

Welcome to *Alternativz*, Volume 2, Issue 5, *Coherent Breathing - The Untold Story*. Writing about the late [Anna Wise](#) and [Awakened Mind](#) in the last issue, reminded me that there is some interesting history regarding the development of Coherent Breathing that few people know about. In fact, there are matters I've been intentionally silent about for over 10 years. Specifically, how my pursuit of the Awakened Mind brain-wave pattern influenced the development of [Coherent Breathing](#) and [The Six Bridges](#).

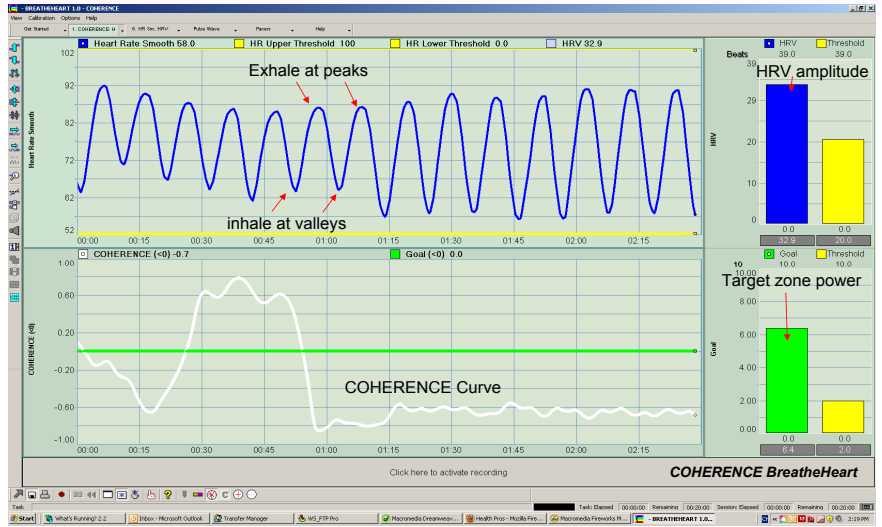


Figure 1: Breathing In Synchrony With One's Heart Rate Variability Cycle

The story begins in 2001, when I met now good friend, coauthor, and close colleague Dee Edmonson, R.N., BCIAC-EEG (www.neurologics.us) who I sought out to help my oldest son, 11 at the time, with ADD, using EEG neurofeedback. Upon our initial visit to Dee's office, she first introduced him to heart rate variability biofeedback (Hearthmath's FreezeFramer instrument), which at that time was fairly new on the scene. (Note that at this time FreezeFramer was expressly *not* a breathing instrument.) Here, I will forever owe Dee a debt of gratitude.

My son placed his finger in the sensor and gave it a try, catching on pretty quickly as kids will. When he was finished, Dee invited me to try it – having been fascinated with biofeedback much of my life – I was eager. For me it was *kismet*, a moment when long preparation met opportunity, in that I immediately comprehended the significance of what I was seeing and feeling. I purchased an instrument that day. (Four years later we published [The New Science Of Breath](#) and eight years later we launched [Valsalva Wave Pro](#) and [BreatheHeart - breathing biofeedback](#) instruments.)

Allow me to emphasize the significance as I saw it. As a long time yogi, meditator, and martial artist, *here was a method that allows one to sit comfortably, remain still, and breathe with their own heart rhythm and within minutes, enter the meditative state - without knowing or doing anything else*. The essential method is that of monitoring one's own heart rate and synchronizing breathing with it, exhaling at peaks and inhaling at valleys. It required no meditation training, it required no guru – except our inner guru, Namaste! My son and I began practicing regularly. His motivation was to better his best score, mine was to further my understanding of exactly what was at work here.

Anyway, within a short time, I was wishing I could practice this breathing with my eyes closed in order to realize a deeper parasympathetic (theta/delta) state, as keeping the eyes open and following visually is stimulating. Having analyzed my own breathing frequency and done some initial research on the phenomenon of HRV, I created a first audio CD that I could use to synchronize my breathing to this rhythm while my eyes were closed and began meditating with it right away. My success with this CD ultimately led to the development of [RESPIRE-1](#).

