

## **ABSTRACTS**

### **Introduction to R for corpus and experimental linguistic research**

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R is a commonly used statistical programming language for undertaking statistical analysis of corpus and experimental linguistic datasets. After introducing the basics of the syntax and the semantics of the language, this lecture will present the relevant R code a) for data preprocessing (i.e. for manipulating datasets in an effective manner) and b) for conducting a range of statistical tests (e.g.  $\chi^2$ , ANOVA). If the time allows it, the presentation will include R code for fitting simple linear regression models.

### **Introduction to bilingualism and different tools in bilingual research**

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Bilingual acquisition is a rather heterogeneous field with many confounding parameters affecting it. Several factors, such as input, age of onset in bilingualism, educational setting etc., have an impact on a bilingual person's linguistic and cognitive abilities (Altarriba & Heredia, 2018; Bialystok, 2001; Cumins, 2001; De Houwer, 2017; Grosjean, 1989).

In this presentation we will first delineate the main research questions and methods employed in bilingual acquisition (Chilla, 2008; Chondrogianni & Marinis, 2012; Genesee & Nicoladis, 2007; Grüter & Paradis, 2014; Hoff et al., 2012; Hurtado et al., 2013; Nicoladis & Paradis, 2012; Rothweiler, 2006; Unsworth, 2014, 2016; Unsworth et al., 2018; a.o.). Special emphasis will be given to the impact the educational setting and (bi)literacy have on bilingual development (Bialystok, 2001; Bongartz, 2016; Bongartz & Torregrossa, 2017; Cobo-Lewis et al., 2002; Leikin et al., 2009; Oller & Eilers, 2002; Schwart et al., 2005).

We will then focus on studies which explored language acquisition in bilinguals with Greek as one of their languages. More specifically, we will outline the main findings regarding factors such as age of onset, input, educational setting and (bi)literacy (Andreou & Tsimpli,

2017; Bongartz & Torregrossa, 2017; Daskalaki et al., 2018; Dosi et al., 2016a, 2016b; Dosi & Papadopoulou, in press; Tsimpli et al., 2014; Unsworth et al., 2012; a.o.) and will discuss the open issues and future plans.

An additional aim of this talk is to review studies which investigated the bilingual acquisition in children with migrant and refugee background. To this end, we will present the specific characteristics of this population, with special emphasis on refugee and migrant children, who are located in Greece, and we will outline the challenges in this research field (Simos et al., 2014; Triantafillidou & Varlokosta, 2000; Tzevelekou et al., 2013; Zombolou, 2011).

### **Investigating the effects of bilingualism on episodic buffer function**

Marianna Olivia<sup>1</sup> Pope & Elvira Masoura<sup>1</sup>

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“There is a large body of literature that demonstrates a bilingual advantage on several cognitive processes such as executive functions and working memory. However, a specific component of working memory, the episodic buffer, has not yet been examined against bilingualism. The Episodic Buffer (EB) is a limited-capacity storage system, responsible for the integration of information from different modalities. The present study investigated the effects of bilingualism on the function of episodic buffer and search for possible beneficial consequences of bilingualism on the abilities to bind stimuli and store bound objects. Seventy adult participants (35 monolinguals and 35 bilinguals) were contrasted on four binding tasks - two visual, one visuospatial and one multimodal. Bilingual participants found to have better performances on all four tasks, although on the multimodal task the differences were marginal.

We conclude that the bilingual advantage is present in binding abilities and on the function of the episodic buffer. Further research is needed in order to confirm these findings”

### **Aspects of oral fluency development in child L2 English**

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In child L2 research, oral story-retelling has often been employed to investigate various language features of micro- and macrostructure as well as possible effects of cognitive factors. To our knowledge, such research has involved mainly bilingual children who had had mostly natural exposure to either language (Tsimpli et al., 2014; Andreou et al., 2015) while there is lack of similar studies with respect to children learning a non-native language exclusively through instruction. In the present workshop we will discuss data from L2 English narratives produced by L1 Greek children learning English in an experimental primary school in Greece. Half of the children were fourth-graders (9-10 years old) and half were sixth-graders (11-12 years old). All children had been exposed to English language instruction for 5 hours per week in the first two grades and for 8 hours in the older grades. The children's English proficiency ranged from A1 to B1 level according to results from a Cambridge proficiency test for young learners (Flyers 5). Story-retelling was based on two of the picture sequences (A2 and B3) in the Edmonton Narrative Norms Instrument (ENNI) (Shneider et al., 2006). The children were also administered a working memory task (N-Back task/2 back digits). In our presentation we will discuss interactions between complexity (number of subordinate clauses) in the oral narratives, age, English language proficiency and working memory. We will also point out some issues concerning the measurement of syntactic complexity in terms of subordinate clauses.

