

Séminaire SynSem

De 15:00 à 17:00

Campus Tertre, Bâtiment Censive, Salle du LLING, C228

Vendredi 29 mars 2019, 15h

Responsable : Denis Delfitto and Maria Vender (Università di Verona)

Titre: *Implicit learning, bilingualism and dyslexia: Assessing AGL with a modified Simon Task*

abstract:

We will present the results of an experimental study we conducted in Verona, in cooperation with the University of Reading (Doug Saddy and Diego Krivochen), investigating artificial grammar learning (AGL) in monolingual and bilingual children, with and without dyslexia, using an original methodology. Instead of asking grammaticality judgments, which unavoidably induce in the subjects some awareness about the nature of the task, we administered a modified Simon Task, in which the sequence of the stimuli was manipulated according to the rules of one simple Lindenmayer system (the Fibonacci grammar). Crucially, this is not a finite-state grammar, as those normally used in AGL studies, and potentially lends itself to investigating how language acquisition is carried out by cognitive processes that exceed the generative power of Markovian processes. The participants of our studies were four groups of children: 30 Italian monolingual typically developing children (MC; mean age 10;0 years old, SD = 1;2), 30 bilingual typically developing children with Italian L2 (BC; mean age 10;2 years old, SD = 1;2), 24 Italian monolingual dyslexic children (MD; mean age 10;0 years old; SD = 1;3) and 24 bilingual dyslexic children with Italian L2 (BD; mean age 10;4 years old, SD = 1;4). Participants were administered the modified Simon Task developed according to the rules of the Fibonacci grammar and tested with respect to the implicit learning of three regularities: (i) a red is followed by a blue; (ii) a sequence of two blues is followed by a red and (iii) a blue can be followed either by a red or by a blue. Results clearly support the idea that learning took place, since participants of all groups became increasingly sensitive to the structure of the input, implicitly learning the sequence of the trials and thus appropriately predicting the occurrence of the relevant items. Moreover, group differences were found, with bilinguals being overall faster than monolinguals and dyslexics less accurate than controls. Finally, an advantage of bilingualism in dyslexia was found, with bilingual dyslexics performing consistently better than monolingual dyslexics and, in some conditions, at the level of the two control groups.