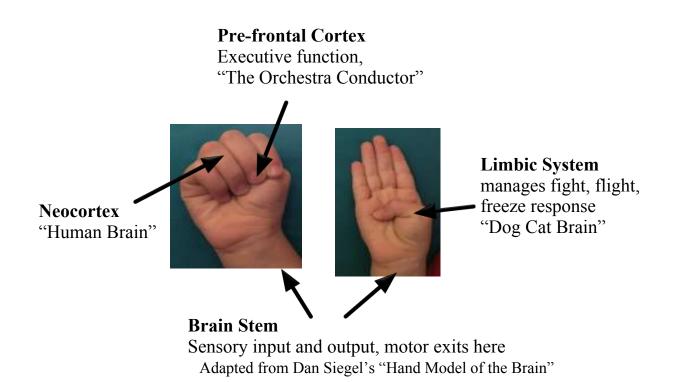
# **Your Brain and Relationships**

Understanding what is happening in your brain and your partner's brain can improve your relationship. The brain is a complex system and just one part of a vastly complex nervous system. This hand model is an oversimplification of a few areas of the brain, but it helps illustrate what is happening inside. Keep in mind the systems of the brain are all interconnected.



#### Similarities in a healthy brains and healthy relationships

The brain systems develop through differentiation and teamwork just like our relationships. Meaning the more we can develop and strengthen the different systems of our brains and the more we connect these processes, the better our brains will work. Similarly, if both partners develop their unique selves, show up, and are good teammates, they will have relationship full of vitality and growth.

The fascinating part is if our brains do not move toward more differentiation and integration of the many systems, our brains can get stuck in rigidity or chaos. The same happens in our relationships. As tension about differences emerge, so do fears. If we shut down or run from these differences, our relationships can become rigid, stale, or chaotic.

#### **Prefrontal Cortex - The Conductor**

A helpful metaphor is thinking about the prefrontal cortex as the of conductor of your brain's orchestra. Using the hand model it is where the finger tips are. The conductor can direct a beautiful, intricate, and flowing song if all the parts of the orchestra (brain) are integrated and strong. If even one section of the orchestra is out of tune or synch, then the conductor may not be able to get the orchestra to produce the music it potentially could. The conductor's ability to get the orchestra back on track is dependent on the musical input that each section orchestra provides.

It is this prefrontal area that makes us human, because it allows us to act with intention and remain goal directed, which is important for providing meaning in our lives. It holds what is called "salience," which means we can decide what is important to us and consider what is important to our partners also.

Sometimes the conductor can regain control and get the system working effectively again. When we use strategies that allow the prefrontal cortex to exert executive control over the lower brain systems, we are using a "top down" approach (e.g., implementing a scheduling strategy).

#### The Limbic System - "Fight, Flight, Freeze Response"

The limbic system manages the "flight, fight, or freeze" response and is depicted in the thumb area of the hand model. This response acts as an alarm system when we feel under threat. There are memories stored in the limbic system which give feedback to the conductor about what is safe or unsafe. We have been creating these memories all our lives to keep us alive and safe.

Unfortunately our partners are often perceived as the biggest threat to our limbic system. Partners may both get triggered and start "thumb wrestling" as referenced in the hand model above when both limbic systems are activated. Sometimes the conductor can calm things down, but sometimes the limbic system is so loud it overtakes the conductor.

At this point, interventions are needed to address calming the limbic system to reset this system out of flight, fight, freeze and back to calm. This resetting will require a "bottom up" approach (eg., repetitive exercise or breathing techniques).

The limbic system is a lower mammal brain and therefore will not respond to a logic-based "top down" approach. These logic-based approaches will only further overload this system. It would be like throwing gasoline on a fire. Thinking about the limbic system as the "dog-cat brain" can be helpful here. Using logic to address an alarmed limbic system would be like trying to help a shivering dog scared of lightening under a table by using words.

Explaining to the dog that the lightening can't get inside the house would obviously not be effective. However, removing the dog from the room so he it can't see the lightening and quietly petting the dog may help the dog soothe in his body, and then he may settle.

Therefore, when we interact with our partners it is important to monitor our body for signs of raw "limbic" emotions, so that we can address these emotions with "bottom-up" approaches. Otherwise these emotions may interfere with our conductor's ability to keep us on our true intentions with our partners.

## The Brain Stem - Sensory input and output, motor exits here

For relationships it is important to be mindful of the thalamus at the top of the brain stem which is depicted by the wrist in the hand model. The thalamus is our sensory relay station. We all have our individual threshold where this sensory system becomes overloaded by too much stimuli. When this occurs, this basic reptile brain system cannot differentiate sensory overload that is just noise from real danger and will direct the limbic system to set off the fight or flight alarm.

Once this occurs, we will find using our conductor to remain intentional with our partners very difficult. Additionally, this sensory overload can impact the conductor directly, which further reduces our ability to respond to our partners the way we intend.

Therefore it is necessary to monitor how overloaded we are by sensory stimuli (i.e., noise, textures, lights, smells, etc.) prior to engaging with our partners. We need to implement strategies to empty our sensory cache prior to engaging with our partners so that our reptile brains don't derail our efforts at effective interactions. Exercise and taking on new sensorimotor activities (eg., art, crafts, musical instruments) can help raise our sensory threshold.

### **Next steps**

Applying this brain knowledge to your relationships can make a positive impact. Please review the attached self-soothe challenge to start applying the knowledge today. You could reap the benefits physiologically and relationally.

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## **Self-Soothing Challenge**

Follow these three steps to experience the positive impact of self-soothing on yourself and your relationships.

### Step 1: Notice and identify your check engine light

Your first job is to notice what is happening in your system. You can think of this as getting to know your check engine light. When certain things happen it is time to self soothe. Be a self detective and add to this list.

**Circle** any of the following that you know to be true when your system is overwhelmed. Write in other things you notice. This is not an exhaustive list. People have unique "check engine lights".

**I know my Conductor is worn out when** ... I can't see the larger picture of who my partner is, I can't prioritize tasks, I struggle initiating tasks, I lose my keys, I have no plan, I start many new tasks at once, I can't stop and see that my partner is different from me, I can't stop repeating tasks, I try to logic my partner when his system is overwhelmed... List any others:

**I know my Limbic System check engine light is on when** my heart is racing, I feel tightness in my body, start thumb wrestling with my partner, attack, withdrawal, blame, yell, feel a racing heart, feel strong emotions... List any others:

**I know my sensory system is overloaded when:** Sounds start to hurt my ears, I physiologically feel trapped, my body is in pain, I feel overwhelmed physiologically, I am hungry, I am tired, I feel sick... List any others:

#### Step 2. Calm your system in the moment

When your system is overloaded it is time to soothe with a "bottom up" technique. **Circle** any of these steps you will commit to doing when you feel overwhelmed for the next two weeks. Feel free to write in your own. Self-soothing bottom up techniques: Take slow breaths, Tap, Do an energy technique, Yoga, Go move your body in some way, Do some Qigong, listen to calming music, learn something new like piano, go draw, color, doodle, sit down and drink water. Others:

## Step 3. Put it all together.

Do steps 1 and 2 for two weeks then think about what you have learned from this brain experiment. How does this impact your understanding of what may be happening inside your partner? Can it help you not personalize their actions or words? Answer the following:

My personal check engine light is (This is how I know I need to self soothe):

My go-to self soothing technique when my body is overwhelmed is: