On the lexico-syntatic dynamics of second language sentence processing: The role of cognate status, proficiency and task demands on relative clause attachment preferences

In Psycholinguistics there is extensive evidence showing that bilinguals activate lexical representations of both languages in a non-selective way (especially for words sharing form and meaning across languages – i.e. cognate words such as *atriz*[actress] in European Portuguese[EP] and English[ENG] respectively), either when words were presented in isolation (e.g., Dijkstra & Van Heuven, 2002) or in a sentence context (e.g., Schwartz & Kroll, 2006). Recent research has also shown the existence of cross-language activation at the syntactic levels, particularly in grammatical structures that are shared among languages (e.g., Harsuiker, Pickering & Veltkamp, 2004). However, what is unclear is the extent to which the lexical and the syntactic levels of representation interact during second language (L2) sentence processing in grammatical structures that are superficially very similar across languages (e.g., "*Someone shot against the maid of the actress who was on the balcony*") but differ significantly in the way the parsers assign a syntactic structure and extract meaning in each language (as in EP: Soares, Fraga, Comesaña, & Piñeiro, 2010; and ENG: Cuetos & Mitchell, 1988); and how these interactions can be modulated by L2 proficiency and task demands.

The studies presented in this talk aim to shed some light on these issues by studying the lexico-syntactic interactions in ambiguity resolution of L2 relative-clauses in native-speakers of EP (L1) who are intermediate and advanced learners of ENG as L2 (and their respective controls). In both experiments we manipulated the cognate status (cognate[C] vs. noncognate[NC] – non-cognates are words that share meaning across languages but not form, as in *criada*[maid] in EP and ENG respectively) of the nouns embedded in the complex noun phrase of those sentences ("maid of the actress") in four experimental conditions (C-C; C-NC; NC-C; NC-NC). In Experiment 1 we used an off-line task (sentence completion) in which participants were asked to complete the ambiguous sentence fragment provided in a plausible way (e.g., "*Someone shot against the maid of the actress who…*"). The number of NP1 or NP2 attachments were analysed. In Experiment 2 participants were asked to silently read the complete version of these sentences in which the relative clause were forced to attach either to the first- (e.g., "*Someone shot against the maid of the actress who was on the balcony serving drinks*") or to the second-host of the complex noun phrase (e.g., "*Someone shot against the maid of the actress who was on the balcony signing autographs*") by the introduction of a critical word in the relative clause that was semantically related to each of the nouns ("*serving*" vs. "*signing*"). Participant eye-movements were recorded using an SMI I-View Eyetracker (500 Hz), and reading times of the target words (NP1, NP2 and the critical word that forced the disambiguation) were analysed. Results are discussed attending to the current models of bilingual syntactic processing.