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Age and Orthographic Effects On the Lexico-semantic Organization of Japanese-English Bilinguals.

Age of second language acquisition has been shown to have an effect on the mapping of a second language in the architecture of the brain (Silverberg, 2004). It is hypothesized that Early Proficient bilinguals (< 7 yrs) have a shared cross-language semantic level. This differs from late bilinguals for whom Silverberg says that the lexical level, not the semantic level, is shared across language boundaries.

This coincides with the two leading interactive models of language architecture as described by Duyck (2002). The Bilingual Interactive Activation Plus Model (BIA+) states that a single lexicon is shared by L1/L2. The Revised Hierarchical Model (RHM) is based on two separate lexicons for L1/L2 in early stages of L2 acquisition, but that as greater proficiency is achieved, mapping of L2 can begin to occur on a semantic level. Duyck (2002) reports that in bilingual translation studies, numbers are translated faster into an L2 when targets are perceived as Arabic numerals. The Arabic numerals act as referential symbols, which can be free of phonological form, but still carry semantic information.

I have chosen to study Japanese-English bilinguals because, due to the morphographic writing system of Japanese, phonological information is not as easily accessible, nor necessary to word recognition. Since Japanese kanji often have multiple phonological representations, but generally a shared semantic meaning, I believe that kanji behave in much the same way as the Arabic numerals; providing cross-language semantic information.

The purpose of my discussion during the conference will be to detail my proposed experiment design. I hypothesize that by using a masked priming paradigm, processing time of English target words can be decreased by way of semantically related kanji primes, regardless of age of L2 acquisition.

References:

- Duyck, W., & Brysbaert, M. (2002). What number translation studies can teach us about the lexico-semantic organisation in bilinguals. *Psychologica Belgica*, 42, 151–175. *ogy: Learning, Memory, and Cognition*, 16, 149 –157.
- McCloskey, M. (1992). Cognitive mechanisms in numerical processing:
- Samuel, A. G. (. (2004). The effect of age of second language acquisition on the representation and processing of second language words. *Journal of Memory & Language*, 51(3), 381-398.