

The right brain feels what the left brain thinks

To keep the explanation of brain functioning simple, imagine two powerful computer processors connected to each other by an Ethernet cable running different programs from the same input. This is what happens in the Cerebral Cortex which is divided into two hemispheres, left brain and right brain connected by a thick layer of nerve fibers called the corpus callosum. These nerve fibers allow messages to pass between the left and right brain hemispheres. Most other parts of the brain are also divided laterally. Each hemisphere of the cortex can further be divided into four lobes:

- Occipital - visual processing
- Parietal - movement, orientation, calculation, recognition
- Temporal - sound and speech processing, aspects of memory
- Frontal - thinking, conceptualisation, planning.

It is scientific fact that each hemisphere normally develops to become hardwired to perform different specific skills. Interestingly, experiments have demonstrated that before entering school, children rank highly in creative right brain dominance but that only 10% of these children will rank highly creative by age 7. By the time we become adults only 2% of the population remains highly creative. It is suggested that our education systems which place a higher value on left brain functions such as mathematics, logic and language, does so at the expense of our right brain imaginative abilities.

Ok, so we know that in normal brains right and left hemispheres process their bits of the big picture and organise their information by sending signals back and forth via the corpus callosum. Each informs the other about what is going on and their tasks are carried out in an integrated way. Although we receive millions of stimuli every minute, only a tiny percent are consciously registered. The rest enter the brain as energy blips, some may create a momentary response in the right brain but are not significant enough to create conscious awareness in the left. So both hemispheres have considerable ability to perform similar tasks, though they may go about it differently. Although there is clear evidence for left and right brain specialisation, the differences are more subtle and complex than early pioneering experiments such as the work done by Roger Sperry in the early 1960s initially suggested. The table below details some of the key differences in right and left brain functions.

	Left brain functions	Right brain functions
Specialties	<ul style="list-style-type: none"> Uses logic, detail and fact orientated Analytical time sequence processing Reality based, practical Forms plans and strategies Math's and science Words and language Recognises order and patterns Present and past Perception Knowing and can comprehend things Practical and safe 	<ul style="list-style-type: none"> Reading faces Music Global holistic processing Understanding of metaphors Uses feeling Imaginative Symbols and images Thinks in pictures Phillosphy and religion Gets 'meaning' Spatial perception Beliefs Fantasy Dreams Creative Impetuous Risk taking
Shared		<ul style="list-style-type: none"> Sensations on both side of face Sound perceived by both ears Pain Hunger Position
Emotions	Positive emotions	<ul style="list-style-type: none"> Negative emotions (such as fear) Expressing emotions Reading emotions

The degree, to which our left and right brains interact or not, influences some aspects of our personality traits. We each tend to have a predisposition to use one side of our brain more than the other in certain situations. This is called right brain and left brain dominance. Although it is a gross over simplification to purely identify people as "left brain" or "right brain" types, the choice of which brain is controlling which situations, often determines others perceptions of our character.

We have one brain, not two, and this one brain does work with a lot of unity. But where there is some tendency to process information in a polarised way, it is possible to identify specific behavioural patterns that emerge. Let us examine some of the behaviors that can result from our dominant brain hemispheres processing information in different ways.

The left side of the brain processes information in a linear manner taking pieces and ordering them logically to draw its conclusions. The right brain however, sees the big picture first, not the details. If you are right-brained, you may have difficulty understanding a plan unless you are given the big picture first. That is why it is absolutely necessary for a right-brained person to have an overview of a vision before being tasked with activities to bring it about. It is important for right brained people to understand why they are doing something, while left brain people need to know how to do it.

Left brain people like lists and schedules often working things out in a sequential manner. They complete tasks in order and get satisfaction from checking them off when accomplished. They find learning things in sequence like spelling, is relatively easy. The left brain is also dominant in the linear and sequential processing of mathematics and in spatial reasoning such as following directions. By contrast, the right-brained person takes a more random approach. They often flit from one thing to another perhaps without having addressed priorities. A project may be late or incomplete, not because they weren't working but because they were working on something else.

The left brain person takes information piece by piece using it to solve problems and to draw logical conclusions. The right brain, on the other hand, prefers to see, feel, or touch the real object, importance is given to coherence and meaning; that is, the right brain tells you it "feels" right. A right brain person uses intuition. If they are interviewing people for a job they may well choose a candidate based on a gut feeling.

Left brain people find it easier to express themselves in words. Right brain people know what they mean, but often struggle to find the right words. A good example of this is how people give directions. The left brain person will say something like "From here, go three miles south on the M21 then take the A27 west for 2 miles and turn first right into Hanover Street". The right brain person will say something like this: "Turn right (pointing right), by the church over there. Then you will pass a garage with a blue sign and a furniture shop. At the traffic lights go right towards the school." Right brain people need to back up everything visually. If it's not written down, they probably won't remember it. Right brain people benefit from illustrating information, they draw pictures. Left brain people are more inclined to use words or symbols to record information.

