

Processing Subject Pronouns in Relation to Non-Canonical (Quirky) Constructions

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Abstract: This paper tests the Position of Antecedent Hypothesis (PAH), formulated by Carminati (2002), in Romanian, in contexts involving dative quirky subjects. PAH states that the null pronoun prefers an antecedent in the Spec,IP position (subject position), while the overt pronoun prefers an antecedent not in the Spec,IP position (in object position or elsewhere lower in the clause). Structural configuration will guide the processor in choosing the proper antecedent for a pronoun. I prove that the PAH holds for non-canonical contexts, namely for dative subjects/nominative objects contexts in Romanian. To demonstrate this, I propose three off-line (pilot) experiments. The results show that there is a division of labour between null and overt pronouns in assigning a referent in non-canonical contexts. The null pronoun always chooses as antecedent the dative subject, in Spec,TP position and that the processor chooses as antecedent for the overt pronoun, the nominative logical object, situated in a lower position in the clause.

Keywords: Position of Antecedent Hypothesis, dative subjects, null pronoun, overt pronoun, non-canonical contexts

1. Introduction

Quirky subject constructions are sentences characterized by a dative logical subject and a nominative logical object. Quirky subjects are elements that behave like nominative subjects, but are not characterized by nominative case. Most of the quirky subjects in Romanian are theta-marked as experiencers and are subjects of psychological verbs (such as *like*, *dislike*). Structurally, dative subjects occupy the same position as nominative subjects, the Spec,TP position. Romanian displays many types of quirky constructions, but the ones considered in this paper are of the kind illustrated below:

- (1) DATIVE SUBJECT + CL.DAT + VERB_{Agree} + NOMINATIVE
OBJECT_{Agree}
Lui Ion îi place Maria.
John.Dat Cl.Dat like.3SG Mary
'John likes Mary.'

In (1), the dative lexical NP is in preverbal position and it is the logical subject of the sentence. The dative subject is obligatorily doubled by a dative

clitic. The dative NP may be missing, the sentence is grammatical with only the dative clitic, which is therefore the logical subject of the sentence.¹

The purpose of this paper is to test the Position of Antecedent Hypothesis (henceforth PAH), formulated by Carminati (2002), in Romanian, in different constructions, such as intra-sentential, subordinate and coordinate structures. The novel factor is that the processing of subject pronouns (based on the PAH) is investigated in contexts involving dative quirky subjects, in both main and subordinate clauses. The paper is organized as follows: in Section 2, I present a background of the literature on the issue of pronoun processing. In Section 3, I present the overall hypothesis of this paper, as well as three (pilot) experiments intended to test the PAH in Romanian (in constructions involving non-canonical subjects). I will also present the results of these experiments.² Section 4 will present the conclusions.

2. Theoretical Background

Numerous experiments have been reported in the literature regarding pronoun processing, based on various hypotheses. Montalbetti (1984) demonstrates that the null and overt pronouns have different formal properties and that only the null pronouns, but not the overt pronouns are licensed as bound variables. Luján (1985) shows that there is a distinction between the null pronoun (corresponding to the English unstressed pronoun) and the overt pronoun (corresponding to the English stressed pronouns), and this distinction could capture the difference between Romance languages (e.g. Spanish) and English. The Economy Hypothesis stipulates that null pronouns should be preferred and used more in contrast with the overt pronouns because they carry fewer features and are more economical. The Parallel Function Strategy (Sheldon 1974) states that a pronoun with two possible antecedents will choose as antecedent the element with the same grammatical role. Clifton and Ferreira (1987) demonstrated that pronouns

¹ Torrego (1996), talking about experiencer in subject position, assumes that the dative clitic without the lexical dative NP signals a null experiencer realized as 'pro'.

² Because this is a pilot study, the results will be taken as suggestive and not as clear-cut evidence for the specific predictions that are tested.

are more likely to retrieve topical antecedents rather than non-topical ones.³ In this paper, I will adopt Carminati's (2002) PAH. She shows that in Italian, there is a division of labour between null and overt pronouns with regard to structural configuration.

(2) *Position of Antecedent Hypothesis*

The null pronoun prefers an antecedent which is in the Spec,IP position, while the overt pronoun prefers an antecedent which is not in the Spec,IP position.

This predicts that the null pronoun will choose an antecedent in the subject position and, respectively, the overt pronoun will choose an antecedent in object position (or elsewhere lower in the clause). The PAH makes the prediction that structural configuration will guide the processor in choosing the proper antecedent for a pronoun. According to Alonso-Ovalle et al. (2002), the referential status of the antecedent is not relevant, neither the morphological properties, nor the lexical content of the pronoun itself.

