Dan Siegel, author of *Mindsight*, clinical professor of psychiatry at UCLA, and co-director of the Mindful Awareness Research Center there, defines integration as the linkage of differentiated elements (2010, p.64). Siegel believes that integration describes a fundamental quality of psychological well-being (2006, 2010). In reference to the human being, integration also has a physical component. Referring to the human being's relationship with gravity, Rolf described Structural Integration as "appropriate relationships in space among the components of the body" (1977, p. 16). For Rolf, Structural Integration was synonymous with vertical integration of the whole body within the field of gravity. Siegel lists vertical integration as one of eight domains of integration (2010). (Others include left/right brain integration and memory integration.)

He describes it as the functional connection of differentiated areas of the body from the feet to the brain into a unified whole via the fibers of the vertically distributed nervous system. For our purposes, the term "vertical integration" is used to refer to the anatomical, functional, and experiential

connection and coordination of differentiated parts of the body in the experience of verticality.

Functionally, vertical integration relates to implicitly or explicitly governed capacities of the nervous system supporting optimal verticality, such as grounding, orienting, and centering. Seven such capacities are described throughout this article as "vertical embodiment resources". All of these capacities depend on the facilitation of functional somatic awareness via vertical integration. When vertical integration functions well, awareness of sensory information travels upward and is integrated by the vertically distributed neural structures of the brain and nervous system (Siegel, 2006).

Scaer describes proprioceptive distortions as a common dissociative feature arising subsequent to trauma (2001). One possible explanation is the postural distortions also described by Scaer. A traumatic event, when not fully integrated, can result in incomplete trauma responses that may take the form of bracing, rigidity, and myofascial holding. These can interfere with the connected transmission



of somatic information. According to neurologist Robert Grimm, “It appears that what our brain needs

to function well is ... accurate, balance-and-gravity, up-down type of information.” (McCredie, 2007, p. 219).

VERTICALITY AND EMOTIONAL EXPERIENCE

One reason that our verticality is such an essential feature of our humanity is because of its relation to our sense of security, and thereby to our sense of self. The ability to orient vertically to our environment enables us to see the full 360 degrees of our surroundings in order to identify and distinguish between threat and safety. Successful orienting from functional verticality combines our internal proprioception system with the perception of information from the environment. From this success, well-being and confidence follow.

Vertical integration, or the lack of it, can impact autonomic regulation, emotional well-being, and the lived experience of the body (Rolf, 1977; Siegel, 2006). Rolf considered Structural Integration, with its expression of “true” verticality within the gravitational field, to be essential to human psychological health (1977, pp. 17, 289). She described an inverse relationship between integration and emotional balance: the less integrated the physical structure, the greater the emotional turmoil.

Siegel sees mental health as a function of integration, and mental or emotional dysfunction as a sign of non-integration (2010). He suggests the middle prefrontal cortex is associated with vertical integration; research shows this part of the brain is involved in emotional balance, attuned communication, autonomic regulation, the capacity to reflect, and other key aspects of psychological well-being (2006). For Siegel, a lack of integration manifests as either chaos, excessive rigidity, or a combination of the two (2006, 2010).

Others have also theorized or described associations between emotional dimensions of experience and aspects of human verticality. Schilder theorized that the human vestibular system links to emotional states in a relationship of reciprocal impact; that is, the vestibular function is negatively impacted by psychosis or neurosis. Inversely, an impaired vestibular system would impact psychological experience as well as

perception, posture, and myofascial tone (1933, as cited in Feldenkrais, 1949).

Sharing this perspective of reciprocal impact between posture and emotion, Linden suggests that postural training can be used to influence emotional states, describing emotions as corporeal events integrating postural, breath, and myofascial tonus responses (1994). McNeilly, associating specific postures with specific emotions, encourages the embodied awareness of a current emotional state through exaggeration of the posture and through sensory awareness cues. Desired emotional states are encouraged through the embodiment of their associated postures, thereby reinforcing the connection between the physical and emotional/psychological (2000).

Darrell Sanchez, co-author of this article and inventor of the Tuning Board, posits that creativity arises through the integration of polarities such as order and chaos, stability and motion (2011). In the somatic “dance” of our verticality, we must successfully manage the polarity of stability and motion to arrive at the integration of other polarities (such as conscious/unconscious, rigid/flexible, internal/external) within our full emotional and physiological context. Balance, in this sense, is not a rigid state of perfect posture, but rather a dynamic dance flowing through the entire body, comprised of never-ending movements and micro-adjustments. This relative balance of dynamic verticality is associated with psychological resilience and confidence permeating one’s emotions, thoughts, and relationships (Sanchez, 2004, 2005).