In parallel, I was practicing EEG assisted meditation on my own, following along the lines of Elmer Green's alpha-theta brainwave training protocol, using a Minder Labs Abhayamudra 2. While "meditating" with EEG and my new breathing CD (and employing what I'd learned over the years),

I could elicit a decrease in the amplitude of high beta brainwaves and an increase in both alpha and theta brainwaves and could facilitate these changes rapidly, something I could not do as easily without “breathing coherently”. After some months, the EEG demonstrated that my brainwaves were in the “desired state” the moment I’d start meditating. In other words my brainwaves were like this much or most of the time, before, during, and after meditation, *and I was now breathing this way almost all the time, as I still do*. I was already confident that breathing coherently was the key to meditation, but exactly what part did it play in my success in realizing the meditative EEG pattern?

Having read Anna Wise’s books and familiarized myself with the Awakened Mind protocol, I moved the EEG electrodes to Occipital Lobes 1 and 2 at the rear of my head (O1, O2, in the parlance). These are the points where one trains Awakened Mind using the Mind Mirror (the official EEG biofeedback instrument for Awakened Mind training). Having done so, I was satisfied that I could make out the Awakened Mind pattern coming and going. To validate my experience, in 2003 I attended Awakened Mind brainwave training workshops at Esalen Institute and in 2004 visited Anna Wise’s office north of San Francisco, to have Anna review my EEG. (Awakened Mind training, being visual, is always facilitated by an observer. This is because, to learn to produce the pattern the eyes are closed in order to raise the amplitude of theta and delta frequencies, those of deep parasympathetic emphasis, where visual stimulation tends to limit how deep one can go. This is the same reason I made the original breathing CD.)

So here I was in Anna’s chair, Mind Mirror attached at O1 and O2, having practiced yoga, martial arts, and meditation for decades, sitting “united”, breathing “coherently”, remaining still, and relaxing my tongue. Anna was observing Mind Mirror and providing verbal feedback. Over the course of minutes, she said, “There’s Awakened Mind, now its fading, there it is again, now its gone, there it is again...try to stay with that...” After 20 minutes or so we had an intermission and debriefing. “Tell me of your experience”, she asked. “Are you relaxing your tongue?” “Yes,” I answered, “But my jaw seems to be the switch.” “Your jaw?” “Yes,” I answered. “Let’s do it again”, she said. And we did, this time testing activation of my jaw muscles. I resumed all of the particulars: posture, breathing, relaxing my tongue and jaw. “There’s Awakened Mind”, then tensing my jaw muscles, “Its gone,” she said. “I tensed my jaw muscles,” I said, “Ever so slightly”. “OK, then relax your jaw muscles and let’s proceed...” “there’s Awakened Mind, there’s Awakened Mind, still there, still there, still there...”, At that moment I learned of the subtle importance of the jaw and the profound effect that it has on EEG. We had tea, talked for a while, and I returned home to make sense of it all.

Is there a “formula” that consistently produces the EEG of meditation, of Awakened Mind? A question that I would not ask publicly during Anna’s lifetime, out of respect and in recognition of what I took to be her fragile economy. However, there is for me and we think we’ve seen evidence of it many times in Dee’s clinical application of Coherent Breathing. For me, elicitation of Awakened Mind involved an exacting posture (Man United With Heaven And Earth), breathing “coherently”, remaining still, and relaxing, specifically, the tongue and jaw, but more generally, the entire face. I think this is because the face and tongue are wired straight into the brainstem, the tongue via the hypoglossal nucleus and the jaw and face via the trigeminal nerve. EEG tells us that both have a powerful and immediate effect on brain function. Tensing them excites the brain and limits the appearance of a meditative EEG. Relaxing them has the opposite effect.

This is not surprising. We know that meditation involves all these things: posture, breathing, stillness, relaxation, but profundity (one of Anna’s favorite words) is a function of specificity. I encourage you to try it, especially if you are a student of Awakened Mind.

Thank you for your interest and consideration,

Stephen Elliott, President, COHERENCE