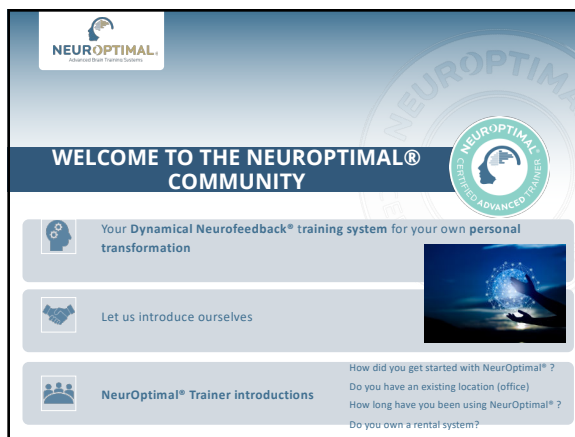




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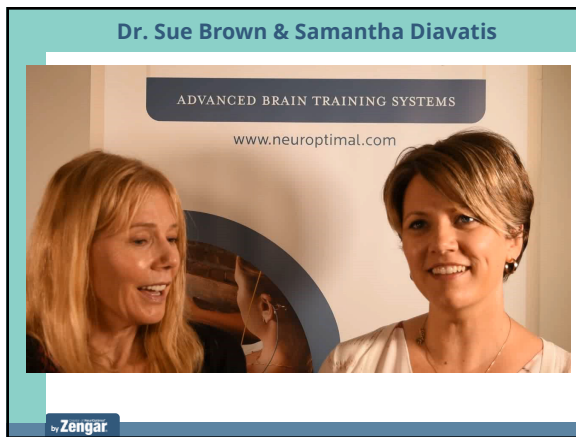
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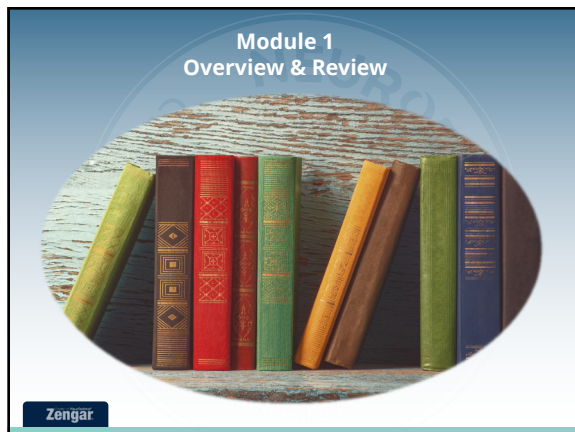
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4



5



1

BRAIN DYNAMICS

- The brain is the most complex **DYNAMICAL** structure known to the universe
- It can process massive amounts of information, develop responses and apply these responses for increased efficiency and mastery.
- **Dynamical**- meaning constantly changing after gaining information about what it just did.

2

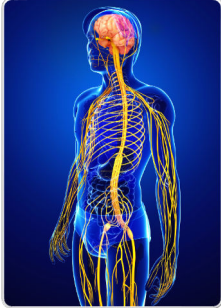
THE BRAIN IS DYNAMICAL

- The brain is **ever-changing**- hence, learning from its own internal & external environment
- Through research we have learned of **neuroplasticity** (i.e., the brain's way to **constantly change and evolve**- necessary for a damaged area)
- Structural changes** are always occurring because the brain is **highly adaptive**

3


WHAT IS THE CENTRAL NERVOUS SYSTEM?

- The Central Nervous System (CNS) - the brain and the nervous system - *communicates through the detection of change*



The Central Nervous System (CNS)


4




BRAIN DYNAMICS

•Geared towards general adaptation but not absolute self-regulation information

•Brain processes and assesses feedback from its own muscles & muscular-skeletal system about its position and stability in space




5





NO BEST WAY TO STAND OR WALK

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



6






PROCESS VARIABILITY

- Infinitely cycling & self regulating
- No **ABSOLUTE** values that are inherently 'best' therefore, we are not moving, nudging, pushing the CNS towards a specific electrical signal of 'balance'
- We know and understand the **brain & CNS will find a place of comfort** when given the information of what it is doing

7



ORDER AND DISORDER

ORDER

~~**DISORDER**~~


8




SIGNS OF A DISORGANIZED BRAIN

- Memory & retrieval
- Poor task performance
- Difficulty sleeping
- Feeling low/sad
- Feeling stressed / overwhelmed
- Feeling "off"
- Feeling less than confident
- Performance & sports anxiety
- Waking exhausted
- Perception of life is negative
- Many more bad days than good days
- Diminished capacity for learning

9



WHAT IS A HEALTHY SYSTEM





- It is a well-regulated system.
- It is a system that is both **resilient** and **flexible**, able to adapt to changes in the environment.


10

AN ORGANIZED BRAIN LOOKS LIKE


- Restored resilience
- Restored flexibility
- Clear minded
- Healthy sleep habits
- More fluid learning/ focus
- Makes better decisions
- Happier overall
- Less reactive / more proactive
- Handles stress better
- Negative talk drops away
- Promotes a healthier lifestyle
- Promotes relaxation
- Effective attention span
- More "on" days than "off"
- Optimal flow and function

11




THE CNS DETECTS CHANGES CALLED DIFS



- Duration
- Intensity
- Frequency
- Shift

Resulting in transformation



12



13

NEUROFEEDBACK 2 BASIC APPROACHES

Linear Neurofeedback

A process uses a software program that measures electrical activity of the brain in **2-methods of detection**

- Amplitude (strength- measured in microvolts)
- Frequency

Dynamical Neurofeedback®

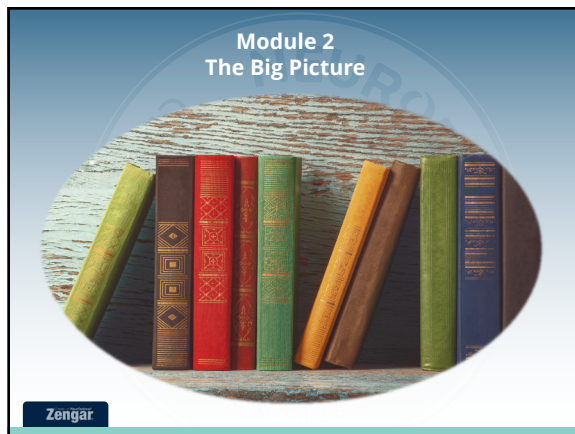
Uses a software program that utilizes **4 methods of detection** to detect the changes in cortical or electrical activity-

- Duration-
- Intensity-
- Frequency
- Shifts

14

NON-LINEAR DYNAMICAL OR A LINEAR PROCESS <small>NEUROOPTIMAL® WAS CREATED FROM A FUNDAMENTALLY DIFFERENT VIEWPOINT THAN WERE OTHER SYSTEMS. UNDERSTANDING THESE DIFFERENCES WILL HELP YOU KNOW WHETHER NEUROOPTIMAL® IS THE CHOICE FOR YOU.</small>		
	NEUROOPTIMAL® DYNAMICAL NEUROFEEDBACK® SYSTEM	OR LINEAR SYSTEMS
Focus	Focus is on restoring brain resilience and flexibility because this naturally leads to a reduction in problems/issues	Focus is on treatment
Diagnosis	No diagnosis is necessary because Training helps your brain find its own best solution	Requires diagnoses
Skill	Expertise is built into the system. No skills are necessary	Requires practitioner skill
Side Effects	No known unwanted side effects	Potential side effects
Effort & Control	Requires no effort or special discipline. Client simply relaxes	Requires effort on behalf of client to consciously train the mind
Process	100% non-invasive. Lets the brain "decide" which corrections work best	Invasive: pushes the brain in a specific direction to achieve correction
www.neurooptimal.com ©2012 Zengar Institute Inc. All Rights Reserved		

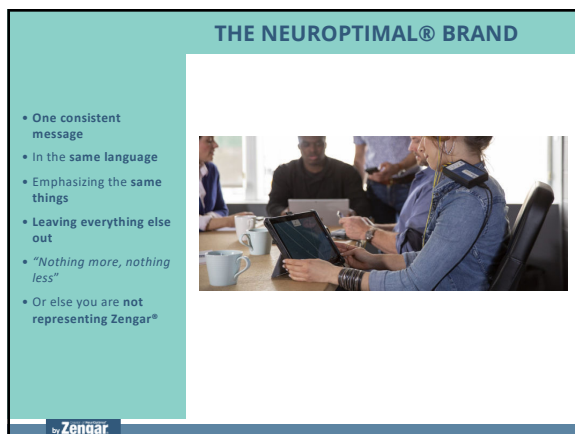
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NeuroOptimal® Terms Reference Sheet

How to use and write specific terms related to NeuroOptimal®


English

Terms to capitalize and always remain in English both in written or spoken format:

Client	Unlimited	Vault
Instructor	Representative	Windows
Linear	Session	AMP
Media Player	Stilus	ZenConnect
NeuroOptimal®	Surface Pro	Zengar®
PNES	Tape Player	Zengar® (referring to the company that created NeuroOptimal®)
Limited	Trainer	Zengar Institute Inc.
	(referring to the license)	


Registered trademarks that should always be capitalized and have a registered mark:

Dynamical Neurofeedback®
 Have You Trained Your Brain Today?®
 I Trained my Brain Today®
 NeuroOptimal®
 Zengar®




NeuroOptimal® Dynamical Neurofeedback® Systems

4



WHAT IS NEUROOPTIMAL® ?