Physical holding patterns or inhibitions evolve in response to personal experiences, and impact the transmission of the connected micro-movements that are the hallmark of vertical integration. Whether developing as adaptations to injury, responses to ergonomic stress, or incomplete trauma defenses, structural or movement inhibitions compromise



the body's ability to orient successfully to the environment from a posture of optimal verticality. Without the ability to successfully orient to and interact with both positive and negative aspects of the environment, safety and emotional stability can

be impaired. Restoring balance and motility through addressing these holding patterns and inhibitions creates a foundational resource that improves the capacity to respond appropriately to the environment and promotes a more functional sense of self.

VERTICAL EMBODIMENT RESOURCES

A "resource" is herein defined as anything supporting health, wholeness, and integration. It can include an action, strategy, or source of support available for use in adverse or difficult circumstances. The vertical embodiment resources described below empower the client to use his or her own body in addressing adverse circumstances or challenges that arise. These resource capacities are interrelated aspects of one's ability to successfully manage a vertical relationship with gravity. Although differentiated here to facilitate their use and understanding, in life they are woven together in a unity of the experience of verticality. Their description here will set the stage for understanding how use of the Tuning Board encourages the development of each of these resources.

Balance

All of the other vertical embodiment resources occur within the context of balance. "Balance" describes that interplay of stability and motion which is the vertical human being's response to the field of gravity. Rather than a stable, fixed state of alignment, balance is a never-ending series of subtle, fine adjustments which happen throughout the body. Thus, the experience of being vertical is a dynamic experience of movement.

The human balance system is comprised of integrated visual, vestibular, and proprioceptive functions which use multiple areas of the brain to integrate and process perceptive information; a combination of internal and external referencing functions is needed for balance. In fact, optimal balancing could be said to rely on all of the other six vertical embodiment resources. When this polarity of stability and motion

is managed successfully, then the person can securely orient to the environment in order to distinguish between threat and safety, and to choose appropriate responsive strategies.

Grounding

"Grounding" refers to the body's relationship to the earth, as its weight passes down through the base of support (feet) and into the ground. The support of grounding is the basis for verticality. The condition, structure, and responsiveness of the feet, ankles, legs, and hips are pivotal to the human capacity to be well-grounded, allowing for a responsive spine and nervous system. It is important to note, as we did with balance, that grounding does not equate with a rigid stability. Rather, it is dynamic and implies responsive motion, beginning with the feet, ankles, and lower legs.

Grounding creates a safe foundation from which the body can successfully orient to the surrounding environment. Dynamic support from optimal grounding allows the upper body more freedom and responsiveness, and, therefore, easier and more appropriate engagement with the environment, leading again to a greater sense of safety and confidence. Being grounded implies a proprioceptive and kinesthetic awareness of one's body as it relates and responds to gravity and experiences support from the ground.

Orienting

With a fully functional orienting capacity, we can be simultaneously aware of, and present in, the external environment, as well as fully present in the internal experiences of the body. In the upright standing



posture, we have the potential to see and relate to the full sphere of space around us. Due to limitations imposed by structural or functional restrictions which may be associated with traumatic patterning, this potential is often not fully realized.

Orienting capacity is important to responsive behaviors such as approach, defense, or retreat in relation to cues in the environment. Orienting is a current-moment behavior; therefore, using it as an embodied resource brings an individual into the present. Because it is dependent on other vertical embodiment resources such as grounding, it also encourages a balanced awareness of internal experience and external conditions which further supports curiosity, exploration, and resilience. Improving orienting capacity also encourages greater awareness of, and connection with, others, thereby activating social aspects of the autonomic nervous system, and reducing dependency on hyper- and hypo-arousal as defense strategies.

Spaciousness

Internal spaciousness is experienced as a subtle openness in the joints which allows for greater freedom of movement. It is important for the breath, as the movement capacity of skeletal structures allows or inhibits ease of breathing and, consequently, optimal intake of oxygen. When the joints of the knees, pelvis, and spine are open and spacious, motion travels all the way up the body and through the head, promoting vertical integration.

The external aspect of spaciousness is the body's capacity to interact with the environment through movement and gesture, and is dependent on internal spaciousness. If someone has fully embodied the external aspect of spaciousness, then their full kinesphere is available for expression and interaction

through corporeal presence and movement (see Figure 1).

