

## Six Insights Into the Brain

### 1. The brain is a connection machine.

Every thought we have is not contained in one key area of our brain but is a map created across different areas of the brain.

Take the concept of a banana. You have a mental image of a banana based on many experiences of them over your lifetime—the smell, the taste, your mother’s banana cake, holidays in tropical regions, monkeys at the zoo, and over-ripe bananas. In other words, the concept of a banana exists in many different maps in different parts of your brain, and they all connect when you think of a banana.

We create millions of maps every second! With so much going on inside our brain, it behoves us to keep things simple.

Things go along pretty nicely for us until we encounter two maps that don’t quite connect. Different maps give us conflicting messages and make conflicting demands for resources. This conflict creates something called a mental impasse, or a dilemma.

We are all familiar with mental impasses—in fact, we all probably have our favourite dilemmas that our minds tend to run over again and again. They are like the “Greatest Hits” of today, of this month, of all time.

A mental impasse is a bit like being given two sets of directions to get to a local restaurant. One has you turning left at a certain point and the other has you turning right. You want to get to the restaurant, but you just don’t know which way to go. You have no way of making the decision since the two maps don’t fit together.

In this scenario, the impasse can be resolved when you realise that one map is older than the other. You are then able to make a decision and move forward with ease.

When we solve a dilemma and two maps connect, we create energy. Making connections creates a huge buzz. In coaching, we call this moment an *insight*. A lot of what coaching does is helping people think through mental impasses and connect their maps more easily.

## **2. Up close, no two brains are alike.**

Our brains have many more differences than similarities.

In a scientific study, six different brains were scanned at the same cognitive moment. They were all thinking about exactly the same thing, but the colours and shading showing the parts of the brain that were activated were very different!

The colours and shadings showed the parts of the brain activated in this one moment of thinking, and there was no clear pattern across the six individuals as to which part of the brain was activated. And this was just when their brains were thinking of one very simple word or concept!

The reason for this variation is that we are all hardwired by experience, at a million-plus connections per second. If you imagine the brain as a map of a neighbourhood, our genes put in place all the houses, but experience connects the houses with roads, power, and phone lines.

Although, at a macro level, our brains are the same (for example, we have similar areas that activate for lifting a finger, speaking, etc.), when it comes to thinking (i.e., accessing networks of meaning), we're all different.

This fact is huge! Up close, our brains are very different, and yet we live as if everyone's brain is like ours. There is absolutely no way to work out how someone else's brain thinks through things. It's a bit like trying to go into someone else's laptop to find or create a file—it's much quicker if they do it themselves.

We tend to live as if the best thing to do is find solutions to problems for other people—as if our brain knows the solution better than their brain! Giving people the answer results in only one thing: Their brain will argue with ours.

So, the second insight is that no two brains are even remotely alike. We all think completely differently.

### **3. The brain hardwires everything it can.**

Broadly speaking, there are two parts of the brain: working memory and long-term memory, the conscious mind and the unconscious mind.

Working memory doesn't really hold very much, only about seven items at any one time. Long-term memory holds everything we actually know, which basically means anything that we don't need to think about anymore.

Our brains are designed to push things down into our long-term memory to keep our working memory from overloading.

Taking on new learning is hard work and consumes a lot of effort and resources because you're constructing new hardwiring. Every time you do something a few times, you are constructing hardwiring.

Once you have learned something, however, you don't have to actively think about it anymore and it becomes easy. This is the brain's way of being efficient.

For example, if someone has been leading in a particular way for some time, they now do it unconsciously because that's what their brain wants. That also means that they will need to invest in building new hardwiring to learn to lead in a new way.

One final point is that the brain hardwires everything, without knowing whether it's useful or not.

#### **4. Our hardwiring drives our perceptions.**

The information stored in our long-term memory becomes the basis for how we view the world and create new learning. We perceive the world around us based on our own unique experiences and what bits of information we have stored in our brains from these past experiences. Thus, our reality is our interpretation of the world based on the way our brains have been wired.

Driven by our wiring, we believe that the world is a certain way, and we will make the world fit in with this picture. The brain literally draws on itself to make sense of things.

Every brain sees the world differently based on its hardwiring—but we can override this hardwiring and consciously influence our perceptions.

Jeffery Schwartz and Sharon Begley write in *The Mind and the Brain*, “[Mental states] can contribute to the final perception even more powerfully than the stimulus itself.”

So two people can be right on the same topic and yet think very different things. Your reality is exactly that: yours! Not anyone else’s.

## **5. It's practically impossible to deconstruct our wiring**

It's an attention economy in the brain. Anything we give focus to can become hardwired (remember, the brain works hard to get things out of short-term memory and into long term-memory so it can use up fewer resources).

Therefore, the more we focus on a given connection, the more we deepen that connection. In fact, what happens when we try to get rid of some wiring is that we actually think about it even more, thereby making it even stronger.

It's almost impossible to get rid of old wiring just by thinking about it. For example, if you are told not to think about smoking, you immediately think about smoking. The more you try not to think about smoking, the more your brain will tend to focus on smoking. This increased focus tends to deepen the wiring even further, rather than erase it.

Getting some basic awareness of an issue is certainly helpful, as we need to know what our wiring is, but once we know there is an issue we want to change, changing the issue requires a different approach as we try to deconstruct it. There's no point working out why it is there, how it got there, or where it comes from: There's a much easier and faster way to change.

## **6. It's easy to create new wiring.**

Luckily, it's almost effortless to create new wiring. It's what our brains are designed to do. We reconcile dilemmas by creating new maps in a moment of insight.

With enough attention and positive feedback, our new maps can become new hardwiring. This new wiring can come from ourselves or others. When we are given the opportunity and encouragement to reflect, we deepen our wiring.

Building new wiring doesn't get rid of the old wiring, however. The old wiring is still there; it's just not being used so much, sort of like a paved road that eventually disintegrates over time from lack of use. The phrase "Use it or lose it" is very relevant here.