LLCd Symposium.
POSTER PRESENTATIONS.

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Brief Bio: I am a doctoral student pursuing my Ph.D. from Centre of Behavioural and Cognitive Sciences, University of Allahabad. My doctoral thesis aims at the investigation of oculomotor control/inhibition in bilinguals which seeks to understand how bilingual advantage affects their oculomotor control and what role proficiency in L2 plays in the modulation of such control in the ocular domain. I received my M.Sc. degree in Cognitive Science from the same Department in 2009. I am deeply interested in the study of eye movements and exploring relationship between eye movements and attention, working memory and language.

Title of Presentation: Activation of cohorts of translation equivalent in non-target language: an eye tracking evidence from Hindi-English bilinguals

Abstract: Research in the field of bilingualism aims at providing an insight into the cognitive architecture of the two languages in a bilingual brain. So far, cross language priming (semantic and translation) have been employed to investigate bilingual memory. Evidences suggest activation of translation equivalent in non target language while listening or performing task in the target language. Previous studies have found that degree of priming is higher in L1-L2 direction, than vice-versa. However, it has been found that this asymmetry is vanished when balanced bilinguals, who are equally proficient in their both languages, are tested. We conducted an eye tracking visual world experiments to investigate direction of activation of translation equivalents in unbalanced Hindi (L1) –English (L2) bilinguals.

Forty unbalanced bilinguals (Mean age 20.1 yrs), with Hindi as dominant and English as a non dominant language, took part in the experiment. Participants listened sentences containing a target word while looking at the display that had four written words. One of them was a cohort competitor of the translation equivalent of the spoken target word while the other three were unrelated distracters. We assumed that if "translation" into the non target language is an automatic aspect of bilingual lexical activation, then comprehenders must also be able to activate other phonologically related words of the translation equivalent. There were two language conditions. In L1-L2 condition: the target word in Hindi was (billi-cat) then the cohort competitor of translation equivalent (cap) was presented, and vice-versa in L2-L1 condition. In a simple look and listen task, subjects had to just look freely at the display under no task constrain.

The results showed that participants looked longer (higher fixation proportions) at the cohort competitor of the translation equivalent of the spoken target word in both the language directions (Figure 1). This indicates activation of translation equivalents in both the directions suggesting that even unbalanced bilinguals automatically activate the translation equivalents during spoken language processing. It clearly implicates role of linguistic profile of the bilinguals as crucial factor in determining lexico-semantic organization. We interpret the results in terms of bilingual semantic memory representation and automaticity of lexical access.

Figure 1: Plot showing proportion of fixations to the target and distactor in L1-L2 and L2-L1 direction.