Spaciousness is the body's natural response to a safe environment. It is the expansive posture of exploration, rest, play, learning, growth, and taking initiative to fill material and relational needs. Spaciousness is in contrast to contraction, which is seen as a natural defensive fear response to threat across the animal kingdom (Darwin, 1872; Feldenkrais, 1949; Hanna, 1980).

Connection

Connection, as used here, relates closely to the term "integration", and refers to the relating of parts to create a whole. Connection is vital in successfully addressing dissociation. As the motility of one

joint relates to the motility of adjacent joints, movement is able to traverse and permeate a person's standing posture with a feeling of wholeness. The body becomes a living, moving unity in a state of flow, rather than a collection of disjointed or dissociated parts. Awareness of internal somatic relationships expands, and

information (sensation) flows through the body.

Because emotions are experiences based in physical sensation (James, 1884; Linden, 1994), the creation of somatic connection or integration taps into emotional awareness. Hershberg suggests that the involvement of "multimodal bodily sensations" in the integration of right and left brain functions leads to insight and the generation of metaphors (2011, p. 106). With the increased integration described here as connection, the various channels of being (behaviors, emotions, sensations, thoughts, images, meaning, etc.) begin to associate with one another. This cross-channel integration of movement and information

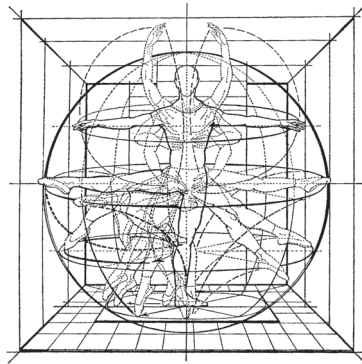
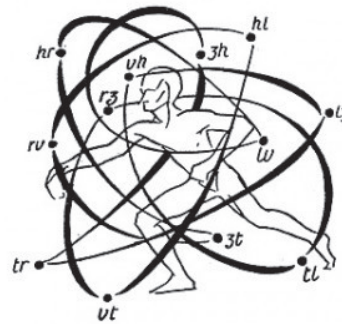


Figure 1. Illustrations of the concept of "kinesphere." Adapted from "Space and relationship: An exploration of Laban's spatial concepts in current dance practice." Retrieved online at <http://thespaceintherelationship.wordpress.com/kinesphere/>. Used with permission.



can lead to transformational experiences and insights (Sanchez, 2001, 2011).

Centering

Centering is the organization of the body relative to a vertical center line in response to gravity. In standing, it implies a functional symmetry and balance of the body's principle masses (the pelvis, thorax, and head). A well-centered body manages verticality more efficiently (with less expenditure of energy – see Figure 2) than a poorly centered one, where energy must be expended to hold up off-center parts of the body. Therefore, improving centering can result in less fatigue and greater ability to manage problems or stress. Additionally, when the head is centered over the spine, range and ease of motion are improved, enhancing the orienting capacity. Centering facilitates connection because movement transmission is better when alignment is better.

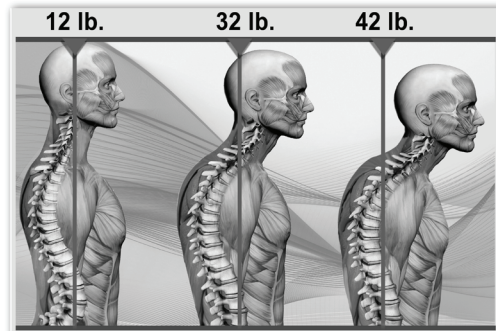


Figure 2. Illustration of why a less-centered posture uses more energy. Copyright Erik Dalton. Used with kind permission.

Tone

Optimal myofascial tone could be described as a readiness in the tissue to respond appropriately to environmental or behavioral needs, or, as the quality of myofascial engagement that permits or inhibits movement. It represents a balance between sufficient tone for an adequate response of flexibility and

strength, and the ability to relax and rest when appropriate. Put simply, healthy tone means tissue is not too strong, nor too weak, neither too stiff, nor too slack; there is a sense of “springy” responsiveness to it in relation to the demands of movement or gravity.

Related Research

There is substantial research relating these seven resources to psychological impacts - more than can be cited here. The research includes studies on postural impacts related to power and leadership and incorporation of various resources into treatments for trauma or psychological disorders. There are also some studies regarding the psychological impact of Structural Integration. Please contact the authors for more information, or refer to the attached bibliography.

