Exploring the inhibitory mechanism of newly learned L2 words with novel vs. familiar meanings

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In three tasks we explored the integration of newly learnt L2 German lexical units with familiar and new meanings into the L2 semantic network. Previous studies (Dagenbach et al., 1990 for L1; Bordag et al., 2016 for L2) indicated that the access to emergent representations with weak memory traces is supported by an inhibitory mechanism that inhibits their semantically related competitors with lower activation thresholds and higher selection potential. This study tests the existence of the inhibition effect in semantic priming for new L2 representations and the hypothesis that the inhibition mechanism might play a more significant role when learners establish completely new semantic representations than when they can rely on already existing ones.

In the learning phase, 30 advanced learners at B2/C1 level studied definitions of 20 critical words in addition to familiar fillers. Ten items were novel words (i.e. pseudowords, e.g. "Lukat") replacing low frequent unfamiliar German words (e.g."Steinschleuder"/slingshot) with their corresponding definitions. Ten other novel words referred to newly-created meanings whose existence is plausible, but which do not exist (e.g. an L-shaped restoration tool for mosaics).

In the semantic priming task, targets (e.g. weapon or hammer) were paired with semantically related novel words, new pseudowords, semantically related and unrelated words. In the related condition, existing words as primes exhibited a tendency towards semantic facilitation, while novel words exhibited inhibition, which was significantly larger for novel words with newly-created meanings. In a semantic categorization task participants responded faster to novel words with familiar meanings.

A pencil and paper post-test focusing on the ability of explicit recall of various aspects of lexical knowledge of the novel words and combined analyses of the data from all three tasks allowed further insights into the qualitative and quantitative differences in the representation of novel words with newly-created vs. familiar meanings.

Keywords: inhibition, semantic network, semantic priming, L2 vocabulary learning.