I had come full circle now, a long way from inner city Baltimore, and was nevertheless returning to that familiar world of medicine, trauma, and the potential danger of my own sense of overwhelm.

After settling in to my Boulder routine, I had a long conversation with Dr. Habibur- Rahman, Chief of Protocol in the Ministry of Foreign Affairs in Afghanistan. My work with Russian veterans of their war in Afghanistan and their families was still on my mind. I was most interested to hear about the war from the Afghan perspective. It was then 1993 and I had not considered the possibility that Americans would also be having veterans of our own post 9–11 war in Afghanistan. I invited Dr. Rahman to join me for dinner at my River House during his visit to the University of Colorado. Out of respect for his Islamic beliefs, I offered no alcohol, and porcine products were nowhere on our menu.

Dr. Rahman had written several articles on subjects relating to peace and reconstruction in Afghanistan and was interested to hear of my work with Russian veterans of war in his country. This tall, elegant westernized gentleman, with carefully trimmed beard and mustache, was educated at Oxford University in the UK. I was delighted to learn that his favorite places in England were along those long stretches of Cornish coast where I have deep ancestral roots. My guest described his ethnic affiliation as belonging to a Pashtun tribe residing in the region nearest Pakistan. Pashtun represent the largest of Afghan ethnic groups and have traditionally produced most of their country's leaders.

At that time, Dr. Rahman was father to fifty children, having adopted all of his nieces and nephews after all of his brothers were killed during the Russian invasion. During this subsequent period of occupation, he explained that an entire generation had been "lost." Afghan social structure was totally shattered, schooling non-existent, and family and village life so damaged and disrupted that he deeply feared a return to Islamic fundamentalism as a hysterically controlled response to an all-pervasive chaos.

Dr. Rahman's fears were well founded, as the following decade would reveal when a Taliban regime seized control of his country. He foresaw no end to strife in his homeland anywhere in the foreseeable future. Part of this complex problem, he explained, was geographical. Afghanistan is located astride land routes between the Indian subcontinent, Iran and Central Asia. This region, repeatedly criss-crossed





by armies, empire builders and trades routes has attracted conquerors throughout history. Modern day Afghanistan maintains a strategic importance due, in part, to the fact that it borders Iran, Turkenistan, Uzbekistan, Tajikistan, Pakistan and China. Over the years, I have often wondered if and how this good man survived subsequent and inevitably ongoing upheavals.

## Tuning Board

Knowing that a second Russian invitation was imminent, Darrell and I had spent several busy months evolving our Relative Balance work. In turn, the process itself slowly began moving us in several new directions. We continued to work with our premise that trauma, in leaving its impact throughout a physical body, may therefore visibly manifest in various forms of imbalance, asymmetry, compression or torsion. We had discovered that creative movement work with various forms of distortion and imbalance can be an important step toward regaining lost postural and defensive reflexes that can occur during any process of overwhelm. Building upon our experiences with Swiss Balls, Darrell devised another kinesthetic tool.

Darrell reasoned that our adult human structure and nervous system is designed to orient in an upright posture. While Swiss physioballs are excellent for sitting or lying, one cannot safely stand on them and reproduce the same sensations of buoyancy with both subtlety and safety. With this new device, one can stand. Darrell's original design consisted of two pieces of plywood glued on either side of a four-inch thick "sandwich" layer of foam rubber. This foam was of such a density that when a person of average weight stands on top of the board, the underlying foam gives, and this sets up a gentle rocking motion. The top surface of this board was lined with a simple "British Flag" design. This floor design is used in dance and creative movement to assist the performer's orientation in space (see www.acst-europe.com).

This orienting design indicates eight basic directions radiating from a center. A central circle represents our vertical center of gravity surrounded by a "core field". This pattern is intended to help people visualize an effortless, erect posture organized around a vertical axis through the center of their body. Extended vertically, the British Flag design can assist with a visualization of three cardinal planes of orientation, the sagittal, frontal and horizontal. This can further aid a

disoriented and overwhelmed individual to gradually re-orient to a three dimensional geometry of space while in a standing posture.

