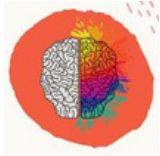


Neuroscience vs Psychotherapy: Exploring The Right Brain/Left Brain Myth



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Are emotions in the right hemisphere?



The **valence model**: RH is dominant for negative emotions and LH is dominant for positive emotions (anaesthesia of one hemisphere and assessment of behavioural reactions) **but this is strongly contradicted by recent neuroimaging studies.**

Meta-analysis of 54 fMRI and PET studies found: **LH amygdala** was more often active during emotion processing than the **RH**.

Also, studies have found that **positive** = **LH mPFC** and RH premotor cortex and the temporo-occipital junction.



For **negative** = RH dIPFC and temporo-parietal junction, but LH amygdala, and middle temporal gyrus.

EEG studies have found greater LH frontal cortical activity during anger

Two newer models: The motivational direction model and “Behavioral Inhibition System and the Behavioral Activation System” (**BIS/BAS**) model

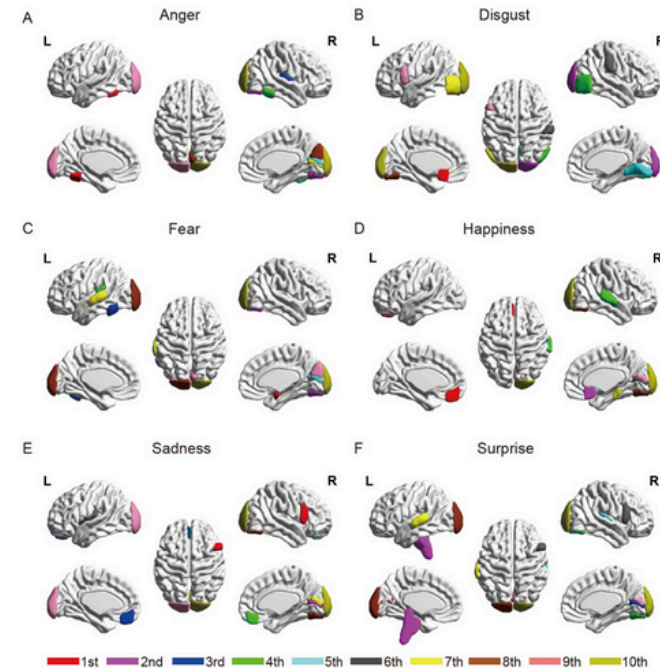


Taken together, all four models supported by some empirical evidence but also contradicted to by other evidence. For example, a recent study comparing the right hemisphere model, valence model, and motivational direction model for facial emotion processing came to the **conclusion that the empirical data do not unequivocally support any of these models.**

So many studies have **poor experimental designs** (30s music, 60s movies, left/right ear for ‘emotive words’)



Therefore, researchers should instead focus on **identifying specific contributions of left and right-hemispheric brain networks** in specific situations involving emotions



Liu C, Wang Y, Sun X, Wang Y, Fang F. Decoding six basic emotions from brain functional connectivity patterns. *Sci China Life Sci.* 2023