

# PRONOMINAL AND ANAPHORIC REFERENCE IN AGRAMMATIC APHASIA: EVIDENCE FROM CATALAN AND GREEK

## Pronominal and anaphoric reference is selectively affected in agrammatic aphasia.

1. Reflexives (*himself, herself*) well preserved BUT pronominals (*him, her*) misinterpreted (coreferential interpretations with an inter-clausal c-commanding antecedent) (Grodzinsky, Wexler, Chien, Marakovitz, & Solomon, 1993).
2. Coreference errors only in contexts with strong pronouns (Grodzinsky et al., 1993) and not in contexts with pronominal clitics (Varlokosta & Edwards, 2002; Gavarró, 2008).
3. Strong pronouns better preserved in simple transitive clauses than in complex Exceptional Case Marking (ECM) structures (Ruigendijk, et al., 2006; Edwards & Varlokosta, 2007).
4. Coreference errors attested in ECM contexts with pronominal clitics (Gavarró, 2008); but see Varlokosta & Edwards (2002) for no coreference errors in ECM contexts with clitics.

## RESEARCH QUESTIONS

- (a) are pronominal clitics and anaphoric reflexives equally preserved  
(b) are clitics better preserved in simple transitive clauses compared to ECM contexts?

Seven Greek- and three Catalan-speaking individuals with agrammatic aphasia, aged 18 to 59 years, participated in this study. They were all right-handed and had suffered a left CVA and were tested at least 1,5 year post onset. Additionally, a control group of unimpaired speakers matched to the agrammatic speakers on age, education, and sex participated in the study.

The assessed structures were the same in the two languages and involved pronominal clitics and reflexive pronouns (Greek) or reflexive clitics (Catalan) in simple transitive clauses and ECM contexts. Two comprehension tasks were used: a picture selection task for Greek, designed within the European COST Action A33, and a truth value judgment task for Catalan.

1

I mama tin pleni / pleni ton eafto tis  
the mum her.CL is washing / is washing REFL  
I mayisa tin vlepi na horevi / vlepi ton eafto tis na horevi  
the witch her.CL sees SUBJ dance / sees REFL SUBJ dance



2

L'àvia l'eixuga / s'eixuga  
the grandmother her.CL dries / REFL.CL dries  
L'àvia la veu ballar / es veu ballar  
the grandmother her.CL sees dance / REFL.CL sees dance



Condition	Greek	Catalan
simple clause, clitic	93%	81%
simple clause, refl	95%	100%
ECM, clitic	52%	66%
ECM, refl	83%	100%

Table 1: Percentage correct across conditions

Although different experimental methods were used both pronominal clitics and reflexives were interpreted in a target-like manner across languages in simple transitive constructions (in line with Varlokosta & Edwards, 2002; Gavarró, 2008), while pronominals, unlike reflexives, were significantly misinterpreted in ECM contexts (contra Varlokosta & Edwards, 2002).

## Predictions within Reflexivity (Reinhart & Reuland, 1993)

### - Conditions:

A: a reflexive-marked predicate must be interpreted reflexively  
B: a reflexively interpreted predicate must be reflexive-marked

### - Condition on A-chains

A maximal A-chain ( $\alpha_1 \dots \alpha_n$ ) has exactly one link:  $\alpha_1$ , which is both (+R) and Case-marked. Where an element is (+R), when it is referentially independent and specified for all  $\phi$ -features

### Reflexives:

**Catalan:** Reflexives are (-R) elements and thus well-interpreted in simple transitive (Condition B) and ECM clauses (A-chain).

**Greek:** Reflexives are (+SELF, +R) and thus do not enter a chain formation (Anagnostopoulou & Everaert, 1999). In simple transitive constructions Condition B regulates the anaphoric interpretation. However, anaphoric interpretation in Greek ECM constructions is a problem since A-chain cannot apply and Condition B requires argumenthood. Thus, the preserved performance of Greek speakers (healthy or agrammatic) in ECM conditions with reflexives remains unaccounted within Reflexivity.

### Pronominal Clitics:

Problem in the formation of A-chain

**Two possibilities:** Pronominal clitics in agrammatic aphasia are

- interpreted as (-R) (Baauw & Cuetos, 2003)
- unspecified (but see Vasić 2006 for arguments against this position).

Thus, the pattern with pronominal clitics in both languages can be explained within Reflexivity under Baauw & Cuetos's (2003) assumption.

## Predictions within PoB (Reuland, 2001)

### - Economy hierarchy

Narrow Syntax >> Semantic Level >> Accessing Discourse

Ruigendijk et al. (2006) postulated a different hierarchy for agrammatic speakers due to their syntactic deficits.

### Reflexives:

Ruigendijk et al. (2006): Dutch reflexives are specified only for person, which is an uninterpretable feature, so a dependency can be formed between the reflexive and the antecedent.

**Catalan:** Reflexives are specified only for person (as in Dutch).

**Greek:** Reflexives are specified for person, number, and gender features; thus, under Ruigendijk et al.'s account, it is unclear what makes reflexives easy to comprehend in both simple and complex constructions, since the key feature in their analysis lies in the incomplete feature specification of reflexives. Thus, Greek is unaccounted within Ruigendijk et al.'s analysis.

### Pronominal Clitics:

Coreference errors are ruled out in simple transitive clauses due to lexical semantic specification of the verb (arity reduction). Arity reduction does not apply between two different predicates; thus, in ECM constructions both a bound variable (semantic) interpretation and a coreferential (discourse) dependency will lead to an incorrect interpretation. Thus, the pattern with pronominal clitics in both languages can be explained within PoB.

## CONCLUSION

It is apparent that both accounts face a number of problems in the interpretation of the cross-linguistic data in agrammatic aphasia. In particular, the feature specification of Greek reflexives is different from the one assumed within these theories, leaving open the question how Greek speakers assign reference to reflexives within both Reflexivity and PoB.

## SELECTED REFERENCES

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