THE TUNING BOARD: A VERTICALITY-BASED INTERVENTION

History and Theory

For over twenty years, the Tuning Board has been used by Structural Integrators and somatic therapists in the United States, and more recently, by therapists in Europe. Darrell Sanchez invented the Tuning Board to create an experience of fluid movement in the standing position for somatic therapy clients (Sanchez, 2001, 2004; St. Just, 2006). He began using it in Structural Integration and trauma therapy sessions in 1993 and provided Tuning Boards to other SI practitioners and therapists, who reported positive results. Its early use included helping clients to self-calm and center through the development of a deep sense of balance as a base from which to orient to the environment (St. Just, 2006).

Rigidity and chaos, stability and motion

As previously discussed, a lack of integration is characterized by the presence of either rigidity or chaos (Siegel, 2006, 2010). In the embodied human being, these signs of less than optimal integration may manifest physically or psychologically. Structural rigidity is challenged by the unceasing motion of the Tuning Board, promoting a felt sense of greater integration and openness. Where lack of integration manifests as chaos, the Tuning Board elicits structural organization through its inherent balancing task. As structural integration improves, so does psychological integration (Rolf, 1977). As an instability resistance training (IRT) device, the Tuning Board promotes the unified, coordinated functioning of differentiated



elements. The structural and psychological integration elicited by the Tuning Board result from the successful management of the interplay of stability and motion. The successful integration of these two polarities leads to greater integration (Sanchez, 2001, 2005).

The Tuning Board and vertical integration

The movement of the Tuning Board gradually challenges patterns or fixations that impede vertical integration. As these fixations are transformed by increasing motility, proprioceptive information originating in the feet travels up through the vertical structure of the nervous system to arrive at the brain. This results in a sense of connectedness of the body, and can increase awareness of the integration of mind and body.

Creativity arising from multiple aspects of integration

Intuition and insight, both elements of creativity, are functions governed by the middle prefrontal cortex, the area of the brain associated with vertical integration (Siegel, 2006). The Tuning

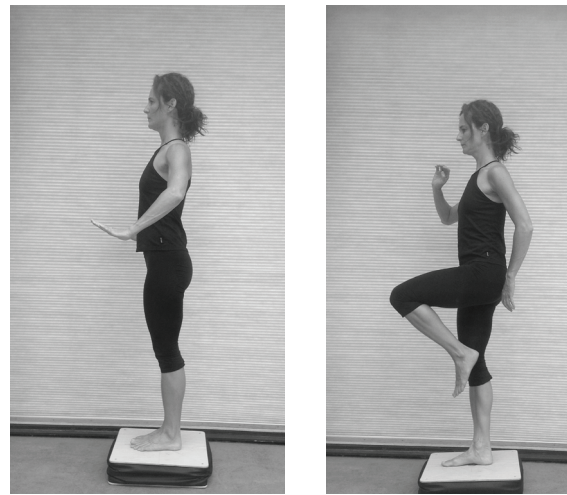


Figure 3. Photographs of a person standing on the Tuning Board, courtesy of Dr. Darrell Sanchez and Cassandra Field.

Board tends to elicit creative insight in a therapeutic setting. Sanchez attributes this impact to the integration of stability and motion, but also to the association of multiple channels of expression or experience (2001). The integration of cognitive and verbal processing with somatic and kinesthetic awareness generates metaphors and insights (Hershberg, 2011, p. 106).

DESCRIPTION AND USE OF THE TUNING BOARD

The Tuning Board is a portable balancing device providing gentle, constant motion that allows for movement in any plane (see Figures 3a and 3b). The constant motion created by gravity feeds a fluid sensory experience into the user's standing body. In working with the Tuning Board, the practitioner stands near the client (see Figure 4) and supports the client in mastering the Tuning Board's subtle balancing task. Simply standing on the board, even briefly, will improve grounding, balance, and somatic awareness of connection. SI practitioners can learn to use the Tuning Board safely and effectively at any point in a session through the simple instructions provided with the board. With further training, practitioners can learn to guide the client through a succession of subtle balancing tasks specifically designed to help the client embody the verticality-based resources. With still more training, use of the Tuning Board can be woven into full movement sessions. Using the Tuning Board in this context

encourages the presence of vertical integration and resourcing as a foundational support for repatterning.