- It is a training not a treatment
- It is a mathematical process measuring the minute changes in the EEG signal

- NeuroOptimal® does not know what diagnosis or what condition the individual has
- It is NOT protocol based

- It is always dynamically changing to the individual attached to the sensors

5



Training vs Treatment

Dr. Sue Brown and Samantha Diavatis



ADVANCED BRAIN TRAINING SYSTEMS

www.neurooptimal.com

6





AS A NEUROPTIMAL® TRAINER

- It is important to talk about the process in the **same consistent language**
- Using terms, we can all recognize as **NeuroOptimal®'s** language

The next few slides will represent how we discuss this **with our Clients**




7


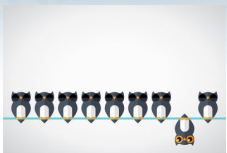
NEUROPTIMAL® IS...

- Is a gentle process.
- Not putting electricity into the brain.
- Benefiting the individual with **subtle changes** that occur naturally at different times for different people. In children it may look like they just **matured**.
- Not uncommon for people to suddenly **feel that they are better but not recognize** when the change occurred.
- This is why we suggest that Clients **track feelings and changes in a journal** to document the process over a period of time to realize how they have "matured" through out the process.

8



NEUROPTIMAL® DETECTS CHANGE

- Change** is a characteristic shared by all living beings
- Change** is the only characteristic **NeuroOptimal®** detects, and is referred to as **'information'**

9




NEUROPTIMAL® IS NONMEDICAL

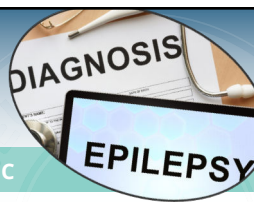
- A **diagnosis** is never necessary
- We do not offer *treatments*
- We do not offer different *protocols*
- **NeuroOptimal®** is not a **therapy**
- **NeuroOptimal®** has no added *stimulation*
- **NeuroOptimal®** does not offer any *entrainment or migration*



10



DIAGNOSTICALLY AGNOSTIC






- Therefore, with the **NeuroOptimal®** process it doesn't matter if the individual has a **diagnosis** of migraines, irritable bowel, anxiety, ADHD, autism or even sleep disturbances.

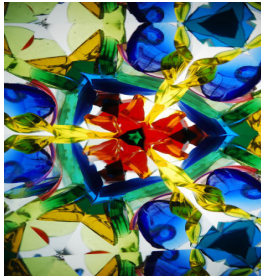


- We will **not** do anything different with our process, the system will mirror the information (change in electrical signal) and the individual will respond.

11



WHAT DOES NEUROPTIMAL® DO?



- Analyzes **shifts** or **flutter** in the electrical activity recorded from the scalp
- Samples data **256 times** per second
- Triggers an **interruption** of sound
- The brain seeks **self-regulation**

12






BECAUSE THE TRAINING IS NOT TREATMENT...

We empower people to return to the intrinsic wisdom and capabilities with which they were born

All we do is present information to the CNS, about what it just did, and the Client's life transforms

Use the Progress Tracking Tools to help them see this and not the "numbers" of the EEG

13

NEUROOPTIMAL® MIRRORS THE CNS





- NeuroOptimal® Trainers don't use states and transitions to change the CNS
- NeuroOptimal® mirrors the CNS to the CNS in the language of the CNS

- Using the language of perception and memory used by the CNS
- Directly communicating to the CNS

- Allowing the CNS to determine the usefulness of the information provided by NeuroOptimal®

14

Turbulence

- That's looking at frequency and amplitude-based methods
- Assessment is irrelevant
- Diagnostically agnostic
- Comprehensive and adaptive training: not "one size fits all" and NOT a "Plug and Play" that assumes it is all the same training.

15

C.A.R.E. MODEL

Comprehensive
Adaptive
Renormalization of the
EEG

CARE

- We simply **give information** to the CNS (Central Nervous System)
- JTFA** (Joint Time Frequency Analysis) is used in the **NeurOptimal®** process- this mimics the method of communication used naturally in the CNS
- Renormalization, **non-linear dynamics**
- Transformation

16





1



NEUROOPTIMAL® IS...

- It is a set of proprietary Mathematical Transforms-

- JTFA and NDS (Nonlinear Dynamical Neurofeedback systems)

- Unique Time-Frequency Envelopes (TFE)

4



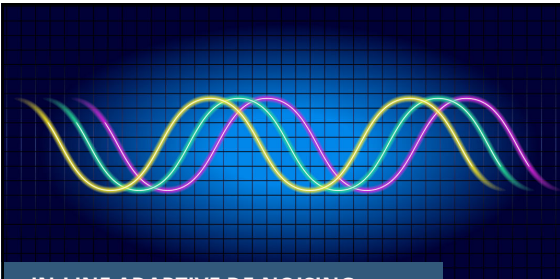
THE ELEGANCE OF CAPTURING THE EEG FLUTTERING

- Using unique, proprietary Time-Frequency Envelopes or TFEs
- NeuroOptimal® can virtually ignore linear measures like power, etc.

- NeuroOptimal® captures EEG fluttering and this leads to
- Interrupts or pauses in the sound

- Heard as "crackling" or "static"
- Informing the brain that it's about to shift

5



IN-LINE ADAPTIVE DE-NOISING

- Line noise is irrelevant - the system filters out the consistent line noise paying attention to only the important cortical data


6




WHAT DO WE MEAN BY 'FLUTTER'?



7




NEUROPTIMAL® DETECTS SHIFTS IN EEG




8

THE BRAIN & INFORMATION


- When the 'flutter' is detected by the **NeuroOptimal®** system the brain notices and adapts/or self regulates by being in the present moment.
- The brain perceives the interruption (at a *non-conscious level*).
- The **interruption** is triggered by the shifts (DIFS) called "information" giving auditory 'feedback'.



9



DYNAMICAL NEUROFEEDBACK®



- This non-linear, dynamical approach mirrors 'information' (changes in electrical activity) micro-second by micro-second
- And then the CNS (central nervous system) can choose to use a new pattern of electrical activity
- Many individualized experiences occur as individuals continue to train

10



FUNCTIONAL TARGETING





- This is how the brain receives the crucial information about itself via the mirroring of NeuroOptimal®




- The 'Dynamic Range of Variability' or fluttering around the different 'Time-Frequency Envelopes' (TFE)



- Allowing for individualized optimal balancing as determined by that brain

11

IT'S ALL ABOUT THE MATH...



- NeuroOptimal® is a set of Mathematical Transforms
- Using the same Mathematical Transforms that Karl Pribram used to comprehend the operation of perception and memory in the Holographic Model of the brain
- Joint Time-Frequency Analysis and Nonlinear Dynamical Systems
- Contemporary neuroscience is still catching up to the elegance and power of that 50+ year old model

12




APPLYING THE SENSORS

- “Improved” sensor placement doesn’t improve training
- This is a direct effect of the JTFA and NDS mathematics that is what NeuroOptimal® is: **nothing more, nothing less**



13



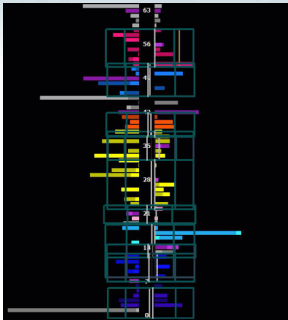
TARGETING WITH TIME-FREQUENCY ENVELOPES

No other neurofeedback system uses the same kind of **targeting**


Time-Frequency Envelopes (TFEs) are not “filters” or “frequency bands”

TFEs represent the fundamental “linguistic structures” used by the CNS during **perception and memory**

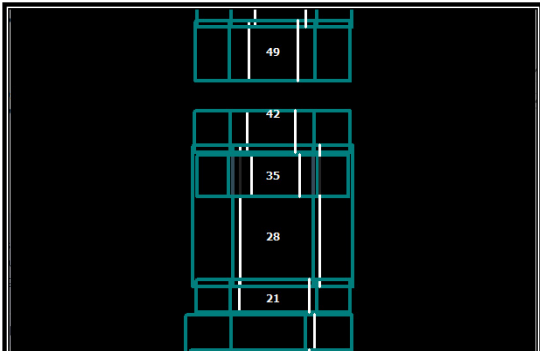
Neurophysiology & neuroanatomy are as irrelevant to NeuroOptimal® as is the location of the CPU in the computer



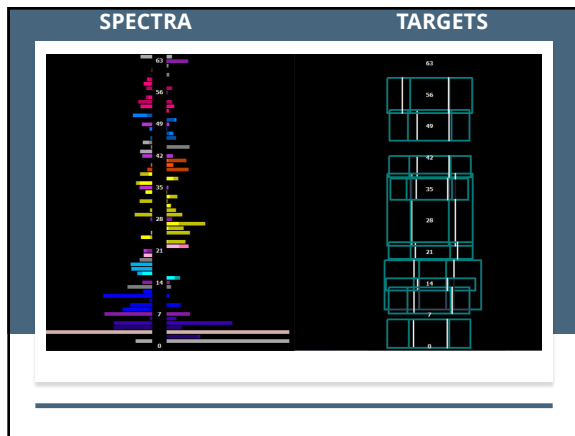
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TARGETS



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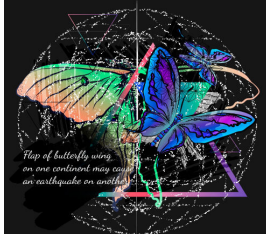


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NEUROPTIMAL

THE BUTTERFLY EFFECT




Flap of butterfly wing on one continent may cause an earthquake on another.