## **Literacy and cognition: Evidence for unprivileged multilingual contexts in India**

Theo Marinis

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“Research on bilingualism and multilingualism in western societies has revealed cognitive advantages and good learning skills. However, rather than enjoying cognitive and learning advantages, multilingual Indian children show low levels of basic learning skills, including critical thinking and problem-solving. In this talk I will present data from the MultiLiLa project that addresses how primary school children in India develop language, literacy, and mathematical skills <<https://www.mam.mml.cam.ac.uk/>>. The MultiLiLa project explores how the complex dynamics of social, economic and geographical contexts affect the delivery of quality multilingual education in India. By conducting research among children living in urban slums in Delhi and Hyderabad as well as in remote rural areas of Bihar where food deprivation, low sanitation, poverty and migration make school attendance and education

hard to maintain, the project focuses on structural and language inequalities affecting educational quality in India. Language inequalities arise because a large number of children in India are deprived of receiving mother-tongue support, being instructed only in the regional language and English, often from teachers with limited knowledge of the language of instruction. In this talk I will present data on cognition, literacy, and maths development of children from Delhi and will address the contribution of mother tongue education and the role of socio-economic factors in the children's development of cognition, literacy, and mathematical abilities.”

## **Bilingualism effects in Children with Developmental Language Disorder and Autism Spectrum Disorder**

Eleni Peristeri

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Bilingualism in typically-developing (TD) children has been linked to enhanced Theory of Mind (ToM) performance, specifically for false-belief attribution. This ToM advantage has been related to improved executive functions (EFs) in bilinguals, such as inhibition or set-shifting skills. The ToM advantage in bilinguals has also been attributed to enhanced metalinguistic awareness, e.g. bilinguals' ability to reflect on meaning and form. Children with Developmental Language Disorder (DLD) and Autism Spectrum Disorder (ASD) exhibit difficulties in all the aforementioned areas, namely metalinguistic awareness, EFs, and ToM. The present talk will address the links between ToM, domain-general EFs and language skills by drawing on the performance of monolingual and bilingual children with DLD and ASD and by highlighting the associations among these processes for each group of children. Findings reveal the degree to which bilingualism effects on developmental disorders, such as DLD and ASD, are mediated by ToM, EF and language ability measures.

## **PhD POSTER SESSION**

### **The syntax-semantics interface during sentence processing: ERP evidence on relative clause attachment ambiguity in Greek.**

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The present study investigates the resolution of relative clause attachment ambiguity. Although it is one of the most studied types of syntactic ambiguity, studies on the subject have neglected one important variable in on-line sentence processing and disambiguation – semantics. In order to bridge this gap in the literature, the focus here is on the role of semantics, and specifically, the nature of the interplay between semantic sources and structural preferences during relative clause attachment processing.

Twenty-four adult native speakers of Greek participated in the experiment, in which electrophysiological data were recorded. In the experimental stimuli, two potential antecedents were in the form of either a possessive construction or a prepositional with-phrase. The relative clause disambiguation was triggered by lexicosemantic cues.

No positive effect was reflected in any of the conditions, which would resemble a P600 deflection (a component indicative of syntactic processing difficulty). However, the results revealed an N400 effect (a component indicative of processing difficulty in semantic integration) only in sentences with a possessive construction.

The findings suggest that structural preferences can be completely eliminated by the rapid influence of semantic cues, highlighting that syntax does not have a priori precedence over other sources of information when a structural ambiguity is encountered. In turn, the rather specific difficulty in semantic congruity seems to be associated with the different semantics of the two constructions in question. Consequently, the results indicate that the processing strategies applied depend on the linguistic environment imposed by the disambiguation frame; the parser focuses on structural properties of the antecedent type when it is asked to form a syntactic agreement, whereas semantic properties of the antecedent type are taken into account when a semantic “agreement” is forced.

## **Object Mass Nouns in Greek**

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Object mass nouns—e.g. furniture, clothing, which denote solid objects yet grammatically patterns with substance denoting nouns—show that a language has a grammaticized lexical count/mass distinction (Chierchia, 2010). Tsoulas (2008) shows that nouns like *epiplo* (‘piece of furniture’) all have singular and plural forms, and he argues for an analysis of Greek in which object mass nouns cannot exist because of the semantic and syntactic structure of the language. Alexiadou (2015), on the other hand argues that Greek can have object mass nouns if they are derived with nominalizing morphology, as is the case with *ruhismos* (‘clothing’), which can refer to one or many objects but cannot take plural morphology. Using six countability tests with 90 collective aggregate nouns in Greek—i.e. nouns that denote solid objects separable from one another but nevertheless connected functionally, spatially, or otherwise (Grimm, 2012)—we show that Greek has a larger set of object mass nouns than previously documented, and that not all object mass nouns are derived—e.g. *psonio* (‘groceries’)—(contra Alexiadou, 2015). Such data call for the adoption of the crosslinguistic account of object mass nouns by Sutton and Filip (2016), in which object mass nouns arise as a result of having non-disjoint denotations in null counting contexts.

