

## **Mid-Year Presentation**

# **Exploring Emergence and Intuition through Alpha brain waves**

**Presented by Simha Bode on August 22, 2013**

**Pre-Capstone Phase - Bachelor of Science - Integrative Ecosocial Design**

20 Minute presentation - 10 minutes questions and answers - Gaia University Call

- Presentation starts with a five minute guided attunement.

My research shows that intuition could be linked with our ability to focus our concentration in a particular manner. We will start this presentation with a small guided focusing of concentration. My goal is to possibly give you a glimpse into this process and provide you with a few tools to help you cultivate your intuition further.

As I give instructions follow as you feel comfortable, I encourage you to push your boundaries.

I would like everyone to get comfortable in their seats, so they won't need to move for the next few minutes. Sit any way that allows your spine to be straight. When and if you feel comfortable, slowly and softly close your eyes. Keep a relaxing, soft and steady gaze, with your eyes closed.

We will attempt to do deep slow diaphragmatic breathing through the nose. This means your stomach expands as you inhale and then contracts as you exhale. Try a few times, it should make a little noise.

Take a deep slow inhalation through your nose. Bring your total awareness to your breath. Feel the air as it caresses your upper lip entering your nose, then filling your lungs. Keep this focus on the cycle of your breath, observe. While keeping your focus on this, add a second focus of all the sounds surrounding you, try not to identify them, simply listen while maintaining your focus on the breath, observe. While maintaining these two focuses become present in your body, feeling without identifying the feelings. We will silently continue focusing on these three; deep slow breathing, the surrounding sounds, and the feelings in your body, for the next 2 minutes.

(2 min pause)

The few minutes we spent doing this exercise is a very small experience of trying to reach what scientists identify as, Alpha brain waves. Alpha brain waves are measured at 7-13 pulses per second.

If your mind was busy and you were thinking, “why is he spending precious time of a short presentation in silence”, or whatever else, your brain was in Beta waves (1). If you were feeling sleepy and dosing off, you were likely in Theta waves. This is not good or bad, right or wrong. This is where practice, persistence and curiosity come into play.

## **What is Intuition?**

no one really knows, there are many theories. I feel the latin root-word 'intueri' - defined '*to look inside*' is a better definition than the more common one - The ability to acquire knowledge without inference and/or the use of reason. (2) Maybe the processes of reason and inference are not thoroughly understood?

I chose to call this *a focus of concentration* and not meditation, because we all have ideas about what meditation is. To take time out of your day, to sit and do nothing but focus your awareness for 15 minutes, or more a day, may seem strange to many people.

It can feel awkward when you first start doing it, but there are many layers to explore, as I hope I illustrated. This is obviously not the ideal context to explore this experience in, but I feel it is a good opportunity to share with my Gaia U community.

Alpha waves have been found to happen when people are relaxed with their eyes closed. They change into lower frequencies, Theta and Delta waves with drowsiness and sleep. This is why you want to keep your spine straight, so you stay alert. Brain waves turn to Beta waves when you open your eyes or with movement of the body (3). This is why you want your seat to be comfortable, so you don't need to move. It is also the reason yogis practice posture yoga, to be flexible so they can sit for long periods of time.

How long to sit? The longer the better, 15 minutes is a good place to start, though I find, even a few minutes or a few breaths can bring results.

Alpha brain waves are not thoroughly understood, it is still a mystery to neurologists how the brain functions. One possible explanation that intuition increases with this type of concentration, is our connection with Gaia's Earth vibration, called Schumann resonance. Having evolved with the Earth for millenniums, it is no wonder that humans have the ability to be in synchronic attunement with the Earth's resonance.

Schumann resonances are global electromagnetic resonances, excited by lightning discharges in the cavity formed by the Earth's surface and the ionosphere (4). It is measured at 7.83 pulses per second and human's Alpha brain-waves at 7-13.

The debate continues over where alpha waves begin and end, the different types of Alpha waves, and their functions. The fact that human brains approach closer and closer to Schumann resonance with focused, relaxed concentration, says something to me.

Nearly all traditional cultures practice(d) some kind of focused concentration or meditation. It is these traditions and cultures that many scientists study, inquiring into their sustainable human-practices.

Could this alignment of resonances be a key factor in these cultures knowledge of ecological and sometime socially balanced lives?

## **How does intuition fit into design?**

Intuition obviously has many layers and is a complex system. One aspect of what I believe we are cultivating with this practice, is what has been called strategic intuition.

Strategic intuition is when you get a flash of insight. Things come together in your mind. You connect the dots. You say to yourself, “Aha! I see what to do.” (5)

It seems intuition is honed by giving this time to process data in a sub, or perhaps supra-conscious modality. By honing intuition there are many tools and layers that become available to us to draw knowledge and information from. This apparent processing of information which happens with alpha waves is what is called synthesis. Synthesis is the connectivity of relations, which is the modality of self-regulating systems(6).

## **Exploring what has been called “the right-brain” is another tool.**

The medical definition of right-brain is the right cerebral hemisphere of the human brain especially when viewed in terms of its predominant thought processes (such as creativity and intuitive thinking).(7)

An article from psychology today says “Some studies have indeed shown that the right hemisphere seems to be involved more when we have an Aha! flash of insight. For instance, one study found that activity was greater in the right hemisphere when participants solved a task via insight, rather than piecemeal (8).