The **butterfly effect** is a phrase that comes from the technical field of the **Chaos theory**.

It represents a condition called **sensitive dependence on initial conditions**. Namely, small variations of the initial condition of a **dynamical system** can produce **large variations** in a long-term behavior of that system.

4

THE CRITERIA AND CHARACTERISTICS OF A NONLINEAR DYNAMICAL SYSTEM



- Sensitive dependence on initial conditions
- Bounded
- Aperiodic
- Responsive to noise
- Multiple, isolated equilibrium points
- Bifurcations and Period 3 behavior
- Sinusoidal inputs yield harmonics and sub-harmonics
- Finite escape time but unstable NDS can escape to infinity quickly

5



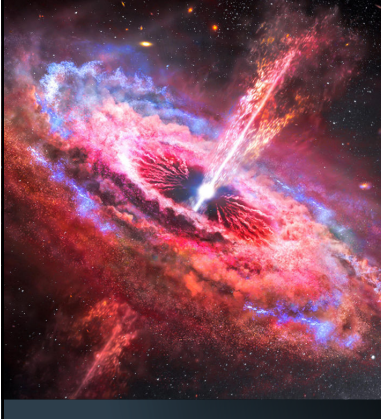
NEUROPTIMAL

SENSITIVE DEPENDENCE ON INITIAL CONDITIONS



- If we are average, we should get predictable results but....
- Truth is a little initial difference can result in a big difference
- Doing the same protocol, results can be very different due to sensitive dependence on initial conditions.

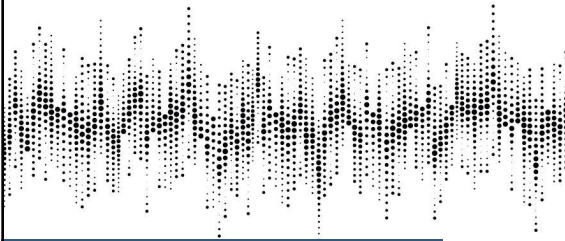
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BOUNDED

- Bounded-
 - Not infinite
 - Every system that's in the real world is actually non-linear but can be bounded in some way.
 - As you get close to the speed of light, things change...Or large gravity sources...

7



APERIODIC

Aperiodic-

Predictably unpredictable

8



NEUROOPTIMAL.
Advanced Brain Training Systems




RESPONSIVE TO NOISE

Responsive to noise-

- Respond to things that are meaningless
- Learning things new
- Do something different
- Why we learn new things



9



MULTI- ISOLATED EQUILIBRIUM POINTS

- Multi- isolated equilibrium points –
- Come back to many different safe places
- Children returning
- Friends' places where things settle down, then change, then

10




BIFURCATION



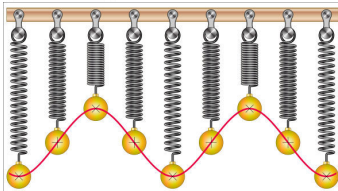
Bifurcations

- Period 3 Behavior-
- Period 3 approach began Zengaro
- Chaotic and nonlinear

11



SINUSOIDS



Sinusoids- / Harmonics

- Used to not be able to look this deep, as we were very focused on certain frequencies
- Now we can see the harmonics generated and better understand that electrical activity is a zero-sum game
- Increasing here/decreased there

12



FINITE ESCAPE TIME



Finite escape time-

- NLDS are real systems, they can blow up!
- Speakers/amp... feedback loop, squeal is the system escaping out to infinity
- Unstable systems can escape quickly.

13



THE FOUR NON-LINEAR DYNAMICAL CONTROL PROCEDURES



- Extrinsic Constraints
- Chaotic Perturbation
- Entrainment and Migration
- Synchronization Through Chaos

14



EXTRINSIC CONSTRAINTS

Extrinsic Constraints

- Block full range of possibilities in the system
- Tie a boat to the dock... constrained the range of possibilities -
- Medications can do this good and bad right?
- NeuroOptimal promotes training of the system to regulate itself, if it is not happening there must be something else constraining them.



15






CHAOTIC PERTURBATION

- Chaotic Perturbation- Never know what is going to happen,
- Hit it with a hammer to fix it!
- An approximate solution to a problem-
- If you are not monitoring the response, you are doing chaotic perturbation



16

ENTRAIN & MIGRATE

- Binaural beats, lights to focus attention....
- Particular stimuli to migrate state of brain-
- Most don't monitor response---
- Most assume all people are the same

17




SYNCHRONIZATION THOUGH CHAOS

Synchronization Through Chaos –


- THIS IS WHAT WE USE with NeuroOptimal®– systems will sync- Clients/patients will synchronize –
- Clocks on a wall will synchronize all in a nonlinear----
- NeuroOptimal® is transformation based on synchronization through chaos, giving information to the CNS about what it just did so that it makes the choice about what to do with that information!
- Not trying for any particular outcome, not pushing/pulling in any direction, simply mirroring information and the mirror is constantly tuning itself

18




Module 5

Back to the Mathematics

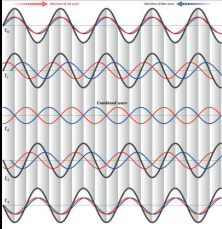


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1




NEUROOPTIMAL® USES JTFA AND NDS MATHEMATICS TO DO THIS...

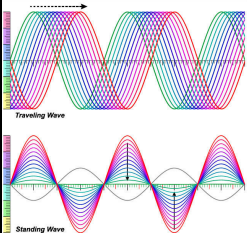


- JTFA - Joint Time-Frequency Analysis
- NDS - Nonlinear Dynamical Systems
- Our unique filtering, targeting and triggering approach integrates with AutoNav to do this
- Our targets “see” EEG and ignore line noise because one is chaotic while the other is highly predictable since it is a simple sinusoid
- EEG and line noise are distinctly different Time-Frequency Events even when they overlap in the frequency domain

2




WHAT IS EEG AND WHAT MAKES IT DIFFERENT FROM LINE NOISE?

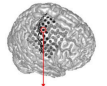
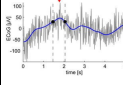
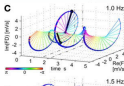
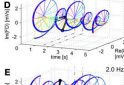
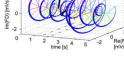


- EEG is a phasor that manifests a “chaotic” trajectory throughout its signal space
- Although generated by various point locations, we only access EEG activity during neurofeedback through the scalp
- These two points hold profound implications for clinical neurofeedback

3




WAIT A MINUTE. DON'T WE WORK WITH BRAINWAVES?

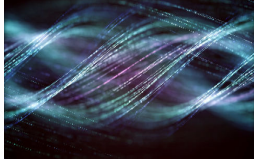
- No, we do not and that's because **brainwaves don't actually exist**
- We deal with **electrical current**, measured by **voltage changes** on the scalp
- The rest is just accounting (i.e., how we **report** or represent those **voltage changes**)
- The **mathematic methods** used make an enormous difference

4




NEUROOPTIMAL® RECOGNIZES THE INFORMATION VALUE OF TIME-FREQUENCY EVENTS AND IGNORES NOISE

- NeuroOptimal® can ignore **line noise** precisely because it is a simple sinusoid, whereas EEG actually is intrinsically **chaotic**
- Now technically **line noise** is also a **phaser**, but it is highly predictable -- always 50 or 60 Hz
- So, **line noise** provides absolutely no information, it just fades into the background being a "wave"
- Information is transformation

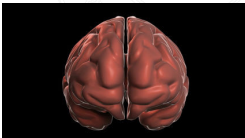


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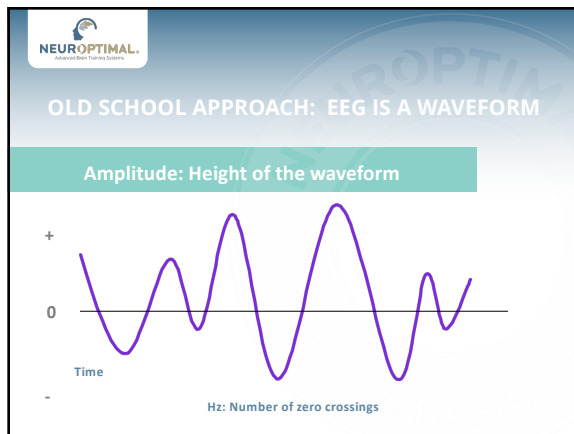


COMPUTATIONALLY IRREDUCIBLE SYSTEMS ARE RESILIENT, FLEXIBLE AND SELF-ORGANIZING

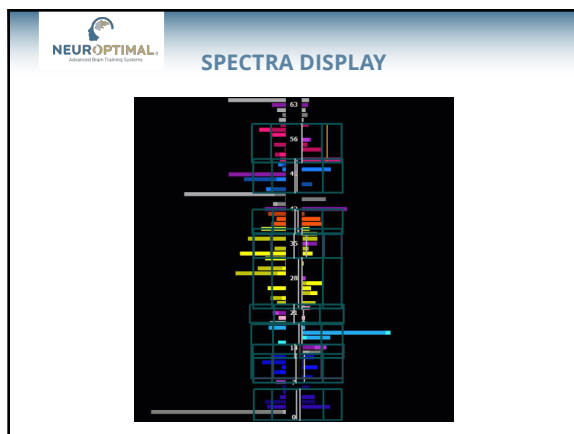
- Disorders are patterns of **redundancies** that are **inefficient** (i.e., reducible) and **ineffective** (i.e., too predictable to be **adaptive**)
- Give information about these **redundancies** as they emerge, and the CNS will adapt by **transforming** and **renormalizing**
- Restoring **resilience** and **flexibility** -- and "symptoms" drop away



