



Hello all,

2024 marks the 20th anniversary of COHERENCE LLC and Coherent Breathing®. Thank you all for your continued interest and support! As always, I wish you wellness! With this, welcome to Coherent Breathing, Volume 3, Issue 7: **Beginnings – Meditate Without Knowing Anything About Meditation**. I hope you enjoyed **Volume 3, Issue 6: Catch The Wave**.

To “meditate” without knowing anything about meditation...Is such a thing possible? The answer is, “Most definitely!” Discovering this reality was a major moment in my research leading up to today and what we now know as Coherent Breathing®. I currently consider meditation to be an innate primordial human capability.

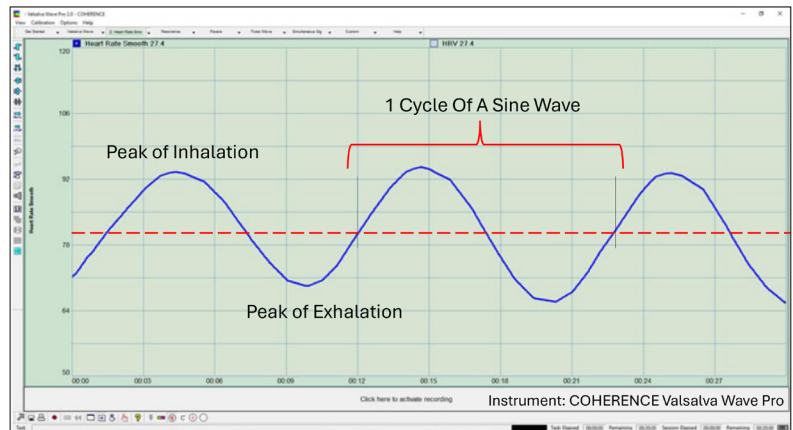


Figure 1: Heart Rate Citing 1 Sinusoidal Breathing Cycle

You see, circa 2000, I was searching for the protocol that would elicit the Awakened Mind brainwave pattern. (Awakened Mind® is a registered U.S. trademark belonging to Judith Pennington.) Awakened Mind was popularized in the U.S. by the late Anna Wise, the protege of Maxwell Cade, the British physiologist and consciousness researcher who, working in parallel with **Elmer and Alyce Green of the US, and Tomio Hirai of Japan**, though on different continents, was investigating heightened states of consciousness using biometrics, e.g. galvanic skin response, hand temperature, and most importantly, electroencephalography (EEG). *Awakened Mind* was Cade’s name for the brainwave pattern associated with mental clarity, intuition, and spiritual awareness, during both meditation and normal walks of life. In other words, it is a brain/central nervous system state (CNS) that we are able to access anytime/all the time, circumstance permitting. Awakened Mind is a specific blend of delta, theta, alpha, and beta brainwave frequencies with their respective amplitudes. (The higher frequency gamma band was not popularized until the application of digital signal processing to EEG instrumentation and analog-to-digital conversion of brainwave signals.)

In the early 2000s I was searching for the Awakened Mind brainwave pattern using the same forms of instrumentation on myself but with the addition of respiratory sinus arrhythmia (RSA)/heart rate variability (HRV) biofeedback, and I found something very interesting – this being that the idealized heart rate signature is a sine wave, this sine wave rising with inhalation and falling with exhalation. The peaks and valleys correspond with the peaks and valleys of inhalation and exhalation, respectively. The sine wave phase-locks with breathing, and is perfected when breathing itself is *sinusoidal*, voilà, the essential principle underlying Coherent Breathing – it is sinusoidal – *the sine wave being the signature of nature*. The implications are: a) precisely equal periods of inhalation and exhalation, b) the pace of breathing emulating the action of a pendulum (which is sinusoidal in operation). With a bit of practice, I could see a desirable shift in my biometrics right away, the EEG of the meditative mind appearing every now and then. I was on the right track...