Carminati (2002) conducted a series of experiments and demonstrated the PAH for intra-sentential anaphora. The first two experiments she reports test sentences with canonical subjects in adverbial clauses in ambiguous contexts (contexts with the same gender possible antecedents). According to Carminati, the ambiguous contexts are "such that we would expect the Position of Antecedent strategy to work best, if such a strategy is employed by the processor." Below is an example from a questionnaire study:

(3) *Marta scriveva frequentemente a Piera quando 0/lei era negli Stati Uniti.*
Marta wrote frequently to Piera when 0/she was in the United States.

'Marta wrote frequently to Piera when she was in the United States.'

When the respondents were asked to find a proper antecedent for the subject of the main clause, they chose *Marta* as antecedent. The overt pronoun was more associated with the object *a Piera*.

³ According to Reinhart (1981), in the absence of contextual and marked intonational features, the referent in the Spec,IP position (the subject structural position) is interpreted as a default topic.

The third experiment reported by Carminati tests the PAH in one referent unambiguous contexts in complement clauses, embedded in verbs such as *think*, *believe*, *report*, *say*. Subjects were asked to choose an antecedent for the subject of the complement clauses (overt or null pronoun), this being either the subject of the main clause or having an obviative referent, a person “not mentioned in the sentence”. An example of the sentences is illustrated in (4):

(4) *Gregorio ha detto che 0/lui sara presente al matrimonio di Maria.*

Gregorio has said that 0/lui will be present to the marriage of Maria

‘Gregory said that he will be present at Mary’s wedding’

The respondents chose the subject of the matrix clause as referent for the embedded subject more times when it was null than when it was an overt pronoun. Subjects were also asked to rate their answers on a confidence scale (1= very unsure, 5=very sure). Results showed that Italian speakers preferred the subject of the matrix clause as a referent for the subject of the embedded clause when it was null pronoun than when it was overt pronoun. In sum, Carminati (2002) proved that if a language displays two types of pronouns, null versus overt, in its pronominal system, then the two will have different functions. The null pronouns were more likely to refer to an antecedent in subject, Spec,TP position, whereas the overt pronoun referred to an antecedent elsewhere.

Alonso-Ovalle et al. (2002) demonstrated that the PAH makes the correct predictions beyond Italian and it correctly foresees the behaviour of Spanish pronouns in intra- and extra- sentential anaphora cases. They have also shown that the anaphoric preferences of the PAH interact with the topic-focus articulation of the sentence. Alonso-Ovalle et al. (2002) proved that the PAH holds for Spanish, Spanish native speakers choosing the subject as referent for null pronouns and referents for the overt pronouns are chosen lower in the clause.

Diaconescu and Goodluck (2004) tested Romanian interpretation of null and overt pronouns in sentence with d-linked and non-d-linked *wh*-phrases. They found both *pro* and overt pronouns being subject to d-linking attraction effect. Also, the null pronoun was coreferred more with the *wh*-phrase than the overt

pronoun. This effect showed that the PAH holds for Romanian, as null pronoun was associated more often with the more relevant structural element in the sentence.

So far, I presented theoretical and experimental background for the PAH. In a language where both null and overt pronouns are available, native speakers will assign the null pronoun as referent to the subject (to a higher structural position) and the overt pronoun as referent to the object of a sentence (to a lower position). In the next section, I propose three experiments to demonstrate the PAH for the Romanian language with non-canonical dative subject contexts.

3. Position of Antecedent Hypothesis in Romania

In this paper, I aim to demonstrate that the PAH holds for Romanian non-canonical contexts, namely for dative subjects/nominative objects contexts. To demonstrate this, I propose three off-line (pilot) experiments, described in this section. The dative quirky constructions, tested for the purpose of this paper are constructions with dative subject experiencers of psychological verbs such as *like*, *dislike*, *miss*, *care*. In these constructions, as previously indicated, the nominative NP is the logical object of the sentence.⁴ The PAH predicts that the processor treats dative quirky subjects in the same manner as subjects in nominative case and that both types of subjects should be good antecedents for the null pronouns. Furthermore, the processor doesn't make the distinction between canonical and non-canonical subjects. On the basis of this assumption, I demonstrate that Romanian dative subjects are the preferred antecedents for null pronouns rather than for overt pronouns.

