

Re-invent Yourself with Neurosciences

Some questions: Can you hear the current noises around you? For example the sound of cars passing by your office or by your home? Are you hearing the voices of colleagues? Can you hear the hum of your laptop or of any other electrical device close to you? How about your heartbeat? Can you hear and feel your heart beating? Just pay attention, focus and listen for a few moments.

The Power of Attention

According to neuroscience, by having shifted and having chosen to modify your awareness some seconds ago, you have changed your brain. It'll be never the same again. Unconscious thoughts that run through our mind daily and repeatedly create a cascade of chemical reactions that produce not only what we feel but also how we feel.

As human beings, we have the natural ability to focus our awareness on anything. It brings everything to life and makes real what was previously unnoticed and unreal.

The more often we focus on something and think of it, the more real it will become. As such we can mold and shape the neurological framework of the self by the repeated attention we give to any one thing.

The continuous Thinking-Feeling-Thinking Loop

The way we think affects our body as well as our life. As such also the lives of our colleagues, team members, family, and friends. You might have heard the phrase "Mind over Matter", meaning that there is a strong connection between mind and body. Your every thought produces a biochemical reaction in the brain. The brain then releases chemical signals that are transmitted to the body, where they act as the messengers of the thought. The thoughts that produce the chemicals in the brain allow your body to *feel* exactly the way you were just *thinking*. So every thought produces a chemical that is matched by a feeling in your body. Essentially, when you think happy, inspiring, or positive thoughts, your brain manufactures chemicals that make you feel joyful, inspired, and uplifted.

For example, when you anticipate an experience that is pleasurable, the brain immediately produces a chemical neurotransmitter called dopamine, which turns the brain and body on in anticipation of that experience and causes you to begin to feel excited.

When the body responds to a thought by having a feeling, this initiates a response in the brain which constantly monitors and evaluates the status of the body. In response to that bodily feeling, the brain generates thoughts that produce corresponding chemical messengers; you begin to *think* the way you are *feeling*:



Thinking creates feeling, and the feeling creates thinking, in a continuous cycle.

This loop eventually creates a particular state in the body that determines the general nature of how we feel and behave. *We call this a state of being.*

You are a Work in Progress

How your nerve cells are specifically arranged, or neurologically wired, based on what you learn, what you remember, what you experience, what you envision for yourself, what you do, and how you think about yourself, defines you as an individual.

Forget the notion that the brain is static, rigid, and fixed. Instead, your brain cells are continually remolded and reorganized by external stimuli, our thoughts, and experiences. The organization of brain cells that makes up who you are is constantly in flux. You are a work in progress. Let's have a look at the principles behind these insights.

Neuroplasticity and Neurogenesis

Today neuroscientists argue that the brain changes in response to every experience, thought, and every new thing we learn. This ability – called *plasticity* – allows the brain to reshape, remold, and reorganize itself well into our adult life.

There was a long-held belief that the numbers of neurons we are born with was fixed throughout our lifetime and that once nerve cells were damaged, they could never be replaced. Recent studies, however, suggest that the normal and healthy brain can repair damaged brain cells and even generate new ones. This process is called *neurogenesis*.

Let's throw another myth overboard!

Until recently, scientific literature has led us to believe that we were doomed by genetics. We should have resigned ourselves to the proverbial thinking that an old dog can't learn new tricks. Forget about it! Multiple researches have shown that challenges can be overcome, that we can change ourselves, if our will and determination are greater than our circumstances. Then we can break old habits and characteristics by releasing the encoded memories of past experiences that may be dated and that no longer apply to our current conditions.

The Concept of Hebbian Learning

On a neurological level every thought triggers electrical impulses in our brain and sends electrical currents to different brain areas. This makes nerve cells (neurons) tie up, form neural networks (clusters of neurons), and communicate. And if these brain circuits repeatedly fire, the connections between them become stronger and more enriched. In neuroscience this concept is called Hebbian learning:

Nerve cells that fire together, wire together.

Various researches have proven that even mental rehearsing alone, i.e. non-physical rehearsing of any task, has significant impact on developing neural networks in the brain. Through ongoing mental focusing we repeatedly fire specific neural networks in particular areas of the brain. We wire those nerve cells together in greater measure.

As a result, with proper mental effort we can change and grow the brain just by thinking. The reason is that the brain does not know the difference between mental or physical effort.

The Mind – Brain in Action

The brain in action is called mind, triggered by consciousness which is the invisible life essence that animates the brain. Consciousness can be defined as the aspect of self, both aware and unaware, both conscious and subconscious, using the brain to capture the thoughts, and then combining them to create the mind. Our conscious awareness is based in the neocortex: The crown of our brain, the seat of our free will. This is the conscious thought center of the brain, where everything an individual learns and experiences is recorded, and where information is processed. You have the ability to be consciously aware of yourself, your actions, your thoughts, your behavior, your feelings, your environment, and your mind, and to express thoughts and ideas.