Since I had spent many hours on his "foam sandwich board", Darrell asked me to try to give a name to my experience. What immediately came to me was a sense of "attunement". This is important in the sense that attunement with nature, healthy orienting and defensive responses – a balanced deployment of instinctual responses to eat, mate, explore and defend – can be thrown out of balance when one is traumatized. Attunement is critical for assuring appropriate and timely responses to both opportunity and danger. At the most basic level, it means survival. Darrell's deceptively simple device was designed as another means of assisting trauma survivors to find their way home to a felt sense of self through their perceptual responses native to a human organism. And so, from this experience of "attunement", Darrell's board became "The Tuning Board."

With Cliff at Mountain Air, I had discovered the value of introducing moderately difficult tasks, while out in the natural world, to gently bring trauma survivors into present time and explore their own particular resources for coping with physical limitations and discomforts as well as working through fears. Mindful attention to oneself and the task can provide a powerful catalyst for healing. Like the Swiss balls, Darrell's Tuning Board also presented a moderately difficult task, which could be used within a clinical setting.

One basic exercise is to ask a person to stand quietly and just look at the board. Their visual perception is usually of a round, solid and completely stable structure. They are then invited to step onto this board whenever they feel ready to do so. In this process of transferring weight onto the board, they suddenly realize that the surface that they are attempting to stand upon is in motion. This realization evokes a conscious perception that "things are not always what they seem." Now, our person must process information acquired directly from the feet, not through thought or visual perception. Originating in the feet, information must now travel through the entire length of the nervous system before arriving at the brain.

The organism will then become activated and immediately begin some sort of coping/orienting response in an attempt to orient and stabilize. Initially, an attempt to control the experience comes through extrinsic, cognitive and visual effort. An attempt is made to stabilize and control the board to make it stable and force it to match their original perception. In so doing, the person is trying to make the external world fit into their internal reality.





The Tuning Board, however, is designed to never be totally stable. There will always be some motion involved while standing on its surface. In assessing copability, it is important to observe how a person responds to that inevitability. They may find that some degree of extrinsic conscious control is possible. This level of mastery is particularly important when the board is used as a device to retrain neurostructural alignment patterns and response capabilities. Mastery of this board, however, does not lie in its extrinsic control. If one remains with an extrinsic emphasis the board can quickly become boring. Real mastery resides in experiencing and trusting non-conscious, reflexive responses of a balanced standing posture with weight evenly distributed throughout both legs.

Returning to the initial experience, realization that a seemingly stable surface is in motion, and will stay that way, offers a cognitive challenge. This challenge lies in how an individual will accept and respond to this continuous motion. It is important to continue tracking until our person arrives at a point of relative stability. This can happen in a relatively short time. The idea is to encourage a basic skill of managing relative stability while standing on a moving board. This also presents a decision point for the tracker. Does our person have sufficient resources to explore a more challenging experience of motion and response?

If so, our next step is to ask our person to close their eyes while remaining on the board. At this point, much more movement, usually a swaying, occurs and there is a shift into a more internally oriented response to whatever disorientation results from lack of visual reference. This sets in motion another cycle of arousal and orientation. This next level of challenge moves away from cognitive toward the somatic while entering a realm of reflexes and responses. The tracker may need to move closer in order to ensure safety, as swaying may become significant with eyes closed. Continue on, is our new protocol, until relative stability is reached with eyes closed.

This brings a tracker to another decision point. At this stage it is important to assess an individual's resources in *exploring* the realm of response without use of visual references. This kind of work with the board, then, is done, in two major stages. The first is working within a realm of extrinsic, visual, cognitive experience. The second involves

work with a more intrinsic, somatic experience. Second stage has much more movement associations with it.

