What about the brain?

#BrainHapps

Understanding how the brain works is possible thanks to neuroscience - the scientific study of the nervous system, with a specific focus on the brain and its impact on behaviour and cognitive functions. Using technology (such as fMRI) to discover and validate how our brains work, neuroscience has provided us with some amazing information. While there is so much more to discover, the evidence is compelling and, significant for business.

Just a few snippets from an enormous catalogue of research:

The brain has a simple survival principle - to minimise threat and be on the lookout for reward

At the most basic level, the brain is designed to keep us alive, so it is first and foremost constantly on the lookout for threats to our safety. Because of that, it defaults to the negative, then it looks for ways to make us feel good, happy and safe. There are however some important things we need to have in place in order to feel this way:

- **S**ocial connection
- **P**redictability
- **A**utonomy
- **C**ategorisation potential (incoming information that makes sense)
- **E**quality
- Food, water, shelter
- The right amount of rest

SPACE

If any of these are absent, the brain sees the situation as a potential threat. If any of these threats persist, it can lead to a stress response.

Getting the picture?

Our brain was designed for a time when sensing threat or danger was critical for survival. Those threats were very different to the threats we encounter today however the brain still responds the same way.

There are two main modalities within the brain – conscious and non-conscious

The non-conscious brain runs mainly on instinct and learned or repetitive behaviours, and goes about its work 24/7 most often without us even being aware of what's going on. For example, the brain supports unconscious thinking by replaying information without us knowing it…this can be dangerous at times.

This part of the brain is known as the limbic brain, often referred to as the 'primitive' brain. It is the limbic brain that scans for threats to our safety and can cause us to fight, freeze or run in the face of danger. It makes up 96% of our total brain.

The brain is lazy – the limbic brain likes to automate (hard wire) everything it can to conserve energy. It has a preference for patterns and habits, and gets easily addicted to the same way of doing things. So while it goes about convincing you that inner change and improvement is occurring, it stealthily continues with the same old thinking, the same old patterns, the same old habits.

It *is* possible to change the hard-wiring in our brain (create new habits) by doing a few things:

- self-regulating or inhibiting certain thoughts, feelings and responses
- increasing our focus - the more focus we give something, the more we deepen the relevant circuit in the brain
- consistently and regularly repeating the new behaviour

The subsequent change in hard wiring you can affect is what is known as 'neuroplasticity' i.e. the physical changes that take place in your brain as you adapt to a new way of thinking and doing.

The part of the brain that *enables* 'neuroplasticity' is the prefrontal cortex (PFC), often referred to as our *executive* brain (or the rational, cognitive brain). This is the part of the brain that allows us to make judgements, have creative thought, plan, make decisions, solve problems and so on. It keeps the 'primitive' brain in check by putting the brakes on destructive thoughts, feelings and habits.

The bad news is, the pre-frontal cortex only makes up 4% of the brain and requires a lot of resources to enable these cognitive processes to occur. If you are fatigued, not eating or drinking appropriately, or experiencing stress, it is highly likely you will not have the energy/PFC resources to keep your limbic brain in check.

The brain can only handle 3-4 pieces of information at any one time – it likes us to work on one thing at a time because it finds it difficult to commit something to long-term memory when attention is divided across a number of things.

The brain doesn't support distractions, interruptions or multi-tasking and it can't be "on" all day at work.

The brain doesn't know the difference between what's real and what's imagined or perceived to be true

What we focus on is what sends our brain into action. Focusing on something negative could send the brain into a threat state. Receiving praise for a job well done could send the brain into reward.

Every brain is unique – no *one* course of action fits everyone, no *one* piece of information is interpreted the same way by everyone who hears it, no *one* benefit or reward has the same value to everyone.

Every brain is structured according to genetics, parenting, school, culture, situations and circumstances encountered along the way – it is constantly changing its structure but it remains uniquely different for every person.

With this sort of insight into what makes us behave, act and respond the way we do at work, there is much business can do to ensure it provides brain-friendly environments for people to work in.