6



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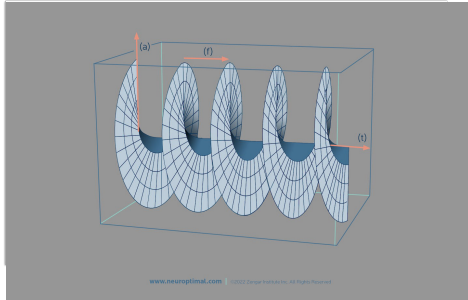


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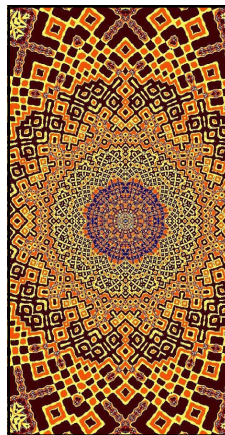


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+ FREQUENCY: "WINDINGS" PER UNIT TIME
 AMPLITUDE: RADIAL LENGTH PER UNIT TIME
 PHASE: RADIAL ROTATION PER UNIT TIME



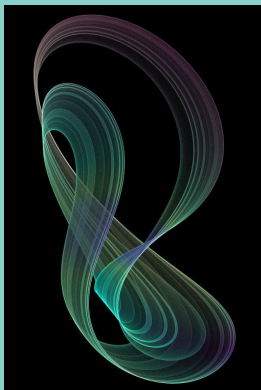
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NONLINEAR DYNAMICAL NEUROFEEDBACK TRAINING

- Iterated Function System (IFS)
- The basic diagram of feedback and simple control processes
- Two or more interconnected feedback systems create a control system
- Time dependent
- This is what makes memory and learning possible
- Criteria of **Nonlinear Dynamical Systems**
- Sensitive dependence on initial conditions: time matters
- Bounded
- Fractal, meaning self-similar through scaling changes

11




Instead of trying
to separate time
and frequency in
EEG,
we can integrate
them...

Zengar

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12




NEUROOPTIMAL® IS ALOT LIKE PLAYING MUSIC & DANCING

- Both involve **time and frequency**
- Both use sophisticated instruments
- Both are based on simple movements or 8 notes
- Yet both are yielding, complex, beautiful, enchanting and create transformative experiences
- Not to mention...Fun!




13




MUSIC IS COMPOSED OF NOTES

Each note has a pitch and duration (*frequency and time*)



14



DANCING INVOLVES MOVEMENTS

- Each movement is composed of a step and a rhythm

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HOW CAN WE CAPTURE THE BEAUTY OF THESE TIME-SERIES?

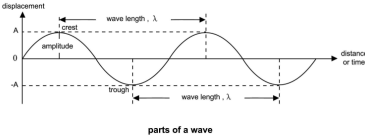
- Musical notation involves notes of various durations in a sequence, aligned vertically to indicate pitch
- Choreography uses figures in a sequence to indicate posture, alignment, intensity, etc.




16



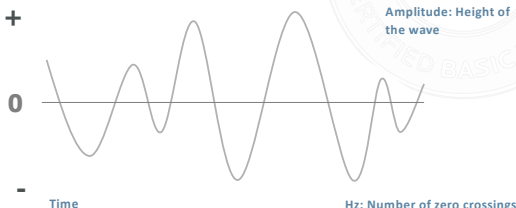
CAPTURING THE BEAUTY OF THIS DYNAMIC ACTIVITY




17



EEG IS A WAVEFORM



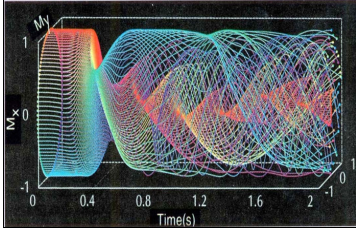
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EEG AS A PHASOR

•When we look at all the activity, we prefer to think of it represented as a **phasor**.


•We describe an ongoing process -- or dance -- of electricity in terms of **time-frequency events**




So, we are **NOT** measuring EEG electrical activity **PER** frequency level, we are measure a phasor of all EEG combined

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19



BUT WHY NOT JUST USE TIME AND FREQUENCY SEPARATELY AS THE BASIS OF THE DESCRIPTION?



Good question, because that's how every other approach does it

Let's consider the path of a car to start to answer this central question


20


CONSIDER A CAR AT REST...

- It has a **position in space-time** that we can specify in a notation
- X for horizontal position
- Y for orthogonal or perpendicular horizontal position
- Z for vertical position
- T for time



21





ORTHOGONAL OR PERPENDICULAR HORIZONTAL POSITION: WHAT'S THAT?


- Think of a map
- Latitude and longitude are orthogonal or perpendicular

- They form right angles to each other
- By the way, so does the Z or vertical axis

- And so, does the T or time dimension, actually form a right angle with the other dimensions...or not?

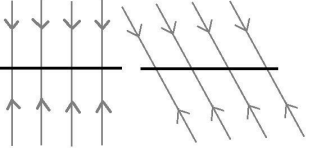
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22



TIME PENETRATES ALL THE OTHER PARAMETERS MUTUALLY

SO, WHAT DOES ORTHOGONAL MEAN?



Orthogonal

Not Orthogonal

- It literally means that two -- Or more -- quantities **do not directly interact**
- Or that they are **completely independent**
- So, is time completely independent of the other dimensions? No, it interpenetrates them all

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MEANWHILE BACK AT THE CAR...



- We have a position $\langle x_0, y_0, z_0, t_0 \rangle$ which is where the car is now -- "0" means initial
- And a position $\langle x_1, y_1, z_1, t_1 \rangle$ which is where the car is next...then $\langle x_2, y_2, z_2, t_2 \rangle$...then $\langle x_3, y_3, z_3, t_3 \rangle$...etc, etc...
- Until we get to $\langle x_n, y_n, z_n, t_n \rangle$...which is where we stop

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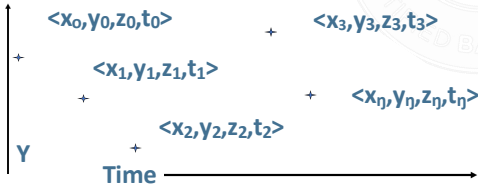
24



THE CAR AS A SET OF POINTS


We can represent this in a graph or a picture

Which for simplicity, will only use two axes: Y and T




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BUT THE CAR PROBABLY TRAVELED BETWEEN EACH OF THOSE POINTS, SO...



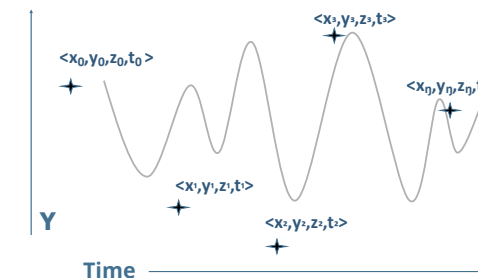
We can look at the car as a time-series (i.e., a sequence of events that occur over time)

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"THE CAR AS A "WAVEFORM"



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27



HOW DO WE UNDERSTAND THE TIME-SERIES MORE SIMPLY?



- In terms of a formula that represents the process in a concise manner...
- Let's talk about some terms first
- We'll use 'X' to represent all of the position components $\langle x_i, y_i, z_i \rangle$
- Where 'i' represents each "step" ... 1,2,3,4...n
- And 'T' will continue to represent time

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THE CAR CHANGES POSITION OVER TIME



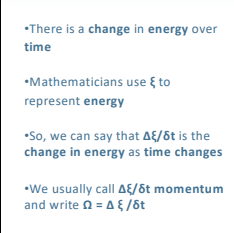
- There is a change X relative to time
- Mathematicians use Δ or δ to represent change
- So, we can say that $\Delta X / \delta t$ is the change in position (i.e., the $\langle x_i, y_i, z_i \rangle$)
- Values -- As time changes (i.e., as 't' goes from 0-n)
- We usually call $\Delta X / \delta t$ velocity and write $V = \Delta X / \delta t$

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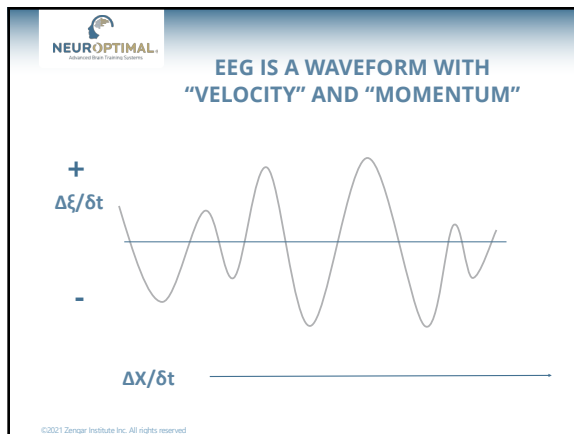
IT TAKES ENERGY TO CHANGE THE CAR'S POSITION OVER TIME



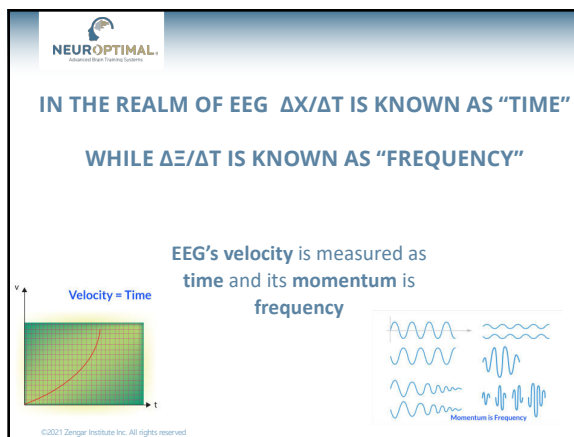
- There is a change in energy over time
- Mathematicians use ξ to represent energy
- So, we can say that $\Delta \xi / \delta t$ is the change in energy as time changes
- We usually call $\Delta \xi / \delta t$ momentum and write $\Omega = \Delta \xi / \delta t$