SPECIFIC IMPACTS

An improved experience of verticality

Use of the Tuning Board tends to positively affect human structural alignment and function, resulting in a body that is more grounded, structurally integrated, upright, and centrally aligned. This improvement in the human experience of verticality is a fundamental factor in the Tuning Board's therapeutic impact. By facilitating progress toward an ever more fluid relationship with gravity, the Tuning Board encourages the recovery and functional maturation of the nervous system. A more centered, upright body also expends less energy in the daily human task of maintaining verticality (see Figure 2), leaving more energy available for facing and successfully navigating life's challenges. The Tuning Board encourages



embodiment of the seven verticality-based resources already described in the following ways:

Balance

The Tuning Board employs an unstable surface that fosters what is known as instability resistance training (IRT). IRT has been shown to improve balance, proprioception, core muscle activation, and rehabilitation from injury while reducing incidence of falls (Behm & Colado, 2012). Through the Tuning Board experience, the client learns that balance is not an elusive, rigidly-held 'perfect posture'. Rather, one learns kinesthetically that balance consists of the continual fine adjustments which compose the body's ongoing dance with gravity. As the client begins to access this sense of relative balance, the practitioner may propose removing the visual support of the balance task by closing the eyes. This will heighten the client's sense of the capacity of the proprioceptive and vestibular systems to manage the balance task (Sanchez, 2001; St. Just, 2006).

Grounding

Because the user is required to respond to the continually moving surface of the Tuning Board, the feet, ankles, and lower legs increase in sensitivity and responsiveness. This responsiveness is further increased by upper-body tasks that demand even more lower body support (Sanchez, 2005). The practitioner encourages the client to become aware of this responsiveness and support; this continues as an awareness of grounding even after the person has dismounted the Tuning Board.

Orienting

Use of the Tuning Board fosters internal responsiveness simultaneously with external awareness of the environment. The relation between the vertical posture and orienting is implicitly and

explicitly experienced, with the discovery that an erect posture facilitates a 360 degree range of vision more easily, contributing to a more secure sense of self and an increased ability to be fully present.

Spaciousness

Increased spaciousness of the joints is coaxed by subtle motion threading its way up through the body accompanied by a sensation of the joints opening up. This increase in inner spaciousness can be followed by practitioner cues for larger movements in the external space. Interacting gesturally with the surrounding space while maintaining grounding through the ongoing balance task helps clients get a sense of ownership of their personal kinesphere.

Connection

By persistently confronting fixations with gentle, continual movement, practitioner and client work to gradually increase a sense of connection in the client's body from feet to head. Eventually, vertical integration increases as fixations begin to open; wave-like motions are often seen and felt in the client's increasingly responsive and available body. Dissociation and disconnection are replaced with integration and awareness of the wholeness of the body. This in turn leads to a better capacity to connect

to the world around.

Centering

Left/right, front/back, and up/down centering are inherently required by the Tuning Board, because any large imbalance will tilt the Tuning Board and stop its motion. More subtle imbalances are addressed as body motility coaxes the release of restrictions that are keeping the body off center. Practitioners using the Tuning Board can also train clients to experience and recognize off-center patterns caused by fixations.



Figure 4. Dr. Darrell Sanchez and Vivian Gettliffe modeling therapeutic support of a client on the Tuning Board.



While engaged in the balance task, patterns may be addressed through going completely into the pattern, then opposite the pattern, in order to return to a more authentic center.

Tone

Initial efforts to control the movement of the Tuning Board typically are based in conscious, effortful patterns of extrinsic muscular control. Yet proficiency progresses through release into implicit responses unconsciously governed by reflex processes (Sanchez, 2001; St. Just, 2006). The Tuning Board evokes a “crisis of surrender” (St. Just, 2006), as the user learns to yield to this unconscious management of its movement, inducing a deeper understanding of, and trust in, the body.

The movement gradually incites responsiveness in the intrinsic, core musculature, resulting in a more appropriate balance of myofascial tone. Hypertension is released as the movement rising through the body encounters restrictions and holding. Practitioners can also challenge the client to become aware of internal sensations signaling the presence of tension imbalances in myofascial tissues. One strategy for bringing these into balance involves completing the muscular action suggested by the tonus pattern, then performing the opposite movement, and then returning to center. This usually corresponds to more balanced myofascial tone, and an increase in experiential awareness vis-a-vis implications of myofascial hypertension, hypotension, and centering. It may also address specific traumatic patterning that manifests in myofascial holding.

PRIMARY METAPHORS AND RESILIENCY

Verticality and balance are two of the embodied “primary metaphors” shared by all humans (Lakoff & Johnson, 1980 & 1999, as cited in Marks-Tarlow, 2012, p. 156). These metaphors derive from the body’s most basic experiences, movements, and interactions with the world. They enter into language through the positive connotations of “up” related concepts, and the negative connotations of “down” related concepts. Marks-Tarlow, Rolf (1977), and Hanna (1980) emphasize the importance of each person’s evolutionary journey from the horizontality of infancy to verticality. Each step of increased mobility represents more empowerment in relation to the child’s environment.

The Tuning Board user must accept the reality of continual movement, partial control, and only relative stability, as in life. St. Just hypothesizes that disorientation and dysfunction occur with cognitively-based attempts to orient to a predictable reality (2006, p. 149). The Tuning Board experience of orienting somatically, rather than cognitively, to a continually changing foundation may improve the capacity to flexibly respond to change in other areas of life. Indeed, users frequently spontaneously express this metaphorical theme. They express wanting

to release into and ride the waves of life’s constant movement and change (as they are learning to do on the Tuning Board) versus struggling to gain rigid control. In one case description below, the subject compared orienting experiences on the Tuning Board to taking in the larger picture of life, as opposed to narrow fixation on a very limited field of vision.

Transferability of Embodied Experience

In addition to transferability of the Tuning Board experience through metaphor, there is the more concrete and physical transferability of the vertical embodiment resources as they become fully accessible without the Tuning Board. St. Just emphasizes this transferability of the Tuning Board experience to solid ground; the sense of relative balance described above remains after stepping off the Tuning Board (2006). So does the awareness that our task of verticality is always best managed when constant fine-tuning and balance are happening at an unconscious, reflexive level. The Tuning Board user quickly begins to feel, in the experience of life on solid ground, the same calling to release into a flow of continual movement supported by functional grounding.



Sensory Awareness

The Tuning Board obliges the user, through its unrelenting balancing task, to remain in the present moment and in his or her body. It calls for continual awareness of the balance-related proprioceptive sensations which feed vertically through the nervous system. This sense of presence is also characteristic of an experience shown to impact emotion: mindfulness meditation practice (Siegel, 2009). The Tuning Board's balance task stimulates proprioceptive and kinesthetic awareness in a way that typically calms highly aroused clients, while calling for increased engagement from those who tend toward hypo-arousal.

Confidence Building

As the practitioner guides the client in accumulating a progression of small balancing successes, the client's sense of confidence increases. Improvement in orienting capacity also leads to increased confidence, as a better capacity to orient to one's surroundings supports a clearer sense of self as well as an improved capacity to evaluate safety and threat. SI clients often come due to issues that have caused them to lose faith in their own bodies. Increased confidence can be an important resource in the Structural Integration process.

Somatic Re-Patterning

Foster uses the term "somatic" to refer to the living, moving, conscious body, including psychological expressions manifesting through the body's tissues and posture (2007). In regard to patterning, she highlights the brain's effect on efficiency as it coordinates the firing of thousands of muscle fibers with each movement we make. Somatic re-patterning is working with a dysfunctional, inefficient or limiting posture or manner of moving and transforming it into one of health, wholeness and a more graceful coordination of embodiment (Sanchez, 2012). Aspects of somatic patterning implicitly affected by use of the Tuning Board include the transfer of effort from extrinsic to intrinsic muscular control, centering, and changes in myofascial balance and tone.

Increased Kinesthetic Attunement

Using the Tuning Board with a client requires that the practitioner attune kinesthetically and non-verbally to the client. Marks-Tarlow's description of mutual coordination, entrainment, and attuned responding (2012) is what we refer to as kinesthetic resonance. Attuned responding engages positive emotional states such as excitement, joy, interest, desire, and curiosity (Marks-Tarlow, 2012). The kinesthetic resonance created in the practitioner/client dyad by the use of the Tuning Board also leads to creativity and greater emotional resilience and embodiment.

