

The two sides of the brain perform somewhat separate functions. The brain is divided into two hemispheres. The **right** hemisphere is responsible for control of the left side of the body. Whereas the **left** hemisphere is responsible for control of the right side of the body.

## Cerebral Lateralisation

### History

"Tan" was a patient of **Paul Broca (1824–1880)**. Tan was entirely incapable of producing spoken language, apart from the word "Tan". An autopsy discovered that "Tan" had a lesion in the left side of his frontal lobe. This area seems "indispensable to the exercise of the faculty of articulate language" (Broca).

This was some of the first evidence of cerebral lateralisation. Language appears to be (for most people) in the left side of the brain. Though it is important to emphasise that "**Broca's region**" is responsible for grammar and syntax. This is separate to language production.

**Stroke/Brain Damage** difficult to measure affects of these. Relies on hindsight.

### Dichotic Listening/Visual Half-Field Studies

Different words are presented in right ear or visual field and behaviour is measured accordingly. This is not reliable for assessing individuals. However, useful in split-brain patients as **Sperry** has shown (patients with a commissurotomy).

**fMRI** is slow and expensive (according to McManus)

**Transcranial functional Doppler** uses same probes used for an ultrasound. Measure blood flow in the cerebral artery. Knecht (200) found that right handers are 5% likely to have language in the right side of their brain whereas left handers are 30% likely.

### Methods of Measurement