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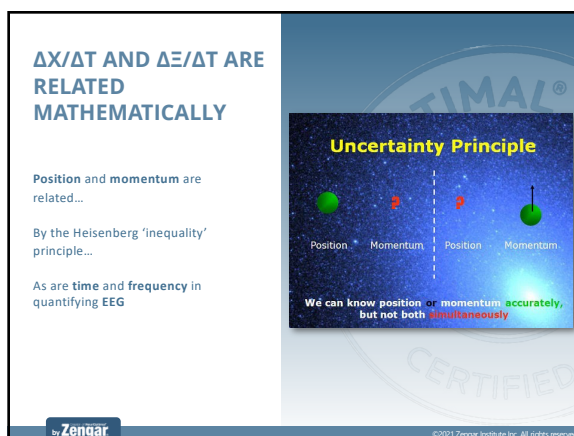
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32



33

HEISENBERG'S PRINCIPLE SAYS:

$\Delta x \text{ TIMES } \Delta \xi \geq \frac{1}{4}\pi$

INEQUALITY


the heisenberg's uncertainty principle

$$\Delta x \Delta p \geq \frac{\hbar}{2}$$


Time and frequency can be specified relative to each other to an **arbitrary degree** not more precise than about 0.78
 So , there is a certainty that there is an inequality

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SO, LET'S LOOK AT THE BEHAVIOR OF A NONLINEAR SYSTEM



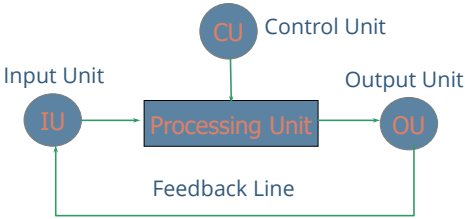
And see what differences there are between 'Time-Based', 'Frequency-Based' and 'Joint Time-Frequency Analyses'

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FEEDBACK SYSTEM DYNAMICS




And this feedback process takes time (i.e., it occurs through iterative steps...)

A control unit drives the process, the process generates an outcome..... Feedback is provided to the input unit and the process cycles

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LET'S LOOK AT AN ACTUAL SYSTEM UNFOLD IN REAL TIME

Lorenz Attractor

three near-identical initial points diverge into chaos

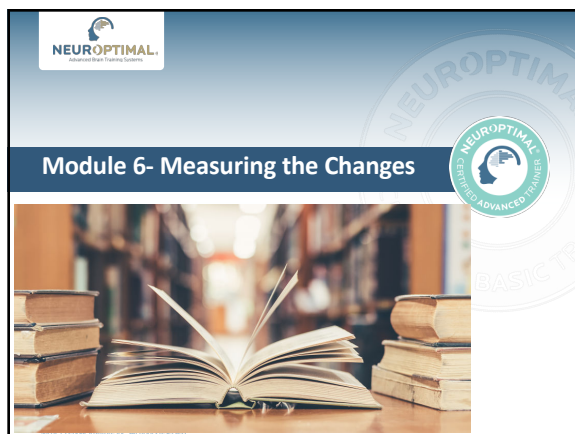
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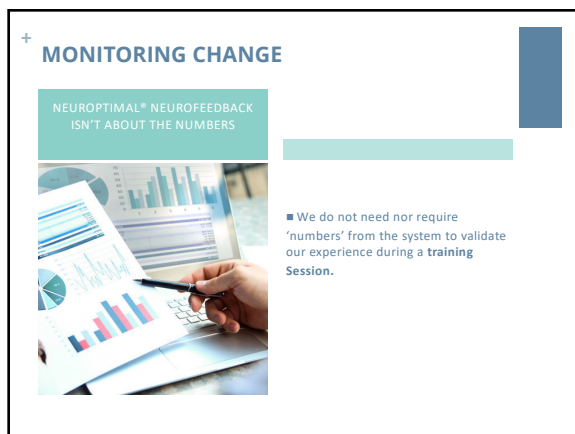
WE CAN
THEREFORE
SPECIFY
TIME AND
FUDGE
FREQUENCY
OR SPECIFY
FREQUENCY
AND FUDGE
TIME

Or at least that's the
way it used to be...

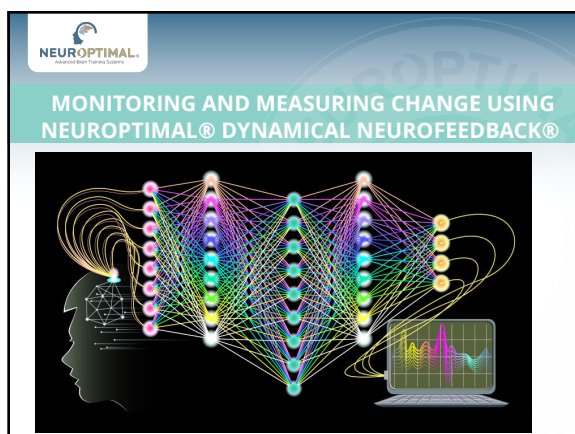
38




1




2



3



ANALYSIS & DYNAMICAL NEUROFEEDBACK®





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4

DOCUMENTING CHANGE



5

CREATING GRAPHS FROM YOUR SESSION IS A LINEAR PROCESS

•No matter what you see in the 'numbers' or 'colors' that is in the Session training, they do not reveal anything that will cause the Trainer to do anything differently within NeuroOptimal® Sessions.

•So, we do not "tailor" the Sessions predicting a change, nor do we look back on a Session and try to 'justify' what happened in that Session.

•Nothing "doesn't work": it's always (information) or feedback the CNS responds to that change in a unique, personalized way

6

'TRACKING TOOLS'

"Analysis Tools" are typically linear. They are used as a method of looking backwards to determine what a Trainer thinks happened and then looking forward and 'predicting' an outcome.

It is confusing when we offer linear 'progress tracking options' for non-linear training process. We do not offer this option in NO3 and highly advise against creating that 'atmosphere' in your location.

Zengar

7

WHAT SHOULD WE USE?


- My Journal Tracking Tools are a method of keeping track of shifts or changes as we experience them.
- Try using terminology like "the more trained a brain becomes the more flexible you will be" versus "You want to see more of this color, this amplitude or this pattern" (the later implies YOU are in charge of their process, and that YOU know more than their intuitive body knows)

8

DR. VAL BROWN~ QUOTES


- "It really is that simple"
- "When in doubt default it out"
- "It's all about the math"
- "A problem is something YOU don't want; a solution is something you do want. What makes it a problem is that you don't want it"
- "A problem in one setting is a solution in another and a solution in one setting is a problem in another- a really good idea to take deep breathe unless you are under water"

9




MODULE 7

SUCCESS AS A NEUROPTIMAL® TRAINER



1




ARE YOU GETTING IN YOUR OWN WAY OF SUCCESS?

What are the signs....


- Always a struggle
- Never seem to be in the right place at the right time
- Money does not flow easily or effortlessly
- Clients are a struggle to find
- As a Trainer your Clients are never satisfied
- You 'hear' the Client is not progressing

2



TRAIN YOURSELF!

1. No excuses... Train yourself!
2. Create a plan
3. Stay involved in the community
4. Follow your own advice
5. Work with a 'mentor', a seasoned Trainer
6. Go through the SORT process as outlined in this course
7. Fear-Based decisions



3



4

MODULE 8

YOUR
RELATIONSHIP
WITH YOUR
CLIENT

1

WORKING WITH CLIENTS


- Empowering the Client
 - **Informed-** Clients need to be **told** about what is going to be done in a **way they can understand**
 - **Consent-** Clients need to **agree** with what is going to be done based on their understanding of what is going to be done

2

INFORMED CONSENT:
ESSENTIAL RESPECT

- Clients choose what, when, how, why and whether they will "do something" or not...
- This is fundamentally respectful and directly empowering
- While simultaneously incarnating a fundamental stance of who is the 'expert' viz: **The Client**


3



CONFIDENTIALITY: ESSENTIAL TRUST

- Clients choose **what, when, how, why** and whether they will "reveal" something or not
- It is **NEVER** necessary to **DISCUSS** any particular content, discuss any particular **ISSUE**, to **FEEL** any particular feeling, to **EXPERIENCE** any particular "STATE", to remember any particular **MEMORY** etc... etc...

4

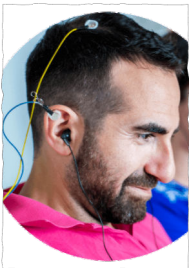


CONFIDENTIALITY: AN ESSENTIAL GUIDELINE HERE

- **YOU** choose **what, when, how, why** and whether you will "reveal" or "do" something or not
- It is **never** necessary to **discuss** any particular **content**, discuss any particular issue, to feel any particular feeling, to experience any particular "state" to remember any particular memory, etc... etc...



5

IT'S SIMPLER THAN YOU THINK...



- Take out the garbage: The **attractors** of **dysfunction, disorder, "stuck-ness"**
- Compassionately support being 'present' interdependently
- The person will **self-regulate**, transform and transcend

6

“ It is not our job to fix anyone,
it is our job to offer the system.”

