

# Building a Better You by Building a Better Brain

WRITER  
JASON W  
BIRKEVOLD  
LIEM

**By understanding how neuroplasticity works you can consciously direct it's principles to work in your favour explains Jason Liem**

Evolutionary-wise our brains evolved to think as little as possible. Thinking needs energy. A lot of thinking requires a lot of energy. It was quite an arduous effort for our ancient ancestors to find, track, hunt, kill, prepare and eat on a regular basis as we do today. As a result of these environmental variables it was better for our brains to evolve down the road of forming habits in order to conserve energy.

When learning something new a lot of initial, upfront energy is invested. The payback is our brains have evolved to automate repeated behaviours. This means when we move into a familiar situation very little to no thought is required. How we react, how we feel, and how we think is pretty much on autopilot. Habits allow us to turn learned tasks into automatic routines, so we can focus our attention on more pressing matters such as potential dangers in our immediate environment.

Many of the habits we've accumulated over the years save us time and effort, so we don't have to constantly relearn skills. It is also no surprise to any of us that some of the habits we've developed are road blocks to our growth. As with many bad habits they may have started out as good habits because they served an emotional purpose. Perhaps in grade school you avoided the role of giving group presentations or other situations where you had to address the class. This made you feel safe and the same as the rest of your friends. You developed the habit of avoiding situations of being singled out and leaving yourself exposed to criticism. The habit served a beneficial function back in school.

Since then time has moved on, you have moved on, and the world has moved on. But what hasn't moved on is your habit of avoiding presentations. You may now find yourself with a great opportunity to move into a fantastic job. Instead of jumping on it you hesitate, because you know it requires you to give presentations every now and then. What once was a helpful



habit has now become a habit that hinders you from moving forward.

The fact is our brains are constantly learning from experience both consciously and unconsciously, the majority of it being unconscious. We've always known that the brain has the ability to learn regardless of age, but it is only very recently that science has woken up to the truly deep insight as to what this really means. The challenge is to occasionally step off the automated conveyer-

belt of learning and to be cognizant of how we can use this natural ability to our advantage.

It was not so long ago that scientists believed the brain formed all its nerve cell connections during childhood, and by the time we reached adulthood everything was pretty much hard-wired. The belief was if the brain was injured by disease or trauma the nerve cells could never form new connections and would never be able to regenerate, and so any functions controlled by that part of the brain were permanently lost.

We now know that the brain can and does change throughout our lives. The research unequivocally shows the brain continues to reorganize itself by forming new brain cells as well as new neural connections throughout the entirety of our lives.

This game-changing property is called neuroplasticity. Neuroplasticity is the property of the brain that allows it to change its structure and function through mental and physical experience. Neurons can adjust their activity in response to changes in the environment, to new situations and to compensate for injury.

If you think back 10, 15, or 20 years ago your thoughts and behaviours are different from what they are today. The way you think now as an adult is different to how you thought as a teenager. This is neuroplasticity in action. Your brain reorganizes and adapts based on what you experience and learn.

With each new thought you begin to create a new neural pathway. This is analogous to walking through a field of tall grass. When you look back you can distinctly see the path you've taken. The grass is bent and broken where you have trodden. If you continue to take the same route through the field it will eventually become a well-formed path. This is no different with the brain.

Every time you repeat a thought or an emotion you reinforce a neural pathway. Over time you become more efficient, more adept and more skilled at playing the guitar, swinging a tennis racket or speaking a foreign language. It becomes automatic and forms a fixed pattern of behaviour. These habits of thought and action become a part of us. We literally become what we most consistently think and do. In essence, neuroplasticity underlies all learning.

Winston Churchill is often quoted as saying, "Those that fail to learn from history are doomed to repeat it". From the perspective of the brain, by simply recalling a specific event from our past we activate a neural circuit in the brain whereby it enters into a malleable

state. This means the activated circuits are in a state where they can be rewritten so they're no longer unhelpful, unadaptive and inflexible but instead helpful, adaptable and flexible. You can literally learn from your past and use the principles of neuroplasticity to physically rewire the brain from being fixed in thought to being fluid in thought.

The important idea is that the brain has not evolved to stay in a static and unmodifiable state. Rather it's always a "work-in-progress". The brain is continuously learning, adapting, and changing consciously and unconsciously in response to what you attend to and what you experience.

On a conscious level we are mindful of our actions and where we place our attention. For example, when you learn to play an instrument, memorize the lines in a play, or comprehend the key principles behind a scientific idea. In this conscious state, we are directly and actively shaping our brain to how we want to develop and grow. We use the process of neuroplasticity to our advantage.

There are two major ways neuroplasticity works to shape the structure and function of your brain. The first is the direct interaction you have with the external world. For instance, when you find yourself staying at a hotel in a city you've never been to before. You will venture out to find a restaurant, see a famous site or visit a museum. Your brain automatically maps everything.

Piece by piece you begin to have a better idea of the street layout, where the decent cafés are located, and the shortest route to the subway. Your brain is literally being shaped by your mental, emotional, and physical experiences with your new surroundings.

The other major way neuroplasticity shapes your brain is through your thoughts. The famous French philosopher and mathematician Rene Descartes wasn't far off with his words: "I think therefore I am". What you consistently think has a direct impact on how your brain develops. Your thoughts determine how you

feel and behave. You can literally re-engineer the structure and function of your brain by changing your thoughts. This means the words you think and the images you consistently recall in your mind directly and physically rewire your brain.

One of the principles of my conversations with clients is about learning to walk into the storm. This means that in order to create the necessary changes you want it's imperative for you to face your fears; whether it is the dread of public speaking, the fear of being more assertive at work or the anxiety of coming to terms with a bad event.

When you walk into the storm of your fears you activate the specific brain circuits tied to the event. In doing this you put those particular circuits into a malleable state where they can be reshaped with new connections. The fact is every time you recall a memory it inevitably changes and morphs and is recoded as a different memory. It is influenced by who you are today and how you see the world.

With that said, it's important to note that neuroplasticity is a brain mechanism that is neither good nor bad. Its principles will function based on any type of learning or experience. Neuroplasticity can work for you in many incredible ways, but it can also work against you by forming harmful habits or dysfunctional thinking.

In order to use the principle to our advantage we need to concentrate our efforts on self-directed neuroplasticity. By understanding how neuroplasticity works you can consciously direct it's principles to work in your favour. You can take measures to correct the runaway negative forms of plasticity while at the same time enhancing the positive ones. You can literally build a better you by building a better brain.

#### *about the author*



Jason W Birkevold Liem helps people to think about their thinking so they are better at managing themselves, others and situations. He achieves this through an informative and engaging process that educates people about the brain, cognitive psychology and interpersonal communication. As a result, clients are better able to face their professional and private challenges with more confidence, certainty and clarity. Through his company, MINDtalk, he designs and delivers brain-based leadership and personal resilience programs to individuals and to teams. Learn more at [www.MINDtalk.no](http://www.MINDtalk.no)

