Verb Morphology in Aaphasic Speech: Evidence from Greek

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1. Objective

Previous studies (Friedmann & Grodzinsky, 1997; Wenzlaff & Clahsen, 2004; Burchert, Swoboda-Moll & de Bleser, 2005; Varlokosta et al. 2006; Nanousi et al. 2006) have suggested that deficits in grammatical morphemes appear to be selective in aphasia, evidenced by poor performance in certain functional categories while other categories appear relatively spared.

Varlokosta et al. (2006) found selective deficits in verb inflection by Greek aphasic speakers. However, materials in their study were not balanced across conditions, confounding functional category with putative processing load.

The present study was conducted as a follow-up of Varlokosta et al. 2006. We aim to confirm the functional category differences having ruled out the possibility of length effects by specifically equating testing materials.

2. Method

Participants

10 aphasic speakers (1 woman) all right-handed; all with left CVA at least four months prior to testing (mean time post-onset: 21.2 months, SD = 15.6); mean age: 61.8, SD = 9.8; mean years of education: 12.2, SD = 2.4. All right-handed; all with left CVA at least four months prior to testing (mean time post-onset: 21.2 months, SD = 15.6); mean age: 61.8, SD = 9.8; mean years of education: 12.2, SD = 2.4. 10 age-, sex-, and education-matched control participants.

Materials & Procedure

A Sentence Completion and a Grammaticality Judgment task were administered, each including three conditions:

Subject-Verb Agreement (agr), Tense (t), and Aspect (asp).

3. Results

Sentence Completion Task: 80 items in each condition: 40 cue-sentences (CS) and 40 target-sentences (TS) differing from the corresponding CS only in one “dimension.” Each participant was presented with the CS and then asked to complete the TS.

Examples:

**agr condition**

CS: símera óli métra o mánoi γράφει γράμμα στή 
6ías. 

Today all day Manos writes 3rd-sg. letter to aunt. “Manos is writing (the) letter to (his) aunt all today”

TS: símera óli métra ev év (γράφει γράμμα στή 6ías) 
Today all day I ______. (write-3sg. letter to aunt.)

I am writing (the) letter to (my) aunt all day today.

**t condition**

CS: fétos i 6ía eleni ólo xáni ta játa tís. 
This year aunt Helen is constantly losing her glasses.

This year aunt Helen keeps losing her glasses”

TS: pérísi i 6ía eleni ólo ____ (éxame tis játa tís) 
Last year aunt Helen ____ (was constantly losing her glasses )

“Last year aunt Helen kept losing her glasses.”

**asp condition**

CS: apó ávrio o 6ános sinécho ma viépí ton patéra tís. 
From tomorrow onwards Thanos will constantly see-imp. his father

From tomorrow onwards Thanos will always see his father.

TS: apó ávrio o 6ános ksafiánoi ____ (Ia óli ton patéra tís) 
Tomorrow Thanos suddenly will see-perf. his father.

“Tomorrow Thanos will encounter his father.”

Grammaticality Judgment Task: 80 items in each condition: 40 grammatical and 40 ungrammatical.

Each participant was asked to judge the grammaticality of each sentence presented.

Examples:

**agr condition**

kai tis xoríno tis jortes ev stóleio dêmata sta pejóia. 
Every year during the holidays I send parcels to the children.”

“*metá to fai pada esí pléno ta pejóia. 
“After eating always you wash up” 1st-sg. up the dishes.”

“*You always wash up the dishes after eating.”

**t condition**

ávriv i sía sinécho 6ía stóleio próskeleis. 
Tomorrow the aunt will constantly send invitations.

Tomorrow the aunt will often send invitations.

**zas to mesiméri i popi viéphi tleórasi. 
“Yesterday at noon Papi washes TV.”

“Yesterday at noon Papi watches TV.”

**asp condition**

ávriv i ajecli sinécho 6ía pléksi éna kaskól. 
“Tomorrow Angeliki will constantly knit a scarf.”

“Tomorrow Angeliki will often finished knitting a scarf.”

Palidótera o stelios sinécho élege anoistis. 
In the past Stelios constantly was telling nonsense.

“In the past Stelios was always talking nonsense.”

3. Results

<table>
<thead>
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<th>Table 1</th>
<th>Proportion of errors (as a percentage of the total number of sentences per condition, for each group)</th>
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<tr>
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<td>Subject-Verb Agreement (agr)</td>
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<td>Tense (t)</td>
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Figure 1 & 2. Performance of the two groups in sentence completion

| Figure 3 & 4. Performance of the two groups in grammaticality judgment |

4. Discussion

•Our findings are not compatible with structural approaches of agrammatism, as they all predict a selective deficit.

•In the sentence completion task the deficit observed in the aphasic speakers’ group appears not to be selective.

•The fact that same patterns of performance are observed in the grammaticality judgment between the two groups suggests that performance on the categories of tense and aspect is normally lower than on agreement → agrammatism accentuates an already existing difference between these categories and therefore the deficit cannot be characterized as selective on the basis of agrammatism.

•If the deficit found was due to a structural-representational account, it should be expected to appear not only in the grammaticality judgment task, but also in the sentence completion task for the same categories (Dickey, Milman & Thompson, 2008).

•Compared with the previous study (Varlokosta et al. 2006), our results suggest that as the sentences were balanced in terms of length, they were balanced in terms of processing load and thus the deficit was balanced across the categories.

•Our findings are compatible with a processing account of agrammatism.

References


