

No head for decision making?

The neuroscience of distorted decisions and how to avoid them

We all know that in leadership roles making decisions is an essential skill. Good decisions lead companies to good places and bad decisions may ruin good companies. We all know this. But what lies behind the decision-making process is the brain

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The brain processes information in certain ways and has certain biases. Recent research has shed light on the myriads of different ways and the multitude of processes that are ticking away in the recesses of our brain's unconscious machinery deep inside our heads. Looking at these not only highlight where many faults in decision making lie but also help shine a veritable spotlight on areas of danger that can boost our awareness and give CEOs and leadership teams tools to help make better decisions.

There is now a sea of research that shows how our decision making is influenced; these influences range, I read in a recent article, from how having a full bladder can influence long-term decision making to which parts of the brain activate in risk-taking tasks and how body language can also influence our brain.

Here a very, very brief journey through the neuroscience of decision making:

Distorted decisions

Emotional decision making may sound like something to avoid but brain science in recent years has shown the importance of emotions in the decision-making process – and the dangers.

We can think of the brain as having three different layers: 1. The brain stem where our survival functions reside, living, reflexes and basic instincts. This is at the top of the spinal cord and lies deep inside our brain and is in evolutionary terms seen to be the oldest part of the brain.

2. The inner-cortex, sometimes known as the limbic system, which surrounds the brain stem and is where most of our emotions are processed, where our memories are consolidated and where many other simple instincts and drives such as reward and pleasure are registered. 3. The outer cortex, the outer layer of the brain where our higher functions reside including many sensory functions such as speech and sight.

We now know that the different layers of the brain work in unison and indeed that the inner workings of the brain control the outer workings more than we previously believed. More surprisingly we know that damage to the amygdala (our emotional processing centres – the name will come up again) will send our ability to rationalise haywire. This may sound contradictory but we need to bear in mind that to deal with our environment which revolves around people in contexts designed by people, we need to balance emotions and our experience (memories) of dealing with people. Emotions are therefore essential to the decision-making process. Additionally, a piece of research has also noted that boosting emotional intelligence can boost deductive decision-making ability, something we would normally consider a cold unemotional task.

Fear and anxiety cause distinct patterns in the brain which will dramatically distort the decision-making processes. Indeed fear is one of our prime survival instincts

and hence takes priority in our emotional centres, the amygdalae. These two almond-shaped centres sitting one in each half of the brain, left and right, can cause massive disruption. So what happens in the brain and how does this affect your decision making?

If our amygdalae fire up with fear, a few other key areas are directly and immediately impacted. First the frontal lobes of the brain, our rationalising and planning centres, are inhibited. This simply means that with increased fear the less rationalisation we have, and the less planning ability also. Obvious if you take a moment to think about it. As the proverbial sabretoothed tiger lurches towards us with jaw apart drooling ready to lunge on us we do not start planning next year's budget – we fight, flee or freeze. So far so good. But fear comes in many guises in the business environment – it could be a financial crisis, it could be in the guise of the US debt crisis or the Euro dropping through the floor. These all have the ability to send our fear centres into overdrive – reducing our ability to plan and to think rationally.

I just mentioned our fight or flight reflex or the alternative: freezing. These come in to play in the motor cortex of the brain which processes our actions. This centre either becomes over-activated or under-activated when fear is present. It becomes over activated to fight or flee or, on the other hand it, freezes. In business contexts this means that in scenarios where fear is present you will find one

of two things happening. 1. Over activation: your team and your employees start running around like headless chickens. 2. Under activation: your team and your employees stop making decisions and action in all areas slows down or stops.

Another impact of an over active amygdala is that it boosts negative bias – this means that for example if you were analysing a balance sheet with a calm brain you might notice a few areas of concern. However, if you analyse a balance sheet with an over active amygdala, your negative bias will kick in and those areas of concern will turn into huge problems causing your attention to be actively drawn to them and dwell upon them. This will also be apparent in your leadership team and your workforce – negativity in all areas will increase in situations which posed no issue before fear was activated. An important point to note here is that uncertainty and ambiguity also activate our fear centres.

Commitment is something that we talk about in many contexts and we may feel uncomfortable taking a decision on something we don't feel committed to. But an interesting insight from brain science has shown that after making a decision, commitment to that decision increases. This is counter-intuitive but given a moment's thought I am sure you can find examples when you made a decision and then this increased your commitment to the decision or to the object (or even the brand). Indeed maybe loyalty can be more linked to this commitment. This has two specific implications for decision making. Understand that you don't need to be committed to make a decision and also that maybe you are sticking and fighting the decision you made simply because you made the decision and not because the decision was good.