The left side of the brain deals with things in reality. Left brain people adapt to their environment. Right brain people are more likely to try to change the environment using creative endeavors. In order to understand why a manager wants them to perform a certain task a right brain person

may omit doing the task just to see what happens. Since emotion is processed on the right side of the brain, they remember things they become emotionally involved in while learning. When the right brain is dominant peoples reactions are often being driven by the same ancient survival mechanisms that hunter gathers had in mans early evolution.

These are just some of the differences that exist between the left and right brain hemispheres. The patterns show that the left brain is analytical, logical, precise and time-sensitive. It is communicative and capable of conceiving and executing complicated plans. The right brain is different; here lies the seat of our emotional responses particularly for fear and general pessimistic feelings. It is more involved with sensory perception than abstract cognition.

Conscious decisions made by the dominant partner are in fact fully informed by the findings of both hemispheres. Occasionally, there is a breakdown in their conversation, the dominant hemisphere may make a decision based on what it thinks and ignores the others information. This leads to an emotional unease that is hard to explain. Conversely the non dominant partner sometimes by passes the executive control of the other side and triggers action based on instinct. A lot of human behaviour is based on right brain hunches. Sometimes the two sides can actually disagree, resulting in our perception of emotional turmoil from the protests of right brain.

So what actually motivates behaviours, how does the brain stimulate us to behave in the way we do. The brain has a very well defined though complicated system of punishment and reward. It is a three stage cycle of urge [need], action and satisfaction that provides the background patterns of our daily lives. The system worked well for our lunch hunting ancestors but in our modern world microwaving a TV dinner is less likely to produce the same feelings of fulfillment and satisfaction. Evolution has failed to keep pace with human ingenuity as our adapted brains main function is still to keep us alive and reproducing. Many of our great attributes like appreciating art and literature and understanding the universe may also arise out of our brains focus on survival.

The amygdale is a small almond shaped object situated at the bottom of the brain stem. It is often talked about in studies of emotional intelligence because it serves as the control center of the emotional mind. All incoming sensory data - sights, sounds, smells and sensations pass through the amygdale. Here they are instantly analysed for their emotional value before going to the cerebral cortex for processing. The amygdale plays the role of watchman, scanning every incident for signs of threat. It reacts much quicker than the more rational left brain. If the emotional charge is powerful enough it leaps into action overriding reasoned thinking and logic, it can cause us to act without regard for the consequences. It's the important trigger mechanism for our four basic survival strategies of freeze, flight, fight and appeasement. Originally evolving to aid the survival of early man in the wild, the amygdales unpredictable reactions are not so appropriate for the modern world of boardroom politics. Punching your boss or running away from the office will not normally benefit your career. It is often imperative therefore that the responses generated by the amygdale are mediated by the thinking part of the brain in the left cortex.

There are many definitions of the word "emotions" and many theories that seek to describe them. Robert Plutchik offers an integrative theory based on principles of evolution. In this theory emotions are adaptive the 'feeling' is the cognitive component of emotion and is a sophistication of the basic mechanism. What people feel effects how they behave and what they think can effect how they feel. Humans have two processing systems – the cognitive interpretation and understanding of the world and the other affect system – which is evaluating the world, making quick value judgments. The two processing systems work differently, affect works by chemical infusion and can change the operating parameters of cognition. The cognitive system works more slowly mostly by electrical signals, analyzing and reflecting. Currently in humans the wiring of our brains favours emotions affecting our

behavioral responses more often than cognitive systems. This is because the connections from the emotional systems to the cognitive ones are stronger than the connections that feedback from the cognitive to the emotional systems. Our conscious mind can only focus on data from one brain at a time. We can switch from one side to the other very quickly via the corpus callosum but that's not always the most efficient way to act. Eventually ultimate authority to enter consciousness is delegated to one brain or the other. It appears that most people will never reach their maximum potential because of the compromises made between our right and left brains. Sometimes skills which the right brain can perform better are selected to be processed with less skill, by the left brain.

One of the most successful types of leadership development is to work with a professional coach who understands behavior modeling involving both right and left brain thinking. For example using cognitive behavior techniques people can learn to elevate emotional signals to the cortical level where they can be consciously processed. People with a high emotional intelligence can anticipate and read the emotional reactions of others and concomitantly influence their own emotional responses to others. Coordinating the ability of both hemispheres to work optimally together may be the key to superior leadership and managerial abilities. Learning and thinking processes are enhanced when both sides of the brain participate in a balanced manner. This means understanding and strengthening your less dominate hemisphere of the brain.

I have taken information for this article from R Carter, Mapping the Mind and D Falk, Braindance. Both books are popular science works rather than academic articles. However both authors seem to present unbiased results of the scientific literature. I also used information from Daniel Golemans successful book "Emotional Intelligence", first published in 1995.