Now, breathing with these mechanics, it is just a matter of exploring breathing frequency. Here, I created a CD for research purposes, this CD presenting a dozen or so breathing rates with which I could experiment. I was aware of the theory of cardiopulmonary resonance and was seeking to understand my own resonant frequency. Was breathing at one’s resonant frequency related to Awakened Mind? Tracks on the CD started at 15 breaths per minute and stepped downward. Rapid breathing sent instrumentation in the wrong direction relative to my quest, toward sympathetic autonomic nervous system emphasis, and away from the meditative state of mind. As breathing slowed down: 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, instrumentation went in a desired direction: RSA growing in amplitude, skin resistivity rising (GSR, the autonomic nervous system shifting from sympathetic toward parasympathetic emphasis), and the EEG pattern exhibiting lower high-frequency (beta) amplitude and higher low-frequency (alpha, theta, delta) amplitudes. As the reader knows, I landed on nominal rate of 5 breaths per minute. Why? What was special about 5?



Maybe 10 minutes into breathing at this rate I experienced a dramatic internal shifting of gears, what feels like the nervous system *stepping* down a staircase. All the muscles in my face “let go”, all at once. I began to feel my blood moving in waves. (A phenomenon that several years later we would name *The Valsalva Wave*.) I wasn’t “trying to make these things happen, they just were. All I was doing is sitting cross-legged on the floor with my back against the couch for support, eyes gently closed, breathing in a sinusoidal manner at the rate of 5 breaths per minute. My EEG was a powerful presentation of that of the meditative mind, strong alpha, theta, and delta frequencies. Wow! – *This is the first time in my life that I’d touched the real thing*. I knew I was onto something important, something that was neither widely nor well understood.

I continued to practice breathing at 5 breaths per minute for days, weeks, months. Was it the Awakened Mind? Not quite...While the Awakened Mind EEG would manifest from time to time, it did not persist. Why not? It turned out that something more was required to enable Awakened Mind, this being *conscious relaxation* of what I termed “*The Six Bridges*”, 12 groups of low-threshold muscle motor units over which we have *explicit dual control*, that can be generalized into 6 anatomical zones: 1) the face and head, 2) the tongue and throat, 3) the hands, 4) the diaphragm, 5) the perineum, and 6) the feet. The explicit dual autonomic and somatic control is the logic that identifies them. By learning to relax these zones, turning this relaxation on and off, the Awakened Mind EEG would follow, like a switch. After practicing *The Six Bridges* for a good while (and several iterations of the supporting CD), I called Anna Wise and told her that I was at a point where I thought I could elicit the AM pattern at will, and I needed her assistance to verify this.

A few weeks later I was sitting in her chair in Corte Madera, California, where I spent an entire afternoon with her, tea followed by EEG, followed by tea, EEG, 4 sessions... I had gotten to know Anna pretty well by this time, having attended 2 of her week long Esalen workshops, and having spent free time with her on weekends. When we were together, we didn’t speak of the Awakened Mind or of Coherent Breathing, but instead of Taoism, an area of intense common interest.

The way Anna worked is that she observed the Mind Mirror and signaled audibly when the Awakened Mind EEG manifested. This was primarily so that the client could close their eyes, this freeing up the visual cortices, eliminating the visual stimuli of the instrument. Each session lasted about 20 minutes, with an opportunity to discuss each at the end. Before we started I told her about the Coherent Breathing protocol that I had been working on and how I had found it to *automatically* elicit the EEG of the meditative mind, that breathing at the rate of 5 breaths per minute with commensurate depth takes you there without having to do anything else, no intent or knowledge required, just remain still and breathe with equal periods of inhalation and exhalation. But elicitation of the Awakened Mind EEG required something more... *conscious* relaxation of *The Six Bridges*.

This having been explained, our afternoon progressed, where I demonstrated this protocol for eliciting the Awakened Mind many times, using the bridges to change my EEG from that of the meditative mind to the Awakened Mind like a switch, where I was using conscious relaxation of my right masseter muscle to effect this change, “AM”, “gone”, “AM”, “gone”. At the end of the 4th session, we spoke for a little while. She asked me about the “*profundity*”, of my experiences – one of her favorite terms. I told her that I had been working to integrate Awakened Mind into my life, all-the-time, circumstances permitting. I thanked her for aiding me in my quest. She smiled and we hugged. It was the last time that I would see her.

Why does Coherent Breathing elicit the Awakened Mind? Because it generates the Valsalva Wave, which washes through the brain with every breath.

Stephen Elliott, President, COHERENCE LLC

Subscribe To Coherent Breathing® – An Occasional Journal Of Complementary Solutions
For Health, Well-being, Performance, & Longevity – It’s FREE!