



WHAT IS A BRAIN PROFILE ?

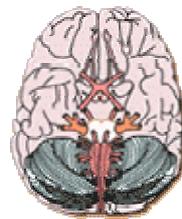


What is a brain profile?

Make-up of the brain

The Left Hemisphere

Verbal
Logical
Analytical
Linear
Organised



The Right Hemisphere

Non-verbal
Metaphorical
Holistic
Spatial
Intuition

The Left Hemisphere

Controls movement on the Right hand side of the body

Verbal:

Involved in language skills, controls speech, reading, writing and spelling. It remembers facts, recalls names, dates and figures.

Logical and Analytical:

Deals with information in a concrete way, understands only literal meaning.

Linear:

Information is processed sequentially, a step-by-step way of thinking.

Organised:

Information is preferred in a structured and systematic way.

The Right Hemisphere

Controls movement on the Left side of the body

Non-Verbal:

Prefers to work with images rather than words.

Metaphorical:

Understands images and metaphors. Sees the picture in the literal meaning, fantasies, makes up stories.

Non-linear (holistic):

Sees the big picture, makes intuitive leaps and ignores sequential processing. Can create and use many types of information simultaneously. Recalls the face as a whole.

Spatial:

Understands depth and multi-dimensional perception. Allows individual to find way without following a map.

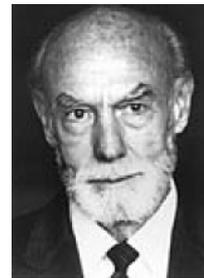
Feeling:

Processes feeling, intuition, sensitivity and people-awareness

Physiologically, the brain consists of two halves, or hemispheres. Each hemisphere controls the movement and vision on the opposite side of the body.

Early scientists found that the human brain consists of millions of small cells called neurons. Each of these cells has a central nucleus from which octopus-like tentacles move outwards. Prof Pyotir Anokhin (a student of Pavlov) found that it is not the number of cells that determine intelligence and creativity, but the ability of the brain (the tentacles of the neurons) to make connections and so create new systems and patterns.

In 1981 Roger Sperry received the Nobel Prize in Physiology “for his discoveries concerning the functional specialisation of the cerebral hemispheres”. Sperry, his student Michael Gazzinga and the neurosurgeon Joseph Bogden, performed the first ‘split brain operation’, and can be credited with some of the most important insights we have of the physiology of the brain today.



Roger Sperry

After the first successful ‘split brain’ operation on a patient suffering from severe epilepsy, similar operations were performed on numerous other patients. The operation entails the severing of the corpus callosum, which is the main connection between the left- and right hemispheres of the brain.

The corpus callosum consists of more than 200 million nerve fibres. Without this connection, each of the two hemispheres of the brain functions virtually independently, largely unaware of the other hemisphere. Sperry’s operation made it possible, for the first time, to study the separate functions of the two hemispheres of the brain. A large number of experiments followed Sperry’s success, and were mostly focused on the identification of the processes of thought associated with each of the hemispheres.

Sperry discovered that each hemisphere had its own specialist functions, confirming a hypothesis that had existed for a number of years. Sperry himself declared, “Each disconnected hemisphere appears to have a mind of its own”. A very practical example of this came when one of Sperry’s patients got involved in an argument with his wife. The patient reached out to grab her with his one hand, but to everyone’s surprise, the other hand immediately grabbed the aggressive hand back.

Although the average person is not confronted with this extreme kind of behaviour (largely because our corpus callosum is still in place), it has become clear that most of us prefer the functions and processes of one of the two hemispheres to the other.

The first four-quadrant instrument was developed by Ned Herrmann in 1981. Herrmann's studies of Sperry's split brain research and Paul McLean's 'Triune Brain Model' lead to a combination theory, based on a metaphorical model of four quadrants.

Building on the work of Herrmann and Paul Torrance, Kobus Neethling determined that both the left and right brain processes (as originally categorised by Sperry) could be divided into two definitive categories, effectively dividing the brain into four quadrants.



Kobus Neethling

Between 1988 and 1991, 2000 adults and 1500 pupils (with an equal distribution between 10 and 19 years of age) were included in research groups to test Neethling's model. A question with four possible responses was posed to each of the subjects, who then had to arrange their personal thinking preferences from the strongest to the lowest. The choices for each question were based on the thinking processes belonging to the four different quadrants.

Neethling found that thinking preferences fell equally into four preference-clusters, corresponding to the four quadrants. Both the validity and reliability levels of each of the quadrants were found to be higher than 0.80.

The resulting Brain Profile looks at the thinking preferences of the individual. As we are dealing with preference, it is important to note that there are no bad, or wrong profiles. Brain Profile is a descriptive, non-judgmental analysis, with no profile being better or worse than another. Instead, the report gives a description of an individual's thought preferences, and makes recommendations based on those.

Brain Profile measures thinking preferences, and not skills or ability in executing those preferences. It could therefore happen that an individual has a very strong preference for order, planning and organisation, but has never had the chance to develop the skills to plan and organise. The recommendation in this instance would be that since the desire is there, the skills to support that desire should be developed in order to be effective in a given career.

On the other hand, it is possible that a person has excellent skills to be a banker, but has a very low preference (which could lead to a rejection) of the processes associated with the job. The individual would therefore not be able to sustain the passion and energy to stay happy and productive in the banking environment.