3.1 Experimental Design

Three off-line (pilot) experiments were combined in four questionnaires, testing three tokens of each condition for each subject.⁵ Four subjects, native speakers of Romanian, were tested for the purpose of each pilot experiment. The

⁴ An exception occurs with the verb *a pasa* 'to care', which has a dative quirky subject, but the object displays oblique case.

⁵ Helen Goodluck (personal communication) pointed out to me that three is the minimum number of tokens allowed per each subject).

questionnaires were designed such that no questions from the same experiment are following one another. Twelve filler sentences were inserted in the questionnaires, one on each page. The filler sentences were followed by questions and the answer choices were a. X or b. Someone else. Each page of the questionnaire contained two test sentences and a filler sentence. The total number of test sentences per questionnaire was twenty-four.

3.2 Experiment 1

The goal of this experiment was to test the PAH with dative subjects and, respectively, with nominative subjects. It consisted of twenty-four test sentences, each with two conditions. The matrix clause was followed by the subordinate clause. Twelve test sentences had the dative in subject position of the subordinate clause and nominative logical object and twelve sentences were canonical, containing nominative NPs in the subject position of the subordinate clause and accusative object. The subjects of the matrix clause were either overt or null pronouns. The test sentences were not disambiguated for gender, the lexical NP in each sentence had the same gender. The null/overt pronouns could refer to either subject or the object antecedent in both types of sentences. The test sentences were to my knowledge pragmatically disambiguated.⁶ The main clause contained an intransitive verb and not subject-object pattern. All sentences were in present tense. The non-canonical sentences had psychological verbs such as *like, dislike, miss, care*.⁷ The dative experiencer and the nominative subject of the subordinate clause were introducing only proper names. The object of the subordinate clause was always either a proper name or an animate lexical NP. Examples of test sentences are illustrated below:

(8) Dative subject – Nominative object in the subordinate clause:

Pentru că lui Ion îi displace Robert, Ø / el se plânde la director.

⁶ However, a reviewer points out that pragmatics may give opposite results from those proposed by both Montalbetti (1984) and Carminati (2002). This fact may also be true for Romanian in the following context, where it is difficult to coindex the pronoun (overt or null) from the embedded clause with *Maria*, unless there is a special meaning (e.g. *Marta* is not an easy person):

Mariei îi place Marta, pentru că Ø / ea e foarte draguța.

Mary.Dat Dat.Cl like.3Sg Marta, because Ø / she is very nice

Mary likes Marta because she is very nice.

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Because John.Dat Cl.Dat dislikes Robert.Nom, Ø/he Refl complains to director.

‘Because John dislikes Robert, he complains to the director’

(9) Nominative subject – Accusative object in the subordinate clause:

Chiar dacă Maria o detestă pe Ioana, o / ea se comportă prietenește.

Even if Mary.Nom Cl.Acc detest.3Sg Joanna.Acc,0 / ea Refl. behaves friendly.

‘Even if Mary detests Joanna, she behaves friendly’

Each sentence was followed by a question about the possible referent of the subject of the main clause, with two possible answers, either the subject or the object of the subordinate clauses. The subjects were instructed to answer each question, by choosing the referent, which seems the most appropriate to them.

3.2.1 Results

The results in raw scores and percentage are illustrated in the table below:

	Null pronoun (quirky)	Overt Pronoun (quirky)	Null Pronoun (Canonical)	Overt Pronoun (Canonical)
Subject Ant.	12 (100%)	5 (41.6%)	12 (100%)	3 (25%)
Object Ant.	0 (0%)	7 (58.4%)	0 (0%)	9 (75%)

In both types of contexts (canonical and non-canonical), the preference for the null pronoun as referring to the subject was in proportion of 100%. However, the proportion of choosing the object as antecedent for the overt pronoun was smaller than choosing the subject as antecedent for the null pronoun. The overt pronoun is recognized as antecedent for the object when this is in accusative case in canonical constructions more often than in quirky constructions, but this difference is not statistically significant.