Testosterone does funny things to men and leadership positions are still held by a majority of men. Unfortunately, in the context of decision making, these boosts of testosterone may be negatively influencing our ability to make good decisions. Testosterone increases energy, rejuvenation and sex drive. That's all very well but the downside is it will increase our risk appetite to possibly unhealthy levels, increase short-term thinking and increase

our need for immediate gratification – all bad for the long-term success of a company. And, yes, testosterone is particularly high in men and successful men at that. Having more women in leadership positions will hormonally, and from a brain perspective, make complete sense in balancing a leadership's team ability to make good long-term decisions.

The unconscious may seem a little elusive but we now know that the unconscious is vastly more powerful than the conscious. As you read this, your mind is activated in a multitude of ways and you are drawing on a plethora of resources; your visual cortex, your linguistic centres, even your coordination as you hold the magazine and your eye unconsciously focuses on the page and skips across the words: none of these is consciously controlled. More than that, we can see fear centres activate to unconscious stimuli (subliminal pictures) without having the foggiest that this has happened. This is worrying as a leader because this means that an emotion such as fear can be activated without us knowing about it and cause all sorts of brain distortions that we have spoken about (reduced rationalisation, etc). This also exemplifies the power of gut instinct upon which many of the world's most successful leaders claim to rely. Gut instinct is the ability

to tap into the unconscious that has processed massive amounts of data below our conscious level and that, in turn, leads to a feeling that we can interpret. Gut instinct is something we need to develop.

The danger of opinions lies in powerful biases that this can cause in the brain. Research into political partisans by Drew Westen in the US has particularly shown that when we look at information that supports or counters deeply held opinions, then our emotional centres activate but our reasoning centres are barely active. This is also true when presented with emotionally loaded statements or scenarios. These also lead to inhibition of our reasoning centres. This is dramatic for leaders because many leaders have powerful opinions and are even unaware of their personal biases. This can be a danger in decision making because it will inhibit and restrict rational centres and good decision making.

Confirming evidence will lead on from biased and emotional decision making mentioned above. In a ground-breaking article in the Harvard Business Review in 1998, Hammond, Keeney and Raiffa listed eight hidden decision-making traps into which leaders are prone to fall: the confirming evidence trap is one that I personally feel is very common because it ties in to our



emotional and biased decision making that I have just spoken about. Once we have made biased decision or emotional decision we will then find the evidence that supports this and ignore evidence to the contrary. These are particularly obvious in political contexts where the same information is seen but this is weighted differently.

Strategies to improve decision making

With all these impacts you may be wondering how we can improve our decision-making abilities or indeed does neuroscience shed light on methods to counteract the distortions our brain develops? Here are a few techniques to help:

Awareness is the first step to increasing your ability to counteract the above-mentioned traps and distortions. Awareness is always the first step to correction and the more aware you are of the processes that are influencing you the better you will be able to balance your decisions. There is a problem, however, research has shown that the least aware people consider themselves the most aware. Increase awareness by constantly asking yourself why you are making decisions. Be honest with yourself and you will start to see past the fog of distorted decisions.

Reframing is a powerful tool. This is the classic ‘is the glass half full or half empty?’; both are reframes of the same situation. Reframing can help you look at the same situation in a different light. What’s more when it comes to emotional situations you will need to reframe into an unemotional context and you will be able to see what happens to your decision-making ability.

Withholding opinion can be difficult for leaders whose job it is to have opinions and act on them. But, as we saw above, having an opinion may mean you are in a distorted decision-making process. So as you listen to arguments, other’s opinions and the facts of a given situation, try at first to withhold your opinion. This will stop biased opinion making kicking in and your emotional centres hijacking your brain. You will be able to make clearer decisions.

Calm leadership is a term used to define leading with a calm brain. If you are overstressed, angry, frustrated or nervous you will not be making good decisions. Neuroscience shows this. Learn to find ways to calm yourself and your decision-making processes. Proper preparation, withholding opinions and calming methods such as deep breathing and mediation will all help.

Diverse decision-making groups will help counteract many of the distortions and lead to more balanced decisions. Research also shows that diversity can increase creativity and find solutions to problems quicker. As a CEO, make sure you have a diverse team around you and boards should particularly look for diversity in board members – diverse not only in terms of gender, background and nationality but also in personality style.

Neuroscience is opening up new avenues for looking at some soft aspects of leadership like quality of decision making. By seeing what is happening in the brain we can start to understand the decision-making process. This can be, I confess, extremely complex. Yet at the same time some of the insights are helping us see how to make better decisions and to better use our brains to improve our business. Here’s to better decisions for all of us.

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