

THE SELF AND THE BRAIN

“ . . . We can make a list of all the characteristics of the “self” . . . and then look for brain structures that are involved in each of these aspects. Doing this will someday enable us to develop a clearer understanding of self and consciousness---although I doubt that there will be a single, grand, climactic ‘solution’ to the problem of the self in the way that DNA is the solution to the riddle of heredity.”

V.S. Ramachandram (1998)

ASPECTS OF SELF AND BRAIN STRUCTURES

Self Awareness	Left Hemisphere
The Embodied Self	Parietal lobes and regions of the frontal lobes
The Passionate Self	Limbic system and the Amygdala
The Executive Self	Anterior Cingulate gyrus
The Mnemonic Self	Hippocampus
The Unified Self	??? Possibly Limbic system and anterior cingulate gyrus
The Vigilant Self	Anterior Cingulate or Intra-laminar Nucleus

Roger Sperry

Bidirectional Model

“Bottom-Up”

“Top-Down”

Gestalt: The whole is greater than the sum of the parts

“. . .it is increasingly clear that cognitive functions [and experience of self] cannot be pinned to spots on the brain like towns on a map. A given mental task may involve a complicated web of circuits, which interact in varying degrees with others through the brain—not like the parts of a machine, but like the instruments in a symphony orchestra combining their tenor, volume, and resonance to create a particular musical effect.” Shreeve (2005)