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Assessing sentence comprehension abilities: A test for Relativized Minimality

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Introduction

Cross-linguistic studies in agrammatism have attested asymmetries in the comprehension of semantically reversible structures with canonical vs. non-canonical argument order. Recently, these asymmetries have been interpreted within the Relativized Minimality approach (RM) to locality in syntax (Garaffa & Grillo, 2008).

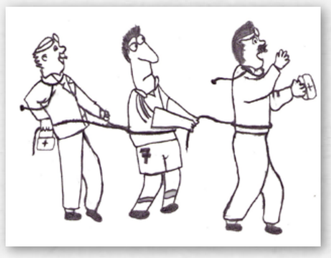
• RM predicts that local relations cannot be established between two terms of a dependency if an intervening element possesses similar morphosyntactic features, since this element will be recognized as a possible candidate for the establishment of the dependency relation.

• In an extension of the RM approach, Friedmann et al. (2009) reported that lexical NP-restriction plays an important role for the establishment of a dependency. Specifically, good comprehension in object relative clauses (RCs) was attested in children due to the absence of a lexical NP-restriction, while poor comprehension resulted from the presence of a lexical NP-restriction in the intervening subject.

The present study aims at investigating whether the predictions within this extension of the RM framework can be confirmed by the data obtained from Greek agrammatic individuals.

Method

One monolingual Greek agrammatic speaker, P.K., 43-year-old male, participated in this study. In 2009, he suffered a left ischemic CVA including a focal lesion in Broca's area after a disruption of the middle cerebral artery. He was selected for inclusion on the basis of the Boston Diagnostic Aphasia Examination (BDAE) (Goodglass & Kaplan, 1983; Greek version by Papathanasiou, Feidatsi, Katsantoni, Panagiotopoulou, & Malefaki, 2004).



Three comprehension picture pointing tasks were administered: **(i)** *wh*-questions, **(ii)** RCs, and **(iii)** free relatives (FRs).

(i) 90 *wh*-questions: 60 non referential, *who* and *what* subject/object questions, and 30 referential, *which-NP* subject/object questions.

(ii) 60 RCs: 30 right branching and 30 center-embedded, half of which were subject-extracted and half object-extracted.

(iii) 60 FRs: 30 subject/object sentences in which the subject/object consisted of the free relative restrictor *opjon* (=whoever) (1), and 30 subject/object sentences in which the subject/object consisted of the free relative restrictor *opjon* and an NP (2). Additionally, 15 object RCs were included in which the subject was a quantificational restrictor (3), and 15 object RCs in which the subject was a quantificational phrase (Q+NP) (4).

Non-Referential wh-questions

Subject Questions: Pjos/Ti t_i trava ton aθliti?
which_NOM/ what is-chasing the athlete_ACC

Object Questions: Pjon kiniga o aθlitis t_i ?
whom_ACC/ what is -chasing the athlete_NOM

Referential wh-questions

Subject Questions: Pjos jatros t_i trava ton aθliti?
which doctor_NOM is-chasing the athlete_ACC

Object Questions: **Pjon jatro** kiniga **o aθlitis** t_i ?
whom doctor_ACC is -chasing the athlete_NOM

RCs

RB_ Subject Questions: Dikse mu ton jatro pu$_i$ t_i trava ton aθliti
show me the doctor that is-chasing the athlete_ACC

RB_Object Questions: Dikse mu **ton jatro** pu$_i$ trava **o aθlitis** t_i .
show me the doctor that is -chasing the athlete_NOM

RCs

CE_ Subject Questions: O jatros pu$_i$ t_i trava ton aθliti ine psilos. Pjos ine?
the doctor that is-chasing the athlete_ACC is tall. Who is he?

CE_Object Questions: **O jatros pu$_i$** trava **o aθlitis** t_i ine psilos. Pjos ine?
the doctor that is -chasing the athlete_NOM is tall. Who is he?

