Embodied Cognition

As of a decade or so ago, most researchers would have agreed that symbolic representations such as stereotypes are **abstract, stable, and general knowledge structures** (or schemas); that they are activated automatically and independent of the perceiver's goals, upon the mere categorization of an appropriate social–stimulus person; and that their activation makes their content available and likely to influence the perceiver's judgments and actions, even against the perceiver's wishes.

Psychological approach that focuses on how the **body** affects behaviour, feelings and thoughts. It postulates that the nature of the human mind is largely determined by the form of the human body.

Concerned with addressing the sensorimotor features of language, namely **how a symbolic system is grounded by multimodal experiences**.

Cognition is not **abstract and amodal** but intrinsically embodied and grounded in the actions that our bodies perform.

Our understanding of an abstract concept is grounded by metaphors **(Lakoff, 1999; Conceptual Metaphors).**

Behavioural Evidence

Wells & Petty (1980) When participants were assessing headphones, they were more likely to approve of tuition fee hikes if they were nodding their head than if they were shaking their head.

Congruence between language and perception/action facilitates comprehension.

Friedman et al. (2005) Approach (vs avoidance) arm movement leads to more cognitive flexibility (creativity).

Perception=Action

Ostracism: Williams et al. (2000) Cyberball Found that participants ostracised in a game of computer catch activated the same brain regions correlated with feelings of real pain (Dorsal Anterior Cingulate Cortex)

Zhong et al. (2008) Found that participants who had just completed cyberball were more likely to desire warm food over cold food, supporting the notion of embodiment with the 'cold' and 'warm' metaphors.

" It is possible that people use coldness to describe social interaction patterns partly because they observe, at an abstract level, that the experience of coldness and the experience of social rejection coincide."

Asch (1946) Warm vs Cold Asked subjects to form an impression of a person based on seven adjectives "intelligent, determined, skillful, practical, industrious, cautious". Groups either additionally saw warm or cold. 8% of those that saw cold thought he would be generous, whereas 91% of subjects that saw warm thought he would be.

Bargh et al. (2008) Warm vs. Cold Drinks Replicated standard Asch study findings but with hot vs cold drinks. In experiment 2, they used hot vs. cold therapeutic pads and found 54% chose a gift for a friend with a warm pad whereas on 25% chose a gift for a friend with a cold pad.

Zhong et al. (2010) Increased dishonesty and self–interested behaviour in a dark (vs light) environment.

Harvey et al. (2008) Physical Disgust=Moral Disgust Does cleanliness reduce the severity of moral judgements? Participants were exposed to six moral dilemmas and one half were told to wash their hands. People made less moral judgements when they had cleaned their hands.

Zhong et al. (2006) Macbeth Effect studied the desire to clean oneself after a threat to ones moral purity. They got participants to recall an unethical or ethical deed and describe their feelings and emotions afterwards. They then completed a lexical decision task with cleanliness related words. Those in unethical deed condition completed more words with cleanliness completions.