3.2.2 Discussion

The PAH predicts that a null pronoun is strongly preferred to an overt pronoun when the antecedent is in the Spec,TP (subject position). The PAH was confirmed in this case because the number of times the respondents chose the null pronouns as antecedent for the subject is greater than the number of times when they chose the overt pronoun as antecedent for the subject. Because the sentences are pragmatically disambiguated and there is no extra-context given,

⁷ Because the number of such verbs is limited in Romanian, some verbs occurred in the negative forms, or some were repeated.

either the subject or the object could be plausible antecedents for the overt pronouns. Only an experiment with dative subject/nominative object structure could not distinguish the PAH from a hypothesis based on economy, which stipulates that the null pronoun is more economical, and it is preferred over the overt pronoun in such contexts. However, by adding the sentences with nominative subject/accusative object, which clearly confirm the PAH, the Economy Hypothesis could be excluded.⁸ Overall, the results confirm the PAH for null and overt pronouns, for both types of subordinate clauses, dative subject/nominative object and respectively, nominative subject/accusative object. Dividing the results according to the two different types of sentences, the results also confirm the PAH. The number of times the respondents chose the dative subject as antecedent for the null pronoun is greater than the number of times they chose the overt pronoun as referent for the dative subject in spite of the fact that the overt pronoun with the dative subject antecedent was also plausible.⁹ In the nominative subject/accusative object type, the difference is clear, that is, the PAH is clearly confirmed. These results confirm the PAH in both dative subject/nominative object constructions and nominative subject/accusative object constructions. Therefore, it shows that Romanian speakers choose a null pronoun as referent for the subject of the sentence, the higher structural DP, and this choice is preferred over choosing an overt subject as referent for the subject. In the nominative-accusative contexts, the preference for antecedents for overt pronouns is for the object (or an element structurally lower).

3.3 Experiment 2

In this experiment, I tested the PAH in complement clauses of report or belief verbs when a subject referent appears in the matrix clause. The subject of the embedded clause was a non-canonical dative subject. In one condition, the dative lexical pronoun doubled by the dative clitic is present, and in the second

⁸ It can also be excluded if we consider results from Carminati's (2002) first two experiments and the results reported in Alonso-Ovalle (2002), Diaconescu, and Goodluck (2004).

⁹ The inverted construction, the null pronoun referring to the nominative object is less plausible than the overt pronoun referring to the dative subject.

condition only the dative clitic is present, and the dative lexical pronoun is missing. The dative subject agrees in gender and number with the subject of the matrix clause. The proposed sentences are illustrated in the example below:

- (10) *Alina raportează că 0 / ei îi plac scriitorii moderni*
Aline reports that 0 / she.Dat Dat.Cl like.3Pl writers modern
'Aline reports that she likes modern writers.'

Carminati (2002) showed that the PAH is true for these types of sentences with canonical subject in the embedded clause. This experiment represents an adaptation of the PAH. The prediction is that if the dative lexical pronoun is missing, and the dative clitic is the quirky subject, then the preference will be for the subject of the main clause. If the overt lexical dative pronoun is present, then the referent is likely to receive an obviative interpretation. The subjects were asked their preference, and the possible answers were: a) the subject of the main clause or b) someone else. All contexts are pragmatically disambiguated. Therefore, when weak elements, such as clitics (not only null), are in the subject position of the embedded clause, the PAH will still hold. This hypothesis will be confirmed if the number of times the respondents choose the weak element as referent for the subject of the matrix clause is greater than the number of times the respondents will choose the overt dative pronoun as referent for the subject of the main clause. The problem with this experiment is that it could be argued that when processing sentences which are pragmatically disambiguated with only one possible referent, the processor will be more likely to choose as antecedent an NP which is expressed in the linguistic context rather than an obviative interpretation. This predicts that the overt dative pronoun could also be a plausible referent for the subject of the matrix clause, but the clitic pronoun can only co-refer with the subject, and it cannot get an obviative interpretation. This being said, I expected a preference for the dative clitic over the dative pronoun in recognizing the subject as its antecedent.

The materials used for this experiment were twelve sentences containing a matrix clause and a subordinate complement clause. There were six frames, each frame containing two conditions, one in which the subject of the subordinate

clause was a dative pronoun and one in which the subject of the subordinate clause was the dative clitic, experiencers of the psychological verb. The dative clitic could only refer to the subject of the main clause, and the dative pronoun could either refer to the subject of the main clause or receive an obviative interpretation. The matrix clauses had verbs such as *a zice* ‘to say’, *a spune* ‘to say’, *a crede* ‘to think’, *a raporta* ‘to report’, and *a afirma* ‘to affirm’. The verbs of the embedded clauses were psychological verbs, such as *a placea* ‘to like’, and *a displacea* ‘to dislike’. All sentences were in present tense. All sentences had as matrix subject a proper name, and the dative pronouns/dative clitic agreed in gender and number with the subject of the matrix clause. Each test sentence was followed by a question with two answer choices, either the subject of the main clause or someone else. The hypothesis to be tested in this experiment is an adaptation of the PAH, that weak elements, such as clitics, are linked to the subject position and the overt dative pronouns are linked to other position, lower in the clause (in this experiment, likely to receive an obviative interpretation). The prediction for this experiment is that the dative clitic will be preferred over the overt dative pronoun as antecedent for the subject position.

