Subject – Verb agreement in Greek: Evidence from on-line grammaticality judgments and working memory tasks

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Aim

The aim of this paper is to examine (a) whether the case features of an intervening NP between the head noun of the subject and the verb affect Greek adults’ and children’s grammaticality judgments and (b) whether the participants’ working memory span correlates with their performance on the grammaticality judgment (GJ).

Background

Crosslinguistic findings argue for morphophonological and/or semantic effects on verbal and nominal agreement (Hartsuiker & Barkhuysen, 2006; Hartsuiker et al., 2003; Vigliocco et. al., 1995; 1996; Deutsch, 1998). Intervening constituents between two agreeing elements have been found to impede agreement in adults and children (Blackwell & Bates, 1995; Hartsuiker & Barkhuysen, 2006; Hayiou-Thomas et al., 2004). Franck et al. (2006) suggested that attraction rates are higher when the intervening constituent c-commands the verb than when it just precedes it. Furthermore, working memory capacity has been shown to correlate with accuracy on S-V agreement in English children (McDonald, 2008) as well as in English and Dutch adults (Bock & Cutting, 1992; Hartsuiker & Barkhuysen, 2006). However, it has not yet been extensively tested whether the morphological features of the intervening constituent affect attraction rates.

The present study

The novelty of this study is that it explores whether the case features of the intervening nouns affect attraction rates and how they interplay with working memory. Attraction effects on S-V agreement were tested by means of an on-line GJ task and correlations between verbal working memory capacity and the GJs through a word and a non-word list recall task (Masoura et al., 2004).

In the on-line GJ task, the case features of the intervening nouns were manipulated so that (a) the determiner and the noun were unambiguously case marked for accusative and,thus, could not be taken as subjects (1), (b) only the determiner was unambiguously marked for accusative (2) and (c) neither the determiner nor the noun were unambiguously marked for accusative (3). The GJ task consisted of 42 experimental sentences, half grammatical and half ungrammatical, seven per each experimental condition. The sentences were presented in a word-by-word fashion, while at the end of each sentence the participants had to judge its grammaticality. Thirty-five Greek adults (age range: 20-41 years; 8 males) and thirty-two Greek children (age range: 10-11 years; 13 males) participated in all tasks.

(1) O kipos me tus thamnus kserathike/*kserathikan.
   the garden.nom.masc.sg. with the.acc.masc.pl bushes.acc.masc.pl.
parched.pass.past.3sg/*3pl
   The garden with the bushes was parched/*were parched.

(2) I efimerida me tis agelies kikloforise/*kikloforisan
The newspaper with the announcements was released/*were released.

(3) I dhiafimisi ja ta tsighara apaghoreftike/*apaghoreftikan.

The advertisement about the cigarettes was banned/*were banned.

The children were overall less accurate and slower than the adults, though this effect was larger in the case of ambiguously case marked nouns. Moreover, verbal working memory capacity was positively correlated with accuracy scores only in conditions with ambiguously case marked nouns ((2) & (3) for children and (3) for adults) and negatively correlated with RTs in the same conditions. These results indicate that attraction rates depend on the case features of the intervening noun; namely, intervening nouns unspecified for case features render the processing of S-V agreement more prone to errors. More interestingly, it is in these cases only that working memory correlates with accuracy and RTs, showing that cognitive resources matter when unambiguous morphological information is not available.

References