FRs

subject - FR_Q_NP: Dikse mu opjon$_i$ ti trava ton aθliti
show me whoever is pulling the_ACC athete_ACC

(1)object - FR_Q_NP: Dikse mu opjon$_i$ trava o aθlitis t_i
show me whoever is pulling the_NOM athete_NOM

subject - FR_Q+NP_NP: Dikse mu opjon jatro$_i$ t_i trava ton aθliti
show me whichever doctor is pulling the_ACC athlete_ACC

(2)object - FR_Q+NP_NP: Dikse mu **opjon jatro**$_i$ trava o aθlitis t_i
show me whichever doctor is pulling the_NOM athlete_NOM

(3)object RC with Q: Dikse mu ton jatro pu$_i$ kapjos travai t_i
show me the_ACC doctor_ACC that someone is pulling

(4)object RC with Q+NP: Dikse mu **ton jatro pu**$_i$ kapjos **aθlitis** travai t_i
show me the_ACC doctor_ACC that some athlete is pulling

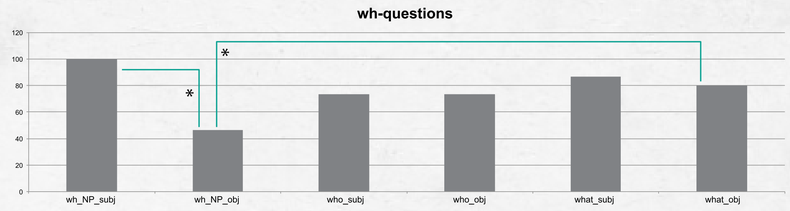
Results

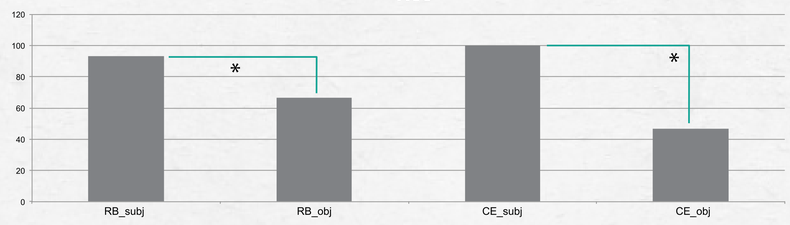
Wh-questions: no subject/object asymmetries in *who*- and *what*-questions, but an asymmetry between *which*-NP subject and object questions.

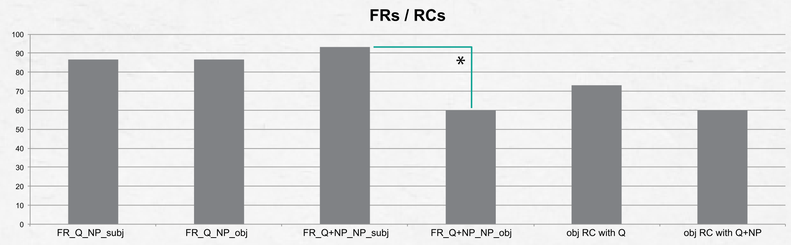
RCs: significantly worse performance on object than on subject RCs.

FRs: no difference in object FRs where the moved element did not contain a lexical NP (1b) and those where it did (2b).

Similarly, the difference between RCs in which the subject included a quantificational restrictor (3) and those in which the subject included a quantificational phrase (4), was not significant either.







Discussion

Our results lend some support for the extension of RM proposed by Friedmann et al. P.K.'s pattern of performance on a sentence-picture-matching task was consistent to some extent with the idea that structural similarity/dissimilarity with respect to a lexical NP-restriction affects aphasic comprehension. Specifically, if both the intervening subject and the moved A'-element in an object-extracted RC or *wh*-question contained a lexical NP, that similarity was sufficient to compromise understanding. Nonetheless, our data from FRs (1 and 2) and RCs with a quantificational subject (3 and 4) indicate that lexical NP-restriction is not sufficient in all cases and that other features of the moved element or the intervening subject play also a significant role in the intervention effects.

Selected References

• Friedmann, N., Belletti, A., and Rizzi, L. (2009). Relativized relatives: Types of intervention in the acquisition of A-bar dependencies. *Lingua, 119*, 67-88.
• Garraffa, M., and Grillo, N. (2008). Canonicity effects as a grammatical phenomenon. *Journal of Neurolinguistics, 21*, 177-197.

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