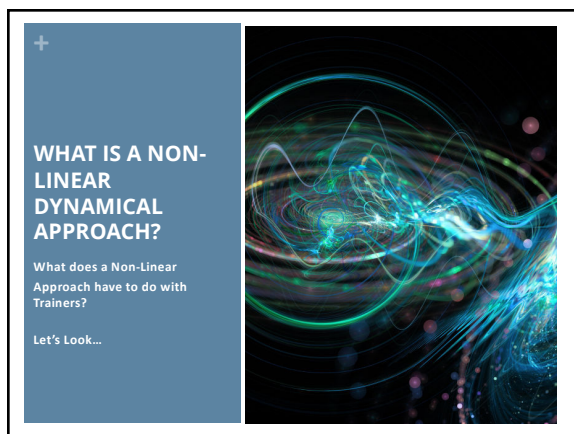
Susan Brown, Ph.D

“IF SOMEONE IS
ANNOYING
YOU...THEN YOU
NEED A SESSION”

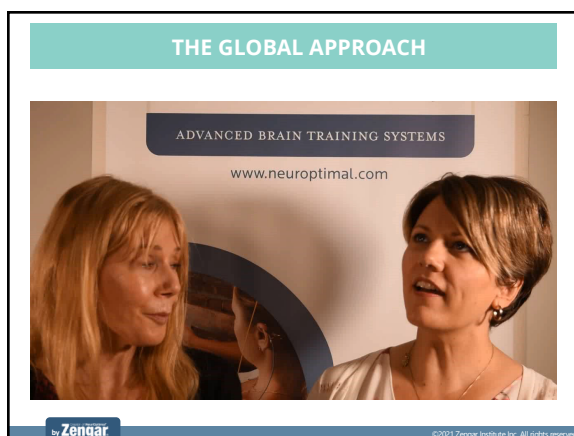
- Sue Brown, Ph.D,
- Co-Founder of NeuroOptimal®
- Dynamical Neurofeedback®



1



2



3

+


NON-LINEAR DYNAMICS IN PERSONAL TRANSFORMATION

PERSONAL

TRANSFORMATION


- A **simple** comprehensive paradigm yielding a unified, **fundamental approach** that works
- The "Importance of an Expert" is not necessary- the system contains the expertise
- Differential diagnosis and **distinct treatments** are not necessary





MODULE 10

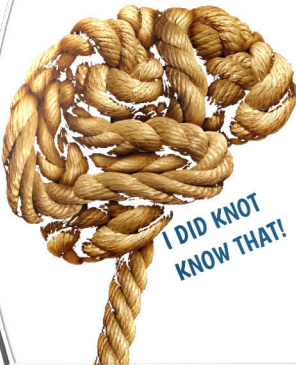
THE 'NOTS' THAT CREATE THE 'KNOTS'



1

UNTYING THE KNOTS

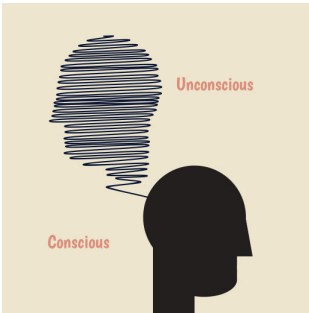
- “I don’t know about...therefore I can’t do”
- A fundamental knot...



2

A QUICKIE: THE UNCONSCIOUS DOES NOT HEAR THE WORD "NOT"

- Consciousness only works on presence and difference
- To "NOT" be here and now, you must BE somewhere else
- When you "draw a blank" it is a literal blank you are actively drawing in your mind



3



A NEW SENSE OF LANGUAGE

•The exact words, tonality, tempo, punctuation et. al of what is actually said is critically important

•This is the exact opposite of what almost every other approach says

•Stay in the actual presentation now of the real live Client who is there

“Words! The way is beyond language, for in it there is no yesterday, no tomorrow no today.”
-Xinxin Ming



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4

+


WHAT IF WE SWITCH “BUT” TO “AND”

•“But” discounts whatever comes before...

- “I **don’t** mean to be rude”
- “Get ready because I’m about to do something that I believe is rude”





5



MODULE 11

LIFE IS CHANGING & TRANSFORMATION





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1



CHANGE LEADS TO CHANGE



Change is a process, not an event.

- Start with a small change...
- Notice the change that makes a change
- Use that as a starting point for further change
- Because the fundamental nature of everything is **CHANGE**

2



THE FUNDAMENTAL NATURE OF EVERYTHING IS CHANGE

To NOT change is impossible and trying to stay the same takes a LOT of effort




Before After

by Zengar


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3




NEUROOPTIMAL.
Advanced Brain Training Systems

THIS MEANS THAT ALL DISORDER REQUIRES EFFORT TO CREATE, MAINTAIN AND CONTINUALLY RECREATE




4



SOLUTIONS AND PROBLEMS

- A **PROBLEM** is something that is **NOT** wanted by **someone**
- Whoever **NOT WANTS** the something is the one who "has" the **PROBLEM**
- Even when it seems to be "caused" by someone else



5



NEUROOPTIMAL.
Advanced Brain Training Systems

RESILIENCE AND FLEXIBILITY ARE ESSENTIAL FUNCTIONS

- Psychologically
- Spiritually
- Cognitively
- Physiologically

- Why? Because these are "not different" from within the purview of the a "non-duality" based spiritual orientation-

- The brain sees the dance of flexibility and resilience as a dynamic process

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6

+ WE WANT QUICK, SMOOTH SHIFTS...



- Within the dance of 'activation-deactivation' in the CNS regardless of its 'state'
- Not attaining a discrete steady state- rather...
- The ability to fluidly 'activate & deactivate' in sync with the environmental demands: i.e., maintaining resilience.
- Rapidly shifting CNS 'states' to most effectively and efficiently navigate reality: i.e., maintaining flexibility

7



THE ORIGINAL FLYING WING IN 1946

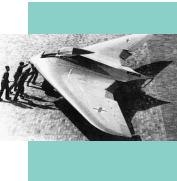


- Notice the **large control surface**
- And counter rotating propellers
- No rudder
- **Inherently unstable**
- Impossible to control
- A **brilliant failure**

8




HORTEN 229 AND ITS BIG BROTHER "AMERIKA"



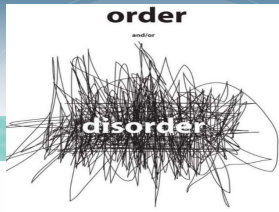
The Horten 229 is part of the Smithsonian's collection
"Amerika" was never built thankfully



9



WHAT IS A DISORDER?



Disorders are repeated sequences of events that are **NOT-wanted** by someone

- * Not letting go of stories or claims
- * Going down the same path (responding the same way)
- * Retelling your same story so that it is now your journey
- * And **Clients** come to you because they **don't want** these things in their lives, and they repeat the same sequence

10



WHAT IS PERSONAL TRANSFORMATION?




Personal transformation is the emergence of new patterns that are desired

- The '**new wanted pattern**' displaces the old **NOT wanted** pattern
- We are doing '**Time-Series Analysis**' of what the Client experiences as yummy & yucky

11



TRANSFORMATION OCCURS IN RAPID SHIFTS...




Personal Transformation Occurs in Rapid Shifts, not in Smooth or Gradual Transitions

"Spurts" of new need to be noticed


- Signaled
- Expanded
- Stabilized
- As the old orderliness of disorder fades

•When this occurs, it is called a 'shift'

12



MODULE 12 – S.O.R.T. THE DIFS



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1

+

LOOK FOR THE DIFFERENCE

“Look for the “difference that makes a difference: a real distinction is change”

Xinxin Ming: “The slightest difference and heaven and earth are set apart...The great way is not difficult. Just give up your “likes and dislikes”

The great way is not difficult for those who have no preference.
When love and hate are both absent
Everything becomes clear and undisguised...
Xinxin Ming-



2



S.O.R.T. IT OUT WITHIN THE DIFS...

This is also known as a S.O.R.T (Solution Oriented Rapid Transformation)

- Solutions instead of problems
- Oriented instead of focused
- Rapid instead of slow or laborious
- Transformation instead of therapeutics a la “feel it all deeply” or “develop profound insights”



3



Each moment of each Session is separate

SOLUTION ORIENTED RAPID TRANSFORMATION (HEALING THROUGH MEETING)

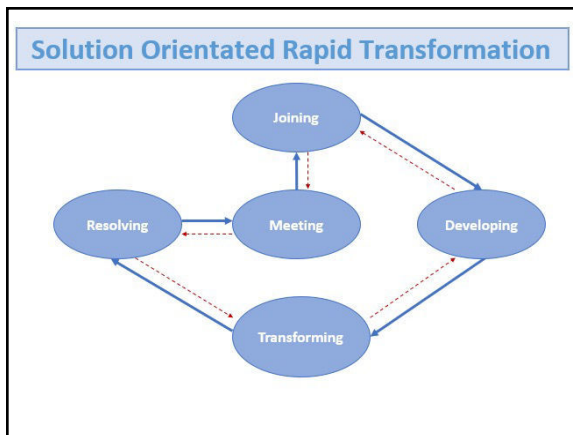
Each moment of each Session is separate and unique

Each Session starts this process over again...this is a fundamental function of NeuroOptimal®

Just as the solution is in the present or else it doesn't even exist

in the
moment...

4



5



MEETING

Meeting:

Listening to their Story...the way THEY tell it

Most people do not listen with the intent to understand; they listen with the intent to reply.

