

## BRAIN PLASTICITY

The brain has about 100 billion neurons, this is a nice round estimate that will be easier to remember than 86 billion, so we can begin here. Neurogenesis is the brain's capacity to create, reorganize and develop pathways and in some cases even, new neurons. These neural networks grow based on input. A child will be receiving more input than a seasoned adult, hence the neural network will constitute greater plasticity for children.

Adults have about half of the growth that children do. A process called synaptic pruning occurs when people do not utilize neural networks. Whereas, new experiences and consistent reuse will create new neural connections. Some people are aware if a child does not learn language early enough, the Broca area of the brain loses its synaptic potency and the ability to have fluid speech is forever gone. Thus, the brain removes unused or weak connections, creating more room for growth of essential connections, prompted by the external environment by which one lives.

This means if we choose to strengthen the brain and the networks we can reorganize and ultimately change the structure of the brain and its pathways for desired outcomes. This is a powerful incentive for elderly, middle aged, stroke victims and many mental health challenges. Donald Hebb a Neuropsychologist, developed an axiom which states, "Neurons that fire together wire together" this has implications for so many positive outcomes, only time will limit what will be learned.

Habits are transformed with therapy, moods are reinforced with experience, life is enriched with practice and the saying "You can't teach an old dog new tricks" no longer applies! While this is simplifying the transformational accounts of neuroplasticity it begins a great discussion for where our own responsibility begins in making dreams come true.

Building on this knowledge, one can strengthen the brain in the direction of choice. Literally the brain structure is plastic, albeit astonishing, also hopeful. If we can rework neural networks in children and focus on healthy attachments, social concerns and love we can begin to soften the dialogue of world racism, greed, genderism, sexual harassment, ageism, and so much more.

How do we reach the heart in school systems that refuse to allow the tenderness of a religious affiliation or a creator? We input charitable deeds, focus on lack and bring it back to our personal experiences. We teach empathy and the heart organ responds favorably too.

In addition of heart responsiveness and brain structure potential, there are biological advantages. The body responds favorably, especially the gut, to positive feedback from these organs. Life thrives as a Neural ~ Synergistic Network, working in harmony for the cause of one and all.

The network may extend beyond our individual selves but this is still not verified. Although it seems plausible, we already know some people exemplify good and pass it forward constantly. Hence, giving each individual the ability to maximize 'good' personal outcomes, creates a feedback loop of benefit to others by default. Helping one, helps the world.

In closing, this is a concern with new genome research. If humans are modified prior to birth for intellect, cultural strengths, attractiveness or some other trait, it will create a bigger division. It is already clear that humans have a keen ability to destroy each other and the elite often use the lesser to achieve goals. Advancing human growth with achievement in mind, rather than peace, surely will destroy the ability to ever live in harmony. If we want success, we have to understand it starts with us and must reverberate to the world. Success is not as narrow as an individual quality.

If I am successful and you are starving, I am lacking, even if I diffuse the responsibility. It may soon come to light that a true Neural~Synergistic~Network is when all humans receive what all humans need. Until then, I will try to keep working on behalf of us all and know if I am in error, I have erred on the side of good.

