



ORIGINAL  
*Tuning*  
BOARD™



## Vertical Integration and the Tuning Board

# VERTICAL INTEGRATION AND THE TUNING BOARD™

## What is Integration?

- “The linkage of differentiated elements of a system” (Siegel, 2010, p. 64);
- A fundamental quality of psychological well-being (Siegel, 2006, 2010).

## What is Vertical Integration?

- 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 (Siegel, 2010);
- The anatomical, functional, and experiential connection of differentiated parts of the body in the experience of human verticality (Sanchez & Gettliffe, in press).

## Why Does Vertical Integration Matter?

- Vertical integration impacts psychological/emotional experience (Siegel, 2010; Rolf, 1977);
- Vertical integration is associated with the brain’s middle prefrontal cortex (Siegel, 2006);
- This part of the brain is involved in multiple key emotional and regulatory functions: body regulation, attuned communication, emotional balance, response flexibility, empathy, insight, fear extinction, intuition, and morality (Siegel, 2006).

## What Gets in the Way of Vertical Integration?

- Physical holding patterns, bracing, and rigidity disrupt transmission of sensory information;
- Trauma can lead to sensation distortions or dissociation, in conjunction with postural distortions and rigidity (Scaer, 2001);
- This can also occur as adaptations to injury, or ergonomic or other types of stress.

## How Does the Tuning Board Help to Restore Vertical Integration?

- The Tuning Board’s balance task encourages the transmission of sensory information up from the feet to the brain and increases somatic awareness;
- The movement gradually challenges patterns or fixations that limit upward transmission;
- It restores the flow of movement through the body and whole person;
- Restoring the body’s capacity for subtle movement (motility) by addressing the patterns and inhibitions induces a sense of connectedness and unitary wholeness of the body;
- The structural and psychological integration elicited by the Tuning Board result from the successful management of the interplay of stability and motion, promoting increased resiliency, creativity, and emotional balance.

## MORE ON VERTICAL INTEGRATION

Integration, the unified, coordinated functioning of differentiated elements, is a fundamental quality of psychological well-being (Siegel, 2006, 2010). Integration also has a physical component; referring to our relationship with gravity, Rolf described structural integration as “appropriate relationships in space among the components of the body” (1977, p. 16).

Vertical integration (one of eight integration domains listed by Siegel) is described 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 (2010). We use the term to refer to the anatomical, functional, and experiential connection of differentiated parts of the body in the experience of human verticality.

Functionally, vertical integration relates to implicitly or explicitly governed capacities of the nervous system that support optimal verticality, such as grounding, orienting, and centering. All of these “vertical embodiment resources” depend on the transmission of sensation via vertical integration. When it functions well, awareness of sensory information travels upward and is integrated by the vertically-distributed structures of the brain and nervous system (Siegel, 2006).

Vertical integration can impact autonomic regulation, emotional well-being, and the lived experience of the body. Rolf considered structural integration, with its expression of “true” verticality within the gravitational field, to be essential to human psychological health (1977, p. 289). Siegel associates the middle prefrontal cortex with vertical integration; this part of the brain is involved in emotional balance, attuned communication, autonomic regulation, and response flexibility (Siegel, 2006).

Trauma can disrupt the vertical transmission of sensory information, leading to dissociation from somatic experience and emotional dysregulation. Proprioceptive distortions are a common consequence of trauma, as are postural distortions (Scaer, 2001). Incomplete trauma responses may take the form of bracing and rigidity that interfere with the connected transmission of sensory information. Physical holding patterns or inhibitions evolve as a result of personal experience. Whether adaptations to injury, responses to ergonomic stress, or incomplete trauma defenses, they compromise the body’s ability to orient successfully to the environment from a posture of optimal verticality, impairing safety and emotional stability.

Somatic awareness practices rely on and enhance vertical integration. Mindfulness meditation, characterized in part by awareness of present moment internal somatic sensations, is associated with improved integration and emotional regulation (Siegel, 2009). The nine processes Siegel lists as benefits of this practice are identical to those governed by the middle prefrontal cortex, which he associates with vertical integration (2006, 2009). It has been proposed that the benefits of mindfulness derive largely from awareness of internal sensation, and that the therapeutic use of interoceptive, proprioceptive, and kinesthetic awareness can improve regulation of the autonomic nervous system as part of a trauma-recovery program (Payne, Levine, and Crane-Godreau, 2015).

## USING THE TUNING BOARD™ TO ENCOURAGE VERTICAL INTEGRATION

The Tuning Board is a somatic therapy tool used in the standing vertical posture. Its gentle, constant motion, caused by the user's weight in gravity, feeds a fluid sensory experience into the standing body. To begin, the therapist stands near the client and supports her in responding to the movement. The balance task encourages vertical integration, the transmission of sensory information up from the feet to the brain, as the movement of the Tuning Board gradually challenges patterns or fixations that limit upward transmission. Restoring motility through addressing these patterns and inhibitions induces a sense of connectedness and unitary wholeness of the body. It creates a foundational resource that improves the capacity to respond appropriately to the environment and promotes a more functional sense of self.

The Tuning Board also encourages and accelerates the implicit development (embodiment) of resources related to vertical integration and human verticality, such as grounding, centering, and orienting. Using the Tuning Board to develop vertical integration and vertical resourcing can improve autonomic regulation. When used in conjunction with verbal therapeutic interactions, we believe it also encourages horizontal integration (another of Siegel's domains) through the simultaneous engagement of right-brain postural and body-mapping functions with left-brain cognitive and verbal processing. In this context it can lead to awareness of the unitary wholeness and integration of mind and body.

Standing on the board in neutral posture, even briefly, will encourage vertical integration and improve grounding, balance, and somatic awareness. With further training, therapists learn to guide the client through a succession of tasks designed specifically to help the client embody seven verticality-based resources (grounding, orienting, balance, spaciousness, connection, centering, and tone). Tuning Board interventions can be as short as a few minutes, and easily inserted into a therapy session at any point. Alternatively, with more training, use of the Tuning Board can be woven into full therapy sessions. Using the Tuning Board in this context takes advantage of vertical integration and resourcing as a foundational support for the therapeutic process. It likewise encourages horizontal integration, inviting the simultaneous processing of somatic perception, emotional response, and cognitive articulation of experience. Using the Tuning Board this way can lead to the creative integration of intuition, insight, and meaning.

A lack of integration is characterized by the presence of either rigidity or chaos (Siegel, 2006, 2010), and 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, psychological integration improves as well (Rolf, 1977). The structural and psychological integration elicited by the Tuning Board result from the successful management of the interplay of stability and motion, promoting increased resiliency, creativity, and emotional balance (Sanchez, 2001, 2005).

*Note: See Concepts and Bibliographies handout for all references.*