The neurological Challenge to change

To change and evolve is not a comfortable process. Why is this?

Neurologically there is a sound answer for that. We choose to remain in the same circumstances because we have become addicted to the resulting emotional states and to the chemicals that arouse that state of being. We choose to live stuck in a particular mindset and attitude, partly because of genetics and partly because a portion of our brain (a portion that has become hardwired by our repeated thoughts and reactions) limits our vision of what's possible.

By now we know: We can change (and thus, evolve) ourselves and our brains, so that we no longer fall into those repetitive, habitual, and often unhealthy reactions that are produced as a result of our genetic inheritance and our past experiences. We can achieve it with will and determination. By making a conscious decision in our neocortex. How does it work in reality?

A neurological Roadmap to Personal Change and Growth

Most thoughts are ideas that we make up and then come to believe. Believing merely becomes a habit. Repetitive thoughts might determine – think of computer programs running in the background all day – our lives. The good news: Since you are the one who operates the programs, you could elect to change or even delete them. Curious how to do it?

Step 1 – Understand the Notion that “Thoughts are real“

Acknowledge that your own thinking process directly impacts your health, your life, your management style, and your state of being. It is your own thinking process that defines you and that – if it happened – has gotten you into trouble. Nothing and no one else is responsible for it, bar you and your thoughts which eventually have become your reality. To get out of it, you need to systematically examine your life. You need to convince yourself of the necessity to become inspired and diligent about wanting to change and/ or to better your life.

Step 2 - Fight against the notion that your thoughts are uncontrollable

This is the next, crucial insight you should arrive at. Choose to be free and to take control of your thinking. You need to consciously – as such activating your neocortex – interrupt habitual negative thought processes before they could produce negative chemical reactions. You need to be determined to control and manage your thoughts and eliminate ways of thinking that do not serve you.

Step 3 – Start questioning old Beliefs

To begin changing attitudes start to observe your habitual thoughts – especially the harmful ones – without responding to them, so that they no longer initiate the automatic chemical responses that produce habitual behaviour. Within all of us, we possess a level of self-awareness, which can observe our thinking. To your surprise, you will most likely find out that most of your persistent, negative inner statements might not be true. In other words, just because you have thought, does not necessarily mean that you have to believe it is true.

Step 4 – Step out of Routines

It takes awareness, attention, and effort to break the cycle of a thinking process that has become unconscious. First, you need to step out of routines so you can look at your life. Through contemplation and self-reflection, you can become aware of your unconscious script. Und you will need to modify unhealthy patterns – i.e. destroying old, negative neural networks – in your sub consciousness in order to achieve new, aspired behaviours in your consciousness.

Step 5 – Speculate and explore

In this step it is all about examining and speculating about what kind of person you would like to become. Typically you would ask questions that challenge your most deeply held assumptions about who you are. What if questions are vital to this process, 'What if I am to be?' 'What if I could'? Other helpful contemplation and imagination-stimulating techniques are hypnosis, NLP, CBT, mindfulness and meditation.

Step 6 – Gather information

Gathering information is another important step on the path to reinvention. Take what you know about yourself and then reformat your thinking to develop new ideas of who you want to become. Start with ideas from your own life experiences. Dive into books and movies about people you respect and you admire. Piece together some of the merits and viewpoints of these figures, along with other qualities you are contemplating, and use all of this as raw material to start building a new representation of how you want to express yourself.

Step 7 – Rehearse every day

As you are exploring possibilities for a better way of being and living, you have also learned new modes of thinking. You interrupted the flow of repetitive thoughts that had occupied most of your waking moments. Letting go of those familiar, comfortable habits of thought, you are assembling a more evolved concept of who you could become, replacing an old idea of yourself with a new, greater ideal. To strengthen and enrich the resulting neural networks in your brain, and as such to follow the Hebbian learning concept, you need to constantly rehearse and practice what this new person would like to be. As discussed before, mental – and afterwards real-life practicing – will stimulate the brain to put these new neural circuits in place and to make them an integral part of your evolved personality and character.

At the end of this process, you will be able to summon these new behaviours at will. After all, our thoughts are created from our memories. Our sequential thoughts are linked together to produce our attitudes. The totality of our attitudes creates our beliefs. Our beliefs, when synthesized, make up our perceptions of the world and determine the choices we make, the relationships we have, the creations we manifest, the behaviours we demonstrate, the leadership style we execute, and ultimately the life we live.

From willing ourselves to change, to changing ourselves at will, the process of evolving our brain, and as such ourselves, is limited only by our imagination.

What do you think? What are your experiences?

This article is mostly based on the following literature which I would like to strongly recommend:

[The Mind and the Brain – Neuroplasticity and the Power of Mental Force](#) by Jeffrey M. Schwartz and Sharon Begley

[The Emotional Life of your Brain](#) by Richard J. Davidson and Sharon Begley

[Evolve Your Brain – The Science of changing your Mind](#) by Joe Dispenza and Amit Goswami

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