Self-Help Video #7 Part 3:

Description of Brain Wave States

<https://youtu.be/EHwTJqhk00Y>

(begin at 13:00 seconds to bypass Medical Disclaimer)

“Brain Entrainment” begins the 25th week of gestation and is necessary for efficient auditory and speech perception.  Speaker and Listener both participate in brainwave synchronization, which leads to shared learning.  This auditory sharing is “auditory entrainment.”

Through our ears, the rhythms and modulations are tracked by the basal ganglia brain region, including those of acoustic signals as well as speech perception of predictive coding.  Auditory signals are passed from the cochlea of the ears into the medial geniculate nucleus then to the thalamus and then to the cerebral cortex.

<https://kids.frontiersin.org/article/10.3389/frym.2018.00063>

What we are really “hearing” is “time” as the processing of “time” is the brain’s main function of the auditory signal.  Perception of sound is due to the temporal processing of the “sound within a restricted or defined time domain.”  The environmentally synchronized brain waves is our subjective sense of the “passing of time.”

[www.sciencedaily.com/releases/2021/02/210208173103.htm](http://www.sciencedaily.com/releases/2021/02/210208173103.htm)

The efficiency of the sound’s journey depends upon many factors of our physical and social lives. Or as Einstein stated: “time is relative”: different “subjective time” perceptions from our various experiences, backgrounds, professions, social roles, cultures, gender, etc.

“Subjective time” is composed: quantitative and qualitative time, clock-based and event-based time, and linear and cyclical time.   Mathematics and classical physical science posit that time flows uniformly and external to events.  Einstein disproved this and his theory of special relativity says that time slows down or speeds up depending on how fast you move relative to something else.

Subjective time impacts our life and behavioral processes: behavior, moods, thoughts, and our eventual sociocultural beliefs.  The subjective sense of “time” can be stressful and harmful if associated with externally imposed “time deadlines.”  Or the “subjective time” can be relaxing when associated with different brain wave states. ​

Posttraumatic Stress Disorder alters your sense of “subjective time” thus your brain wave status becomes a focus of IN SYNC psychotherapy. There are five frequency bands which have been measured through EEG recordings of the human brain: delta, theta, alpha, beta, and gamma.

<https://indyneurofeedback.com/neurofeedback/what-are-brainwaves-and-why-do-they-matter/>

Delta is present in stages 3 and 4 of deep sleep, and enables us to access information in our unconscious mind during sleep.  Effects of entrainment: can induce drowsiness, trance, and deeply relaxed states.

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Theta waves are strong during internal focus, meditation, prayer, and spiritual awareness. It reflects the state between wakefulness and sleep and relates to the subconscious mind. It is abnormal in awake adults but is perfectly normal in children up to 13 years old. It is also normal during sleep. Effects of entrainment: if enhanced, can induce drifting, trance-like state. If suppressed, can improve concentration, ability to focus attention.

Alpha appears to bridge the conscious to the subconscious. It is the major rhythm seen in normal relaxed adults.  Effects of entrainment: can produce relaxation.

The beta band has a relatively large range, and has been divided into low, midrange and high. Low beta (12-15 Hz) is distributed in the brain by hemispheric side and by lobe (frontal, occipital, etc.).  Effects of entrainment:  can produce relaxed focus, improved attentive abilities.  Mid beta (15-18 Hz) is localized over various brain areas.  Effects of entrainment: can increase mental ability, focus, and alertness.  High beta (above 18 Hz) may be very focused. Effects of entrainment: can induce alertness, but may also produce agitation.

Gamma is between 30 and 44 (Hz) and is the only frequency group found in every part of the brain. When the brain needs to simultaneously process information from different areas, gamma consolidates the required areas.  The gamma activation is the current focus of “meditation practice” which is changing from the “still silence” to an activated mental state.  When Gamma is activated, people report experiences of a state of “Loving Kindness” with increased levels of compassion, feelings of happiness, and at the same time peak performance mental abilities come out. This is a state of mental awakening.  They have rapid and vivid memory recall and are hyper-sharp focused in the moment. This is called “in the moment, in the flow, being in now — in the zone” state.

All of the trainings in these Video Books are geared towards activation of the Gamma wave. As an awakened individual, you have the potential to create tremendous impact upon your listener.  You will bring them a new subjective sense of “time” and, with that change in brainwave entrainment, you will be the catalyst for easing of anxiety, depression, physical pains, and many more human miseries than you ever know.