6

+

JOINING

Join their story so the Client feels understood as they understand themselves...Tell me about that" 'building rapport'

7

+

DEVELOPING

You know you have gotten the Client's story-- the problem-- because they follow your lead into sharing the solutions, they know to have worked for them in the past

If the Client doesn't follow your lead, then you haven't joined the Client. Go back to joining to really get their story -- which is always the problem

8

THE "EMILY LITELLA" SHIFT

Head tilt and something like "Oh...that's different" confirms the transformation

If that doesn't happen, transformation hasn't actually happened

Go back and develop the rest of the story or even go back to joining to make sure that the Client will follow you into transforming

In traditional psychotherapy this is called the moment of insight

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9

THE "EMILY LAELLA" SHIFT



by Zengär

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10



TRANSFORMATION

Transformation- Put it all together **their story** – the **problem** – with their **past solutions** and tell the **whole story**

"Oh ok, so there are times in your life when you feel depressed, and there are times where you aren't depressed and when you're not depressed you go out bowling with your friends...What do you think would happen if you just went bowling with your friends regardless of how you feel? What do you imagine would happen?"



11



RESOLVING




Resolving- Solve again the original problem by utilizing the **transformation** that just happened in front of you now.

12



MODULE 13 – PROBLEMS & SOLUTIONS



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1



The Difference Between Solutions and PROBLEMS

SOLUTIONS AND PROBLEMS

A **PROBLEM** is something that is **NOT** wanted by someone

Whoever **NOT WANTS** the something is who has the **PROBLEM**

Even when it seems to be “caused” by someone else



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2



SO....WHAT IS THE DIFFERENCE BETWEEN SOLUTIONS AND PROBLEMS



A **SOLUTION** is something that is **WANTED** by someone

- Anytime you talk in terms of “NOTS” you are engaging in the “**problem talk**”
- And are actively **RECREATING** the problem as you talk about “**IT**”

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3



NEUROOPTIMAL[®]
Advanced Brain Training Systems

There are no **PROBLEMS** in the present...

focus on
problems
solutions

SOLUTION? There is no escape, nowhere to go and nothing to do.

There are no **PROBLEMS** in the present...

Only choices

It's not what happens to you, it's **HOW** you respond that counts


4

WHY IS THE S.O.R.T METHOD IMPORTANT TO US?

- NeuroOptimal[®] is creating the same type of processing in a *mathematical/computerized* method and it is going on backstage starting with the 5 Phase model and moving into v3.5




5




MODULE 14

THE NEUROPTIMAL® TRAINER



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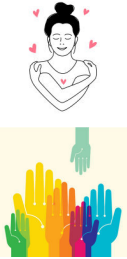
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AS A NEUROPTIMAL® TRAINER

The Trainer will not 'pretend' to 'adapt to' or 'treat' a particular issue

Therefore, as Trainers, we can not accept the responsibility to 'cure' or 'heal' any disorder/issue (nor take credit for any 'self-healing' that occurs.



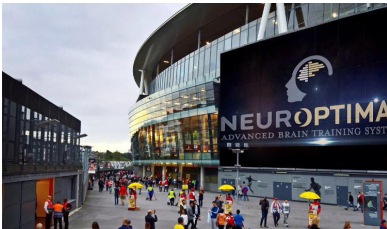
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TRAINER-CLIENT RELATIONSHIP

The professional has a 'location' that requires respectful 'rules' be in place.

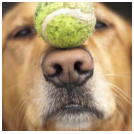

- Paperwork should guide a framework of mutual respect
- Expectations of process
- Tracking Tools (how to notice 'shifts')



3

+

It is easy to ‘fall-into’ the frantic concern of your Client “it’s not working”, ‘symptoms are coming back”, “I am having new symptoms”

CALM ASSERTIVENESS

Start with a small change...
 Notice the change that makes a change
 Use that as a starting point for further change
 Because the fundamental nature of everything is change...

4




WE AS TRAINERS UNDERSTAND...

- Calm assertiveness will support the Client with confidence
- There is no ‘norm’ that is the state to achieve: **nor any other state**
- We are **experiencing** not ‘diagnosing’
- **Everything is feedback**
- So NeuroOptimal® is **NEVER** “not working”
- **Training is not treatment** and we do not give anyone that expectation




5

ASK YOUR CLIENT...

“What needs to **happen** today that will make **you** feel it was **worth** being here?”

“What **makes** something a **problem** is that **YOU** don’t want it”



by Zengar

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6



WHEN ISSUES ARISE




www.neurooptimal.com

Sue Brown, Ph.D., Co-Founder

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7



Myth Busters


Rumor Has It...

Funny how rumors get started...One person thinks they understand how something works and says, "It must work like this" while another says "no, I heard it worked like this", and yet another says, "In my experience it must be like this". Before you know it suddenly, all these funny rumors, inventions and in some cases superstitions, have started and with little to no truth to it! So, I am going to take a moment to dispel a few rumors.



1 Allow at least two nights sleep between NeuroOptimal® Sessions.

FALSE! NeuroOptimal® is so safe that Sessions can even be run twice per day if you want. Because it doesn't push the brain, NeuroOptimal® cannot hurt you nor create side effects.



2 If the spectrograph has a predominant blue color, then add Omega 3 oil or if spectrograph has red dots within it, stop drinking caffeine.

3 You must ease into the process by starting with the Initial Session and eventually graduating to Regular as a process.

FALSE! Start with "Regular" and stay with "Regular", no matter who you are training. Since AutoMw came to be, easing into your Sessions using Initial, 2nd & 3rd is no longer necessary.

4 Migraine headaches need 20 NeuroOptimal® Sessions, while ADHD needs 40 Sessions.

8



FIST EXPERIMENT




Relaxed

Stressed

9

+

Side Effects

we are not putting anything into the brain nor are we taking anything out. We are not 'encouraging specific frequencies to respond differently' than they do, therefore the **NeuroOptimal**® can not, not, be working nor can it create a side effect, as it is the mirror.

Remember walking by that mirror and seeing yourself... not standing straight, but instead you notice you are bent over. You decide to stand up straight and now you feel your back is in a different position and because it is in a new position or a 'different than before position' it might now feel a little achy. It is not because you are standing straight that made your back ache, it is because you are now in a different position and your body 'feels the change'.

The body is always detecting and looking for 'change' even when it is a good change the body notices it. As our body detects change it also adjusts and reorients to that new position and the new change, the transition from detecting to reorienting is what we call a shift, the shifts are usually very comfortable and a relief (release to many) however, occasionally some individuals find change to be difficult and when they notice a new position they see it or feel it as a re-occurrence of old symptoms (probably their fear of a new position) but we don't need to justify that part, just know it happens.

Dr. Sue Brown says, "keep on- keeping on"! I use this phrase over and over! It is only through repetition and consistency of wearing a pair of brand-new shoes that they start to feel like 'our comfortable pair of shoes'.

BLOGS



Start with a small change...

Notice the change that makes a change

Use that as a starting point for further change

Because the fundamental nature of everything is change

10

NEUROOPTIMAL®

NeuroOptimal® Brain Training System

TAKING A PICTURE OF A MOVING OBJECT



11

+

NEUROOPTIMAL® TRACKING TOOLS

My Journal Checklist

My Journal Tracker

MY JOURNAL CHECKLIST

NAME: _____

DATE: _____

PRELIMINARY NOTES: _____

Remember to fill out this checklist before you begin your NeuroOptimal® Brain Training session.

1. Have you been feeling any of the following symptoms for the past 30 days?

1. Headaches

2. Dizziness

3. Fatigue

4. Irritability

5. Anxiety

6. Depression

7. Sleep problems

8. Stomach problems

9. Joint pain

10. Muscle pain

11. Numbness or tingling

12. Blurred vision

13. Double vision

14. Dry eyes

15. Dry mouth

16. Dry skin

17. Itchy skin

18. Allergies

19. Asthma

20. High blood pressure

21. Low blood pressure

22. Heart disease

23. Diabetes

24. Thyroid problems

25. Autoimmune diseases

26. Chronic pain

27. Chronic illness

28. Chronic fatigue

29. Chronic stress

30. Chronic worry

31. Chronic fear

32. Chronic anger

33. Chronic sadness

34. Chronic loneliness

35. Chronic isolation

36. Chronic emptiness

37. Chronic meaninglessness

38. Chronic hopelessness

39. Chronic helplessness

40. Chronic powerlessness

41. Chronic worthlessness

42. Chronic guilt

43. Chronic shame

44. Chronic embarrassment

45. Chronic humiliation

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300. Chronic humiliation


12


4



MODULE 15


THE UNDERLYING PHILOSOPHY OF NEUROOPTIMAL®



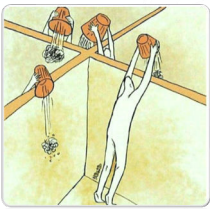


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UNDERSTANDING THE UNDERLYING PHILOSOPHY



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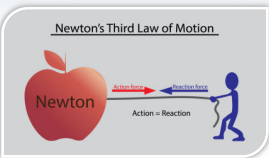


KARMA: THE LAW OF CAUSE & EFFECT

Every action has an opposite and equal effect

- What you sow is what you reap
- Gravity works
- Time exists
- All things come into being, persist a while and then disintegrate
- Dropping an egg will shatter it – and they're VERY difficult to put back together again

Newton's Third Law of Motion



Newton was a good Buddhist

3



KARMA ISN'T A PROBLEM, IT'S HOW REALITY WORKS.
THE REAL PROBLEM IS IGNORANCE

And it's important to remember:


**** Ignorance is ACTIVE... ****

It's not a passive "not-knowing" of something;
rather,
It's an active denying of "what's so".
And that's a primary reason that acceptance is such an
important foundation for

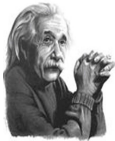


Effective action and personal transformation

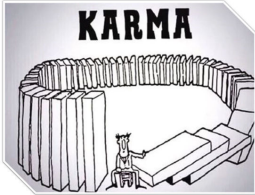
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WE CONTINUE TO EXPERIENCE THE SUFFERING
CAUSED BY KARMA BY DOING THE SAME THING BUT
EXPECTING A DIFFERENT OUTCOME



"Insanity:
doing the same thing
over and over again
and expecting
different results."
Albert Einstein

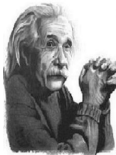


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ABBREVIATION FOR K.A.R.M.A.