On another level, this second stage can be seen as a challenge of moving from an orientation which seeks absolute stability and control, toward a "crisis of surrender" with a felt experience of encountering a reality of partial control and relative stability. This new way of being would include a felt sense of becoming structural and fluid, as well as boundaried and open.

It is during this intrinsic second stage that a wave-like motion will begin to appear throughout a standing posture. This motion starts in a person's feet, travels up through both legs, through the spinal cord and into the brain as a somatic experience, in contrast to solely cognitive action. This intrinsic wave-like motion cannot happen in an extrinsic, cognitive mode. In a Taoist sense, the organism is invited to move "out of fixation, into flow."

And so, a wave-like motion provides an integrated, resilient and intrinsic response experience in neural sensory motor associations in the form of a new *engram* for relative balance. The role of engrams provides ongoing challenges in the understanding of the somatic manifestations of trauma. An engram may be defined as a definite or permanent trace left by a stimulus in the protoplasmic nerve tissue. Engrams, are in some functional and anatomical respects, at the opposite end of the behavioral spectrum from the primitive orienting reflexes which carry patterns established over millions of years of species development, and are re-created during the unfolding of every normal fetus (Juhan 1987; see also Schacter 1982).

Engrams are largely created from the life experience of every individual. In this sense, the term engram was used by Karl Lashley to describe the physical basis of long-term memory. Unlike orienting reflexes, engrams cannot be localized into any anatomical unit or fixed connection. Engrams are a means of arranging into meaningful sequences the firings of the more primitive reflexes. Engrams, therefore, are organizing factors that cannot be pinpointed. In many ways they are analogous to quarks in the realm of particle physics – "the ghosts in the machine" the direct observation of which has so far eluded us, but whose practical effects are everywhere evident (ibid.; see also Bartenieff/Lewis 1980).

So, with the Tuning Board experience, the developing engram for relative balance addresses a geophysical truth that earth offers only





relative stability. Upon stepping off the board onto "solid ground" one question is, "What has changed?" What role is cognition now playing in a standing posture? Now, there is more somatic information available. When on solid ground, an experience of relativity remains. This experience, which was not there before the board, can become a new reflexive response. Knowing in a felt sense that the Earth is only relatively stable, and moving, while feeling the planet move, as we move, is movement with a felt sense of relatedness and relationship.

In working with a Tuning Board, the human organism can learn to orient within a reality that things are not always as they appear. Attempts to orient toward a balanced, stable predictable reality, using only cognitive and visual perceptions, can lead to ongoing disorientation. In dealing with potentially traumatic situations, which are inherently unstable, unpredictable and often not as they initially appear, those organisms able to orient within a felt sense of relativity are much better prepared to respond. In a sense, an engram for Relative Balance, achieved through an intrinsically felt sense, can potentially serve as something like a "booster vaccine" which enhances immune responses by increasing copability.

The Tuning Board can be very valuable in training people to stay calm and centered with attention to their orienting reflexes under circumstances perceived as threatening. By learning to cultivate a deep intrinsic sense of balance, one can develop an expanded sense of option whenever the flight or fight reflex is activated. In this sense, a Tuning Board serves as a transitional object designed to access a subtle response to the geophysical forces of our gravitational field while in a standing posture. This sense soon becomes available without use of the board. We felt that Darrell's Tuning Board had the potential to expand options for non-verbal, kinesthetic, cross-cultural trauma work and so he was willing to make ten of them for me to take along to Russia.

Sometime in early spring a message arrived from Valery. "Please come," his message said. "There is war in the Causcasus and much work to do." My mother was unhappy with this development. Over tea, she was predictably direct: "Who or what are you looking for in Russia? Our Cornish family has no Russian roots, and we have no family ties there." I said only what I understood to be my truth, "I don't really know." "The women in our family," she continued, "have always been involved in war. Did you know that three of your great aunts were nurses with the British Army in France during World War I?" I did not