

Module 1

The Philosophy and Theory of NeurOptimal®

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The Philosophy & Theory

The Brain's Role in Noticing Differences

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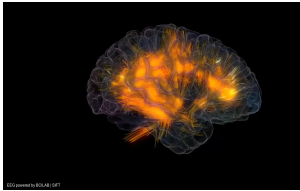
Brain Basics

The Brain Communicates by Noticing Differences

What we Know About the Brain

- Your Brain is the center of your **Central Nervous System (CNS)**. It is a sophisticated command and control center.
- It is estimated that the human brain has approximately **100 billion** (100,000,000,000) **neurons** and each neuron may have as many as **7,000 synaptic connections** to other neurons

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Just as a small sound can trigger an avalanche so can one small flicker of electrical impulses

The Brain... Sand on the Beach

Is like a tiny strobe light, flickering on and off

Producing a **chaotic dance**

No rhythm and no pattern

However, each flicker influences others to flicker


Sometimes they **dance together** smoothly other times separately almost clashing altering the landscape

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Brain Dynamics

The brain is the most complex **DYNAMICAL** structure known in the universe

It is able to process massive amounts of information, develop responses and apply these responses for increased efficiency and mastery.

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"Dynamic refers to change whereas Dynamical refers to changes in how change happens as it is happening"

Val Brown

The Brain Is... Dynamical

The Brain is ever-changing...

Through research we have learned of **neuroplasticity** as the brain's way to **constantly change** and evolve after any damage

Every time we learn something new it is making a structural change in the **brain**

The **central nervous system (CNS)** communicates with itself through the detection of change

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Brain Dynamics

The brain is inherently geared towards general (but not absolute) self-regulation based on information

No need to teach a child the 'Best' way to walk –with experimentation the brain discovers and develops internal balance & a natural gait unique to that individual...

BRAIN PROCESSES AND ASSESSES FEEDBACK (AS INFORMATION) FROM ITS OWN MUSCLES & MUSCULAR-SKELETAL SYSTEM ABOUT ITS POSITION AND STABILITY IN SPACE

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Process Variability

The Brain is...

Infinitely cycling & self regulating

The Brain is...

No ABSOLUTE values that are inherently "best" or the "amount" of activity required for specific functions.

The Brain is...

It always varies from brain to brain, and it always varies with time for that same brain

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The CNS Detects Changes: DIFS

• The Length of Time

Duration

• The Strength

Intensity

• How Often it is Occurring

Frequency

• Results in Personal Transformation supporting general well being

Shift

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WHAT we notice about a HEALTHY SYSTEM...

Flexibility

Resilience

■ The system is **flexible**. It can respond quickly to environmental changes and turbulence.

■ It is also **resilient**, being able to adapt to changes in the ever-changing environment without worry.



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Discussion Questions

Please Take Time and Review

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