- Kontinued
- Affective
- Re-Triggering
- Maintains
- Attachment



We can't solve problems by
using the same kind of
thinking we used when we
created them.
Albert Einstein

6



KARMA:

REPETITIVE PATTERNS OF THOUGHT, FEELING AND BEHAVIOR



- We “**kontinue**” to do the same things
- And those “**same things**” re-create the same feelings they did in the past
- Which re-generates the “**SAME**” reactions
- Which **motivates** our consequent behaviors and the behavior of others around us
- So, we “kontinue” to believe in the “**reality**” of those feelings and behaviors
- Val calls this “going to the Coke machine”

7



WE ESSENTIALLY RE-TRAUMATIZE OURSELVES TO REPEAT THE PAST


“

SAMSARA IS NOT AN EXTERNAL PRISON: IT IS A PRISON MADE BY OUR OWN MIND.

DESHI KELSANG GHATSO

- The **more** we engage in those **same** behaviors, feelings or events, the more we simply end up re-creating them
- By re-triggering the “original” affective experiences we actually **strengthen** them
- This maintains our **lived attachment** to our “story” -- i.e., the story of our self/life/world
- the **more** we work to “overcome” this, the more we directly continue to reincarnate it
- This **circular process** of re-creating is Samsara or the cycle of birth and death

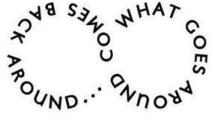
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WE CAN “STEP OFF” THE CYCLE OF BIRTH AND DEATH

Liberation from the cycles of karma occurs through releasing ignorance and coming back to the present.

We literally “wake up” to “*what is so*” – this is the root meaning of Buddha.





9




O.R. IS ANOTHER ACRONYM REFERRING TO THE ORIENTING & RELAXATION RESPONSES

We'll look at each of these in turn and then see how they can be used together to release suffering and promote 'personal transformation' within a comprehensive-adaptive approach to NeuroOptimal® Dynamical Neurofeedback® Training.

10

+ THE ORIENTING RESPONSE




- The CNS detects difference and orients to that difference
- A fundamental psychophysiological process that is critical for preserving safety
- When significance is high, the *Orienting Response* remains robust
- When significance is low, the *Orienting Response* ignores what is not significant – i.e., not significant re: safety and survival

11


+ THE ORIENTING RESPONSE IS ORIENTED TO INFORMATION

- Specifically, the information value of emergent stimuli as possible danger signals
- The traditional perspective is that as "novelty" decreases, the 'orienting response' habituates and extinguishes
- However, diminishing "simple" novelty is not informative, so it is correctly ignored
- Simple novelty is a 'scalar-specifiable' analogue of significant change in familiarity, chosen because it can be easily researched by traditional means



12


+



THE ORIENTING RESPONSE IS ORIENTED TO WHAT IS FAMILIAR

The fundamental information-rich dynamical structure involved concerns the interplay between “what is familiar” and “what is novel”. Because it is **different** from what is familiar”

Disruption of what is familiar- - by something “novel” –allows for disruption of the familiar pattern that creates suffering



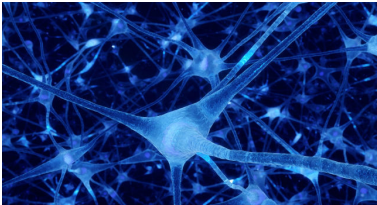
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SIGNALS

■ The orienting response remains salient during neurofeedback BECAUSE we are always working with **personally significant signal sets**, viz the emergent variability of the CNS.

■ Clients come because of their lived, **significant, suffering**, which is reflected in the **emergent variability** of the CNS activity that is captured and actively **fed-back** to the CNS and Client during **NeuroOptimal®** training.

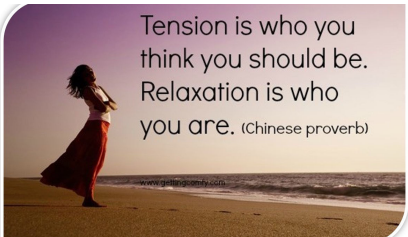


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+

WHAT ROLE DOES THE RELAXATION RESPONSE PLAY?

It's the **integral partner** of the ‘orienting response’ and is what allows the CNS to “**release**” its suffering -- after **perceiving** that there really is **NO CURRENT** threat, despite how the CNS has been **triggered** during the actual **NeuroOptimal®** training



Tension is who you think you should be.
Relaxation is who you are. (Chinese proverb)

15

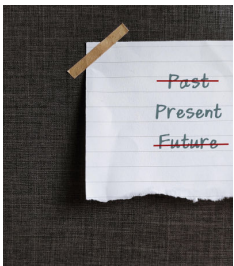




+ ALL WE NEED TO DO IS INTERRUPT THE PROCESS OF RE-CREATING THE PRIOR “TRAUMA”

- We do that in **NeurOptimal®** by interrupting the ongoing audio-visual stream
- Whenever there is a “flutter” in a significant component of the current activity of the CNS

16

+ HOW DOES THAT PROCESS HAPPEN?

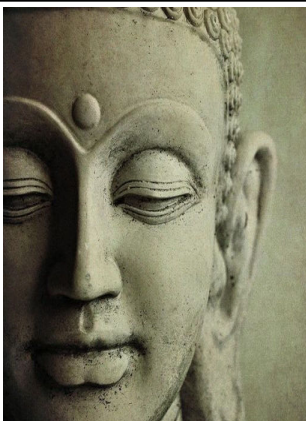
■ The CNS orients to the difference of that interruption and then relaxes into the present as it correctly perceives the lack of a current “threat” to its safety in the current context of NeurOptimal® training

17

+ THE ROLE OF DHARMA OR ~ “WHAT’S SO”

DHARMA

- Disrupting
- Habitual
- Affective
- Re-Triggering
- Maintains
- Aliveness



18



KARMIC PATTERNS RELEASES SUFFERING

+
SIMPLY DISRUPTING THE HABITUAL KARMIC PATTERNS RELEASES SUFFERING

19



NEUROPTIMAL.
NeuroOptimal® Brain Training System

INTERRUPTING THE PAST WITH THE PRESENT IS TRULY A GIFT


When you surrender to what is and become fully present, the past ceases to have any power.

You do not need it anymore.
Presence is the key.
Now is the key.

~Eckhart Tolle~


NEUROPTIMAL
CERTIFIED TO ADVANCED TRAINING
BASIC TRAINING

20




MODULE 16

PRESENCE OF MIND & TRANSFORMATION



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1



be.
here.
now.

"WHAT'S SO"... NOW AND IN THE PRESENT MOMENT

It's really all about **disrupting** the process of recreating the past "trauma" -- The repeating patterns of attachment and ignorance -- and coming back to the present to be with the "what is present" moment



2




HOW TO RE-PERCEIVE IT...

The Glass Is Completely Full:
Half Is Water, Half Is Air

- World view
- Breaking up the story
- "The more we break it into parts the more we obscure what is the case"
- "Take a step back" from the "already given-ness" of habitual perception




3



ALL OF WHAT WE CALL DISORDER IS SIMPLY NOT BEING PRESENT TO "WHAT'S SO"

It is inherently and essentially a way to incarnate ignorance



Without awareness or understanding of doing so -- and this doubled ignorance makes it extremely challenging and entangling

4



WE DON'T HAVE TO WORK THROUGH THE ISSUES -ALTHOUGH THAT CAN ALSO WORK



All we need to do is **interrupt the learned, lived process of re-creating what isn't present**. The **CNS** detects that interruption and then **perceives** --realizing-- that there is no danger, and it **relaxes** back into the **safety and aliveness** of the **PRESENT**

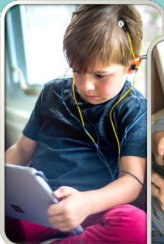

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5

+ TRAINERS, DO YOU WANT TO BE SUCCESSFUL AND UNTIE THE KNOTS?

Listen to your 'internal dialogue'
What are you telling yourself?

Do your own Sessions on a regular basis

Be the 'story' you want others to see...

6



RESTORING OUR INSTRINSIC SELF-ORGANIZING & SELF-REGULATING CAPABILITIES


“When we address the causes and conditions that create suffering, suffering does not arise and, therefore, does not need to be “overcome” or “treated”.

“Our natural, intrinsic self-organizing and self-regulating capabilities work as designed, restoring resilience and flexibility regardless of what originally caused or conditioned the suffering”.


Val Brown, Ph.D.,
Co-Founder of NeurOptimal® Dynamical Neurofeedback®



7



LIFE REALLY IS THAT SIMPLE...



All we have to do is give information to the CNS – about what it just did/about to do and the Client’s life transforms

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8



CONGRATULATIONS!

YOU HAVE COMPLETED THE
ADVANCED COURSE




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9