

The role of consciousness in semantic processing.

Insights from masked priming

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What is the role of consciousness in processing the meaning of words? Is unconscious semantics different compared to conscious one?

Theories of semantics can be divided in two contrasting approaches: (i) Embodied Semantics (ES), according to which the meaning of words is grounded in the sensorimotor system and semantic processing requires perceptual and motor information stored in modality-specific areas of the brain; (ii) Amodal Semantics (AS), holding that word meaning is represented via highly interconnected semantic nodes constituted by amodal symbolic representations.

In several masked priming experiments we explored the possibility that different levels of semantic processing may take place at different levels of consciousness. We will argue that the contribution of the sensorimotor system to language understanding is the product of *semantic integration* between linguistic and non-linguistic information and that requires awareness to take place. Unconscious semantics, instead, is limited to the way lexical representations are associated with each other in the lexical system. A system of relationship that is likely to be based on language statistics (e.g. the co-occurrence rate of two or more words in written and/or spoken language).

The hypothesis of Conscious Semantic Integration (CSI) is compatible with several models suggesting that consciousness plays a crucial role in combining information coming from different modalities and/or cognitive domains. It also suggests an alternative approach to the debate between embodied and disembodied theories of word meaning.