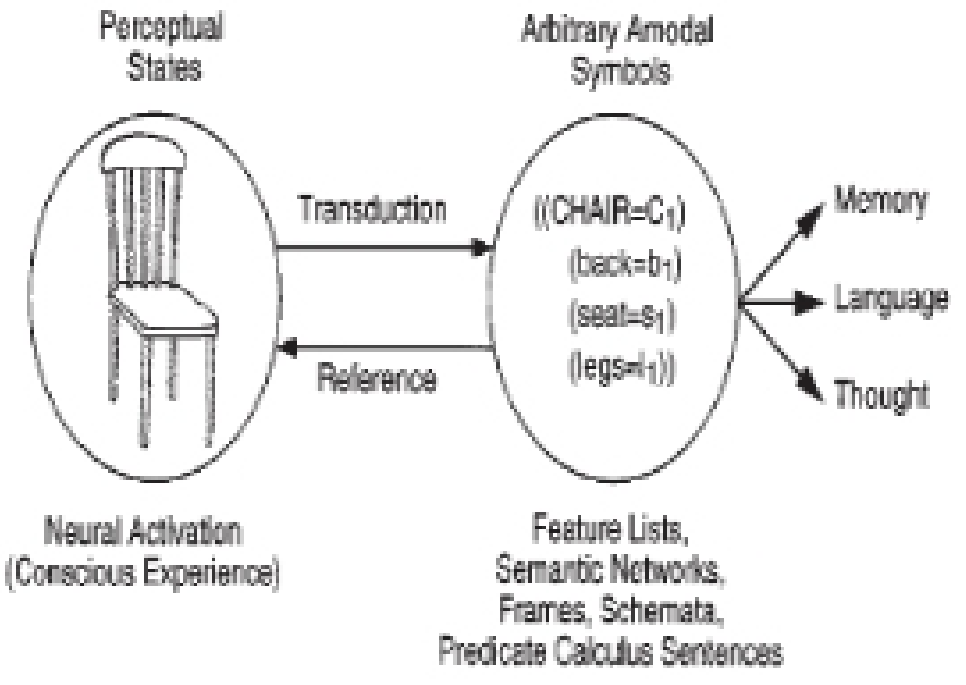
Embodied Cognition

What are the amodal theories or representations?

- Multi-sensory/bodily kinesthetic information is transformed into symbolic representation
- Comparable to the propositional code in the sense that perceived things are transformed into language like representations.

- Perceptual states are transduced into a completely new representational system. The structures of these symbols are unrelated to the perceptual states that produce them.



What is a modal theory?

- Knowledge is embodied in bodily states and the brains modality-specific systems.
- Rather than using amodal descriptions of on-line modality-specific states to represent situations, the cognitive system uses reenactments of the situations instead.
- Perceptual, motor and introspective experiences underlie the representation and process of knowledge.

What are the main points of embodied cognition?

- The body is central to shaping the mind.
- When an experience is retrieved, ***neural states*** are reenacted from the systems that were relevant for the original experience, such as actions and perception systems.
- Neural state: traditionally viewed as conscious state, states arise in sensory motor systems during contact with physical world.

What is the action-compatibility effect?

- When text is read sensory motor regions in the brain are activated.

  .Ex: participants of an experiment were split into 2 groups. One group had to put a pencil in their mouth while reading versus the control group who did not. They both read a comic and those with the pencil in their mouth rated the cartoon funnier than the control group. The pencil in the teeth naturally activates the muscles typically used for smiling and this motor effect suggests that the brain was primed to smile.
- Also states that the brain resources used to plan and carry out actions are also used in language comprehension; therefore, if an action implied in a sentence is different from the suggested response, there is interference within these brain resources.

What role does metaphor play in understanding abstract concepts such as "freedom"?

- Freedom can be linked to the metaphor containment. Due to link freedom can be understood.
- Abstract things need to be linked to bodily sensory motor experiences to be understood.

What are the main points of replacement style embodiment?

- Organisms can respond appropriately to perceptual information without the need to cognitively enrich the perceptual input.
- All that is need is an agent that responds to an environment through basic desires
- Simulation is not always necessary; the agent can use the environment to understand the world.