As this article points out “Left-Right Brain” theory has become a useful metaphor and is not 100% black and white.

I watched some of a UC Berkeley lecture Video on the brain. The video shows that the brain is much more complex than just left/right. It discusses the central component of the Hypothalamus which is partially responsible for emotional response (9).

Pure objectivity is a key to the right-brain vision, everything is seen as “new”. Things are experienced in their present-state, as they are, not in relation to past experiences.

So, how to enter into the “right brain” perception? One way we can enter this realm of perception is to practice the focusing of our senses, as we did in the beginning. This allows us to dive into subtlety. To perceive without entering the analytical left-brain that

wants to identify and categorize everything is the trick. I see it like becoming an antenna.

I believe these tools have great benefits for the ecosocial and world-changing field. Intuition increases our understanding of *emergence* which is the principle-characteristic of complex-systems and mutual causality. Tuning into our senses, in a given environment, allows us to “see” subtleties and the periphery of what our normal Beta-wave and left-brain modes can not see (10).

## **What is Emergence?**

Emergence is the seemingly irrational patterns in systems. These patterns arise from a multiplicity of simple interactions. These interactions are happening between a diversity of components in diverse ways. The patterns are irrational because they do not equal the sum of the components and their interactions, it is the creation of something “new”. Jeffrey Goldstein in the journal *Emergence*. defined emergence as: "the arising of novel and coherent structures, patterns and properties during the process of self-organization in complex systems". (11) I feel this is a good concise definition.

In my project for OP2 I started the exploration of my design method. This was a turning point for me, where I did some patrix busting. Many of the projects I did had come out of fulfilling a need, I did not do a physical design. I felt a knot in my stomach when I was looking at how to present these designs. When looking into *a pattern language* by Christopher Alexander, the emergent quality of patterns informed me about my design method. Then when doing a (SWOC), Strengths Weaknesses Opportunities and Challenges analysis of my OP2, I realized this was an opportunity to learn.

I had to probe into the uncharted territory of my “design-as-I-go” modality, which I called Emergent-design flow. I started out by researching flowcharts. My first emergent-design flow was clumsy and confusing. I looked at the flowchart, which had a central modality of *Observe Patterns*. I asked myself, how does this design process feel? I thought, it feels like a spiraling in-and-out of observing patterns. My second draft of my emergent-design flow expresses this. It is partially this process of making these flowcharts, which led my deeper research on intuition and emergence.

I am in the beginning stages of probing into a very deep realm, so I feel I am just skimming the surface. I spend time quietly sitting in the places that I work on projects and I know it has influenced my designs.

Science is catching up to what Yoga has taught for millennium(12). In this *Experiment of Intuition* video, they show that they have scientifically measured the hearts ability to have pre-knowledge of what will happen (13). Exploring the seemingly boundless layers of intuition and consciousness is a life long work. Questions and curiosity deepen our experience of more layers bringing new insights and growth . I encourage you all to get curious about your own intuitions!

Feel free to ask questions or to share your experience of the attunement. Thanks for attending my presentation on Intuition and Emergence, I hope this has spurred more questions than answers for you to delve deeper into.

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3. ^ “Alpha Brain waves”, wikipedia.com, Aug. 2013 - [http://en.wikipedia.org/wiki/Alpha\\_wave#cite\\_note-1](http://en.wikipedia.org/wiki/Alpha_wave#cite_note-1)
4. ^ “Schumann resonances”, Wikipedia.com - [http://en.wikipedia.org/wiki/Schumann\\_resonances](http://en.wikipedia.org/wiki/Schumann_resonances)
5. ^ “What is Strategic Intuition?” - [http://columbiapress.typepad.com/strategic\\_intuition/what-is-str.html](http://columbiapress.typepad.com/strategic_intuition/what-is-str.html)
6. “The best explanation to resilience”, Stockholm Resilience center tv, youtube.com - <http://youtu.be/tXLMeL5nVQk>
7. ^ “Right brain”, merriam-webster.com, <http://www.merriam-webster.com/dictionary/right%20brain>
8. ^ Jarrett, Christian Ph.D, “Why the Left-Brain Right-Brain Myth Will Probably Never Die“, Psychology Today, June 2012, <http://www.psychologytoday.com/blog/brain-myths/201206/why-the-left-brain-right-brain-myth-will-probably-never-die>
9. ^ Diamond, Marian, “Integrative Biology 131: General Human Anatomy”, webcast-berkeley Fall 2005. <http://webcast.berkeley.edu/playlist#c,d,Biology,9A701D54E8896DoE> )
10. ^ Bailey, Stewart, “Strategic Creativity”, Intublog.com <http://www.intublog.com/2011/07/07/strategic-creativity/>
11. ^ “Emergence”, Wikipedia.com - [http://en.wikipedia.org/wiki/Emergence#cite\\_note-6](http://en.wikipedia.org/wiki/Emergence#cite_note-6)
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Alternate nostril breathing technique - <http://www.artofliving.org/yoga-breathing-techniques/alternate-nostril-breathing-nadi-shodhan>