

## **Influence of linguistic context and modalities on the switching mechanism in late dutch-portuguese bilinguals**

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Inovative neuroscientific experiments under the scope of Distributed Morphology (DM) [1,2] investigate claims about the micro-modular architecture of the Language Faculty: words are derived in a distributed fashion. First, abstract syntactic features -root and a categorizing morpheme -are combined. Subsequently, vocabulary items with phonological form are inserted according to the syntactic specifications. Finally, the structure is paired to a content stored in the Encyclopedia and then interpreted by the logical-semantic interface [3,4]. Only in this first cycle a saussurian arbitrary form-meaning matching occurs; in subsequent cycles other morphophonological layers might be inserted, which then are assigned compositional readings. This theory poses interesting questions for the bilingual brain: (i) how is the neurological architecture of the two bilingual language systems organized; (ii) granted the strong distributional assumptions can part of the system be shared between languages; (iii) if so, how does this sharing interfere with word-level processing. In this study, a priming paradigm ERP experiment is applied to late Portuguese-Dutch bilinguals. We varied language combinations (L1-L2;L2-L1;L1-L1;L2-L2) of prime and target, aiming to detect the switching mechanism at different stages of lexical access. Thus, we might verify which modules are shared and which are language specific by observing switching cost usually associated to activation/inhibition patterns [5]. We also manipulated the modality of the prime: audio, written or picture. Our neurophysiological data confirm known effects for directionality [6] and, among other interesting findings, suggest that the bilingual brain shares the conceptual system independently from modality.

### References:

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