## **Anaphora Resolution in L1 Greek: Corpus Data**

Andreas Charatzidis

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The study explores discourse-level anaphora in L1 Greek. It focuses on the behaviour of different types of referring expressions and on factors which possibly affect the saliency status of antecedents.

Linguistic research has shown that each type of referring expression indicates a different degree of mental accessibility; longer referential forms signal low accessibility of concepts, whereas shorter forms tend to be linked to more prominent discourse elements (Ariel, 1990;

2001). The behaviour of pronouns has been extensively investigated in plenty of languages; in pro-drop languages - like Greek - null pronouns have frequently been claimed to present a preference for more salient antecedents compared to overt pronominals.

However, saliency is not categorically defined and measured. A variety of studies have shown that antecedent prominence is influenced by factors, such as:

- distance of the antecedent from the referring expression  
(e.g. Clark and Sengul, 1979; Hobbs, 1976; Yule, 1981)
- whether the antecedent is sentence/discourse topic  
(e.g. Alonso et al, 2002; van Kuppervelt, 1995)
- whether the antecedent is in Subject position  
(Carminati, 2002; Gordon et al., 1993; Wolf et al., 2004)
- discourse structure and the rhetoric relations between utterances  
(Asher, 1993; Lascarides & Asher, 2007; Charatzidis, 2014; Tantos et al., 2014)

The aim of the current study is to explore multiple factors that affect anaphora (i.e. Recency, Topicality, Syntactic position, Hierarchical Discourse Structure) and their interplay with various types of referring expressions (null/over pronouns, DPs) through the analysis of a corpus of texts written by Greek native speakers.

## **Investigating the learnability of uninterpretable features with advanced and intermediate adult L2 Greek learners**

Terpsi Danavassi

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According to the Interpretability Hypothesis (IH, Tsimpli and Dimitrakopoulou, 2007), post-childhood L2 learners have access to the principles and operations of UG but cannot learn abstract features of lexical items which are uninterpretable at the Logical Form (LF) of the language faculty (e.g. grammatical gender), if these features do not exist in the L1.

In this study we investigated L2 Greek articles produced by L1 Georgian, English and Albanian adults who had lived in Greece for a long time and were first exposed to Greek after puberty. Participants were advanced/very advanced and intermediate in Greek, as attested by an independent proficiency test. Greek distinguishes between definite and indefinite articles

which inflect for gender, number and case. Agreement is always required between the noun, the adjective and the determiner. Georgian has no grammatical gender or articles, save for a numerical sometimes used as an indefinite article. In English there are both definite and indefinite articles, yet no grammatical gender. In Albanian there are definite and indefinite articles and grammatical gender. Data were collected through four types of oral tasks: free discussion, picture description, giving instructions and sentence repetition.

### **Effects of language dominance in Phonological Awareness, Vocabulary and Reading Decoding in Greek-English bilingual children.**

Theodora Papastefanou

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**Background:** According to Silva-Corvalan & Treffers-Daller (2016), language dominance is defined on the basis of language proficiency and use. A language is dominant when a bilingual has attained an overall higher level of proficiency in that language at a given age and/or the bilingual uses it more frequently and across a wider range of domains. Bilinguals do not use both languages for the same purpose and frequency but use languages complementary (Grosjean, 2006). As a result, language dominance may differ in different domains of language (e.g., phonology, lexicon, morphology, syntax) and literacy (reading, writing), although how it may differ is not well understood. In addition, language use may change over time as a function of language experience, and therefore, language dominance may also change over time. This is often the case when children speak a minority language in the home and enter a school that follows a monolingual curriculum in the majority language. However, it is unclear if language dominance changes across different domains of language and literacy at the same rate.

**Aims:** The aim of this study was to investigate effects of dominance across several domains of language and literacy in bilingual children who acquire Greek as a minority language and English as a majority language in the first and third year of primary school in the UK. The hypothesis is that the Greek language dominant children will have better performance in Greek literacy tasks than the English ones, and that with increasing years at school, dominance will shift from Greek to English, so participants will perform better in English



than in Greek. This may be stronger for skills that develop at school, such as reading, and less strong for early acquired domains of language, such as phonology and vocabulary.

**Methodology:** 40 typically developing Greek-English bilingual children were recruited from primary schools, 20 from Year 1 and 20 from Year 3 were assessed on their expressive vocabulary, phonological awareness (blending and elision) and reading decoding skills (real-words and pseudo-words) in both Greek and English. Furthermore, the LITMUS-PABIQ questionnaire (Tuller, 2015) was provided to the participants' parents to obtain data in terms of language history, quantity and quality of input, and use.

**Results:** Results showed that Greek-English children both in Year 1 and Year 3 scored higher in English expressive vocabulary test, phonological awareness tasks and reading decoding tasks than in the Greek tasks. Furthermore, the results on language dominance from the questionnaires indicated that only two participants out of 40 were Greek dominant, whereas all others were dominant in English.

**Conclusion:** We suggest that children's literacy skills are affected by language dominance, and that schooling has an important role in their performance.