

### *How (and why) do we react to change?*

The aim of this section is to give the reader an overview of why we react to change in the way that we do and what that typically looks like. There are, of course, many variations and variables, but there does seem to be a commonality of experience for most people. The classic sequence of

Shock → Denial → Anxiety → Anger → Depression → Acceptance

appears to be common to a range of circumstances, but all seem to have their root in one word; loss. Often, this is regardless of logic or proportionality or how concrete or indeed tenuous the “loss” is. Just knowing that this is normal and perhaps to be expected can help people be forewarned and help them make sense of what may appear to be rather irrational thoughts, feelings and behaviours.

### *Key Learning Points*

1. The way we react to change is a function of our evolutionary history as it helped us to survive when under threat.
2. The result is a quick response to that threat but it can be rather indiscriminate as logic is not at this point involved.
3. The three-part structure of the brain reflects this process; consciously or even unconsciously notice change (threat), pass the input to memory and emotion to enable neurotransmitters to cause our fight or flight behavioural response.
4. We can also route through the logical, decision-making part of the brain. Usually afterwards, however.
5. The result of this biological and neurological process is the change curve – our classic reactions to change or a stressful event.
6. This is typically Shock → Denial → Anxiety → Anger → Depression → Acceptance.
7. It is exactly the same process as grieving and bereavement, because to your brain, that is exactly what change is. A loss of some description.
8. *Section summary; how (and why) we react to change*

### *A step back in time*

Go back a few hundred thousand years. It made sense to develop an internal alarm system that reacted quickly to danger, and those early humans that did, survived to pass their genes on. We developed such a system to survive the deadly animal attack; your heart beats more quickly to get blood to where it is needed and you breathe quickly and shallowly to get a rush of oxygen. And there is none of that slow thinking to hinder us – just quick, knee jerk, emotional reactions.

This quick mode (Kahneman calls it system 1, or Thinking Fast) helps us now when we see an angry face and we instinctively know how to respond or at least put us on our guard; it is there when we dive into a canal to save someone or push someone out of the way of danger. Thinking about it takes longer – at least 5 times longer – so we developed a bypass system for emergencies.

This process is reflected in how our brains are structured. The oldest bit of the brain, evolutionarily-speaking, is the bit at the top of your spinal cord with parts called, amongst other things, the hindbrain. This part of the brain acts as our first filter on the world. It effectively says to the next bit

of the brain “you had better pay attention to this, it may be important.” One of its function is to notice change, and if it detects it, to pass the information on to the next part of the brain.

The middle part of the brain again has a few working parts but collectively it is often called the limbic system and comprises largely our memory bank, and our emotional centres including the amygdala. This is particularly responsive to the classic threat responses we have been discussing above and will start a stress response that will eventually lead to the fight/flight mechanism being invoked. Not only that – it actively releases hormones that stop the more logical parts of the brain from functioning.

This limbic system, then, has created the stress response to prepare the body immediately for attack. In a way, the amygdala acts as our second filter as it stops the brain from thinking. Thinking is slow (system 2, according to Kahneman) and time may be of the essence. We have therefore what is called an amygdala hijack or limbic system overload and our response is an emotional one based on survival. No room – or time, for thought. And one of the reasons why we all react slightly different to change or other stressful situations is that what is stored by our amygdala as emotional memories depends on our own past events, culture and upbringing. It would also appear that the amount of perceived control we have over the situation causing the overload has a large impact on this limbic system arousal which gives us a remedy – we can choose, with practice, to think about things differently.

The final part of the brain is the bit that makes us human. It consists of grey matter (our neocortex) and white matter, together combining in various structures called lobes (four pairs, one in each hemisphere) to form the thinking part of the brain. Specific parts are responsible for planning, judgement, decision making and creativity. This is our frontal lobe; the bit behind our forehead that hurts when we have been thinking a lot.

This was the last bit of the brain to develop in evolutionary terms and is the last bit to develop as we progress through our childhood and young adult stage; our ability to logically reason and understand risk seems to peak at the age of 23 or so with the full development of our frontal lobe. It is the only part of our brain that can control emotions – one of its functions is therefore to control the impulses of the amygdala. Without it, you would not be able to control impulses or solve problems or make decisions.

Finally, this frontal lobe contains our chief executive; the prefrontal cortex. It receives information from pretty much everywhere else and sends commands out to them and is our primary decision-making structure. It is therefore trying to make sense of all the separate bits of information and sensory input and make decisions as to how to think or act. In a way, it is the seat of our consciousness.

### *Putting it all together*

Even this simplistic explanation of our brain’s structure helps us to understand something quite profound. Our brain is geared to notice and react to change as if it is a threat. It therefore creates an emotional response to that threat before it even gets to prefrontal cortex and starts thinking about it. We can eventually route it through logic, rationality and decision making areas of the brain but it

takes a lot longer and we may not always have time. This really helped when we had to be mindful of immediate dangers, and is still useful when we are faced with an attack but the same mechanism is potentially invoked when we are faced with an angry student or a terse email from the boss. More generally, however, it is often the process behind our reaction to all kinds of change in our home or professional lives – we tend to treat it as a threat.

#### *What this means*

Our first reaction to change, which our brain tends to perceive as a threat, is emotional, not rational. The result is the classic *change curve*.

Now, everyone is different and every situation is different. But our responses to change and life's stressful events tend to have some commonalities. So much work has been done in this area that it has almost passed into folklore, but essentially our classic response to change, heavily influenced by the way our brains work, can be fairly predictable.

Firstly, there is typically shock, followed by a period of flat effect – numbness. Essentially, our brains find it difficult to comprehend what is going on and go into protection mode. This may be fleeting or may last for several days as we keep on repeating the circumstances that led to the shock in our thoughts. This is often followed by a period of denial – or even a sense of false optimism and heightened mood! This is our brain's way of putting you into a holding pattern; the event may be just too enormous to deal with right now so it goes into another form of protection mode and pretends it isn't happening for a while whilst it regroups and gets the energy to deal with it. We may steadfastly ignore all the warning signs of an impending change and yet somehow be surprised and shocked when it happens.

Denial is not bad in itself – it is putting things off until we can deal with them – but long term, it can have a dramatic impact if we don't eventually accept the event and go through the rest of the change curve.

This emotional rollercoaster usually comprises anxiety, anger and sadness or even depression; not always in that order and sometimes jumbled up together so that it becomes hard to separate them. Anxiety is about concern for the future or the implications of the change on you or those around you. It is not the same as fear, which is about something real and now, but more about something potential that is anticipated. Our amygdala and hippocampus get locked into a neural loop which seems to feed on itself.

It doesn't just go. We repeat the pattern of thinking and keep on generating the chemical hit, time and time again. We may find ourselves getting angry at the circumstances, other people related or even completely unrelated to the stressful event, or ourselves. As we said before, logic and rationality is not our default during times of change. The anger may be expressed outwardly or may be held inside, festering away.

Eventually, reality sinks in and with it the (perceived) enormity of the event and this is where the low point occurs. We all feel sad from time to time but this process can also lead in some circumstances to outright depression. Martin Seligman suggested that one of the major causes of depression was *learned helplessness* – where we feel out of control of a situation and that the world is happening to us, instead of us happening to the world. If that is how we feel as a result of the change, it is easy to

see how this could have an impact here. Again, the more control we have, the easier it is to deal with change.

Gradually, however, we deal with it. We accept it. It doesn't mean we have to like it but we put it more into its correct perspective and achieve some sort of proportionality. This is where we start to make choices and we start looking to the future. Our frontal lobes gain mastery and we start to plan, make decisions and regain control of our mood state.

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