TUNING BOARD RELATED RESEARCH

In research interviews with trauma therapists and other professionals who were using the Tuning Board with clients, Sanchez asked nine yes/no questions related to their impressions of the Tuning Board work's effect on their clients (Sanchez, 2001, 2004). Of these, five questions could be said to relate directly or indirectly to emotional experience. The interviewees unanimously felt that the Tuning Board increased the resiliency and emotional flexibility of clients, it helped clients to become better able to cope with stress, and it improved clients' sense of confidence. All practitioners felt that the Tuning Board improved their clients' ability to self-calm when anxious, although one specified that this was not true for all clients. Finally, a majority of the interviewees also noted a positive effect on clients'

ability to cope with uncertainty.

Additionally, ten trauma therapists were interviewed, all of whom had been using the Tuning Board in their practice, some for several years (Sanchez, 2001). Their responses covered a wide range of observations regarding the therapeutic process and benefits of the Tuning Board. In relation to the vertical embodiment resources, Sanchez cites half of the interviewees as mentioning its usefulness in establishing grounding as a resource. Connection and balance are also mentioned. There were also several comments related to "tone," generally regarding observations of increased relaxation in clients, as well as reduced tension and stress. The Tuning Board's calming effect on the nervous system was noted. One therapist touched indirectly on centering, describing the



way ingrained postural patterns of emotional origin became evident and were more available to change through the use of the Tuning Board.

Finally, Sanchez also interviewed six Structural Integration practitioners about their use of the Tuning Board (2001). These practitioners' comments tapped into two resources not mentioned by the therapists: spaciousness and orienting. Their descriptions of spaciousness related both to the relationship with external space, as well as internal expansion. One practitioner described in detail how the Tuning Board's use was effective in establishing simultaneous awareness of grounding and internal space while orienting externally. Several of the SI practitioners emphasized tone, describing using the Tuning Board to facilitate the release of ingrained postural holding.

Case descriptions

One of Sanchez's Structural Integration practitioner interviewees related an experience of working with a client using the Tuning Board (Sanchez, 2001). The client had recently experienced some stressful life events, including a divorce and the death of a parent. He had a history of asthma and was complaining of a strained sensation in his chest. Tuning Board work included training in standing awareness of grounding, orienting, and upward extension (spaciousness). After a few sessions, he was able to relax the holding in the chest and begin to process his experience differently. His capacity for internal somatic awareness increased. The client became enthused about using the Tuning Board to notice where in his body he felt physical responses or holding related to the week's challenges

and was able to start experimenting with alternative responses to those challenges.

Vivian Gettliffe, co-author of this article and also a Structural Integrator, conducted 14 one-hour sessions on the Tuning Board with a client who had difficulty with balance. This client was simultaneously undergoing therapy elsewhere during recovery from a challenging mental health issue. During the course of the Tuning Board sessions, the client progressed from being unable to stand on the Tuning Board, even with assistance, to confidently enjoying its use unassisted. The capacity to survey and engage with the full 360 degrees of surroundings while on the Tuning Board was developed. The client reported that the Tuning Board interventions had a significant impact on psychological progress as well, and shared the following comments: "The orienting seems particularly relevant and helpful... Centering myself within my wider surroundings feels stabilizing and enlivening. Especially compared to narrowing my vision and...awareness as a habitual reaction to fear, stress, etc....One result of...our work is my heightened awareness and trust of feet doing their work. That awareness makes a difference wherever I go....My final thought for now is reminder that all of this applies to life. For example, holding the big picture vs. zeroing in on what's only in front of you. How much better the first one works....Wherever I go, aware of extending and owning my space. Particularly, feeling and enjoying my height. Shoulder movements up and down feel good. I like that you can bring all of this into your daily life."

CONCLUSION

Our relationship with gravity is so fundamental to our human condition that we largely overlook the breadth of its effect on the whole of our lives. From earliest childhood, we relate to the world from a vertical orientation, with our heads aligned over our hearts and base of support. We learn to stay upright while managing the polarity of motion and stability. With these basic resources of grounding and balance, we gain confidence in orienting to the space around us, enabling us to evaluate threat from safety, and to discern what to approach or avoid. Connection to our bodies, centering, myofascial responsiveness and our capacity to experience the space within and around us contribute to balanced and oriented embodiment. When we are both internally aware and attuned to the environment, we know where we are in the present moment, an important step toward knowing who we are as well. The vertical embodiment resources described above and encouraged in Tuning Board interventions relate to one other in a unity of experience of our human verticality. They are the lived embodiment of our conscious sense of self.



Darrell Sanchez owns all rights to the Tuning Board. He receives income from Tuning Board sales and through teaching related to the Tuning Board. Vivian Gettliffe assists Darrell with related business services.

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