## Neuroplasticity Dr. Rick Hanson, Joey Remyni and Susan Dunn-Rachleff

Neuroplasticity is the brain's ability to change and be flexible, depending on its environment. Build new neural pathways by using your mind to change your brain to change your mind.

Turning positive mental states into positive neural traits

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'What **fires** together, **wires** together!' Dr. Rick Hanson

Trust your body – it is speaking to you!

- The purpose of each neuron within the nervous system is to transmit a message from brain to body and body to brain.
- These connections occur at the fingerlike tip of each neuron, and the messages are carried out by particles traveling from one neuron to another.
- You decide what you want the message to represent. It could be stimulating a muscle, generating a thought, hearing a sound, or cultivating peace and steadiness.
- All of our sensations are neural messages that travel using this essential process.
- The more they communicate and pass neurotransmitters, the more efficient they become.
- Eventually, these neural processes can become automated and hardwired, no longer requiring much effort or practice.
- What **fires** together, **wires** together!

#### **Creating Neuroplasticity**

Think not lightly of good, saying, "It will not come to me." Drop by drop is the water pot filled. Likewise, the wise one, gathering it little by little, fills oneself with good. Dhammapada 9.122

#### Neuroplasticity is created by the way we neurocept (process) our environment.

- You guide your neurons to move and reshape by repeating actions, behaviors, thoughts, ideas, beliefs, and postures.
- In other words, you create your own neural patterns. If you want to change patterns, you can do so with self-directed neuroplasticity.
- The more you do it, the longer you do it, the stronger those neural settings become, and that is why **MINDSET** and **BELIEFS** are so essential for us in our daily lives and as musicians!
- Our thoughts and beliefs guide our emotions, moods, and behaviors. **Eventually, our states become traits.**
- Medical researchers are finding we play a central role in our own health and capacity to heal.
- One study represented in *Full Catastrophe Living* showed that eight weeks of consistent **mindfulness-based stress reduction practice**, with exercises such as **body scans**, resulted in structural changes to the brain, as was revealed in MRI imaging.
- You may change your brain by practicing a nonjudgmental relationship to your thoughts and sensations.
- These changes to the brain are evidence of neuroplasticity occurring.

#### You Choose Your Reactions

# Our thoughts, feelings, beliefs, and actions change the shape of our brain and create our perception of the world.

- Reality your brain is like velcro for the negative and Teflon for the positive.
- Have you noticed that some people experience horrific trauma but come through it with a renewed sense of empowerment and faith in themselves? They not only survive it, but they experience an enlightened perspective of the world.
- They reshape how they view themselves or others.
- They see the sacred in everyday life, are humbled by kindness, and deeply understand evils and pain.
- They focus on grace and gratitude.
- Their mindset shapes their experiences, moods, and perceptions to benefit themselves.
- They can feel both at ease and inner peace within themselves despite trauma.

Alternatively,

- Some can become victims of everyday life experiences.
- They can blame others for their bad moods or experiences and react with anger, resentment, frustration, and hurt.
- Their perceptions, experiences, and behaviors reflect their beliefs and ideas about what should happen.
- If one reacts aggressively, it is difficult to understand their inner-world sensations.
- They have not yet realized they can change their perspective, shift their interpretation of events, and experience a situation with **a 'no big deal' attitude**.

Neurons can be stimulated to:

- Send chemical messengers of **blame**, **hurt**, **aggression**, **shame**, **guilt**, **frustration**, **anger or**
- Send chemical messengers of calm, connection, gratitude, presence, forgiveness, and ease.
- We can activate our parasympathetic nervous system to assist and calm us or our sympathetic nervous system to activate us!

### **Creating Positive Beliefs**

- The more we believe that we can relax in our body, the more we will feel relaxed, and the more our relaxation neural patterns fire.
- The more we believe we are worthy of love, the more we can feel loved and be loving toward ourselves.
- The more we practice being kind to ourselves, and the more we believe we deserve this kindness, the faster we can heal.
- Chronic stress inhibits neuroplasticity!
- When we stop running away, we create space for neuroplasticity.
- Instead of fighting what we feel, we lean in and kindly support what we feel.
- We go through it without drama or stress.
- We change our neural patterns and return to feeling at ease by approaching situations differently.
- **HEAL**: Have a positive experience. Enrich it. Absorb it. Link positive and negative material so that positive soothes and even replaces negative.

#### Exercises

- How do I go into relaxation response to create a safe internal environment?
- How do I regulate my nervous system? Breathe
- Let Be, Let Go, Let in! What do you set your mind on worries, self-criticism, anger, anxiety, or noticing you are already basically ok seeing the good in yourself and

regularly resting your mind on gratitude and taking in moments of goodness - creating calm, strength, self-confidence, and inner peace.

- Accept what you are feeling. Ask yourself "how do I help myself in this moment?"
- **Have a beneficial experience** Notice one you already have, or create one by thinking of something you feel grateful for.
- Enrich it Stay with it; open to it in your body; enjoy it!
- **Absorb it** Intend and sense that the experiences are sinking into you like water into a sponge, becoming a part of you.
- Essentially, there are three fundamental ways to engage the mind:
- **Be with what's there, experience the experience, and feel the feelings**. Let contents into your awareness sounds, sights, smells, tastes, touches, and thoughts– come and go without attempting to change them in any way.
- **Prevent, eliminate, or decrease what's (pragmatically) negative** softening around it, relaxing, intending, and helping it to release. Seeing through untrue, negative thoughts; letting go of unhelpful, wrong beliefs. Imagery imagine that the negative is floating above and out of you.
- **Create, maintain, or increase what's (pragmatically) positive** noticing, foregrounding, and bringing attention to beneficial "tiles" in the mosaic of experience and thinking of things that call up a beneficial experience. Enrich and sustain the experience. Stay with it, bring attention back to it, and help it last.
- If we think of the mind like a garden, these three excellent practices are:
- Witness the garden let be
- Pull weeds let go
- Grow flowers let in

If you practice appropriately, you can overcome our brain's negativity bias. Be on your own side and treat yourself like you treat your friends - with kindness and compassion.

Your needs and dreams matter!