3.3.1 Results

The questionnaires were scored manually and the percentage of times the respondents chose the subject and obviative interpretation for each of the two conditions was computed. Scores and percentages are given in the table below:

	Dative Clitic	Lexical Pronoun
Subject Ant.	12 (100%)	8 (67%)
Obviative	0 (0%)	4 (33%)

The results suggest that in sentences with only one referent, the processor prefers as antecedent an element present in the discourse. But the prediction holds, as the subject of the main clause was chosen more often as antecedent for the dative clitic than as antecedent for the dative pronoun. Also, the obviative interpretation was chosen significantly more times in contexts with the dative

pronoun than with the dative clitic. This suggests that there exists a division of labour between the dative clitic as subject and the lexical dative pronoun.¹⁰

3.3.2 Discussion

In all cases, the dative clitic was preferred as antecedent for the subject of the matrix clause. The PAH was confirmed, although it was less evident than the findings in the previous experiments or the findings of other experiments reported in the literature. These results could be explained by the fact that the PAH needs to be adapted to different contexts: one vs. two possible referents. According to Carminati (2002),

“in one-referent contexts, the antecedent bias of the overt pronoun is weaker than in two-referent contexts. However, the comparison with the null pronoun in the same contexts shows us that this bias does not completely disappear.” (Carminati, 2002: chapter 2)

To summarize, I have demonstrated that there is a division of labour between dative pronouns and dative clitics. In these contexts, the “weak version” of the PAH could be formulated as follows: weak elements (such as clitics) are likely to choose an antecedent in subject position (in higher position in the clause) and lexical elements (such as lexical dative pronouns) are likely to choose an antecedent elsewhere (lower in the clause – for two possible referent contexts or an obviative interpretation – for one possible referent in the clause).¹¹

3.4 Experiment 3

Experiment 3 tests the PAH in contexts of two coordinate clauses (and adversative clauses). The first clause is a quirky construction with two possible referents, of the same gender, either the dative subject or the nominative object. The second clause (coordinate or adversative clause introduced by *and* or *but*) was a canonical clause, in which the subject is either a null or an overt pronoun, of the same gender as the two possible referents. Examples are illustrated below:

(11) *Lui Ion îi displace Petre, dar 0/el se preface indiferent.*

John.Dat Cl.Dat dislike.3sg Peter, but 0/ he Refl pretends indifferent.

¹⁰ A reviewer suggests a possible hierarchy, which is likely to be true for Romanian: null pronouns > clitics > overt pronouns. This will remain subject for further research.

¹¹ More research needs to be conducted to confirm this hypothesis.

‘John dislikes Peter, but he pretends to be indifferent.’

In this experiment, all dative logical subjects and nominative objects are of the same gender and they are all proper names. The contexts are pragmatically disambiguated. The null/overt pronoun is a possible antecedent for either the subject or the object. The experiment consisted of six frames. In each frame there were two sentences, one in which the subject of the second clause was a null pronoun and one in which the subject of the second clause was an overt pronoun. Each test sentence was followed by a question whose possible answers were either the dative subject or the nominative object of the first clause.

The hypothesis tested for this experiment was the PAH. It was expected that the subjects will choose the dative subject in the first clause as proper antecedent for the null pronoun and the nominative logical object as antecedent for the overt pronoun. Therefore, the processor will choose according to the structural configuration, given that the dative subject occupies the Spec,TP position. It is also expected that for the processor it will be easier to make the expected choices in the contexts of coordinate clauses with two referents than in subordinate clauses or clauses with only one possible referent.

3.4.1 Results

The four questionnaires were scored manually and the percentage of times the respondents chose the subject and object antecedent interpretation for each of the two conditions was computed. The results of this experiment are summarized in the table below:

	Null Pronoun	Overt Pronoun
Subject ant.	12 (100%)	3 (25%)
Object Ant.	0 (0%)	9 (75%)

These results show that there is a division of labour between null and overt pronouns in assigning a referent in non-canonical contexts. The dative subject was chosen as an antecedent for the null pronoun in 100% percent of the times, and the nominative logical object was chosen as antecedent for the overt pronoun in 75% of the times.

3.4.2 Discussion

The findings of this experiment confirm the PAH in coordinate and adversative contexts. The results show that the null pronoun always chooses as antecedent the dative subject, which occupies the Spec,TP position and that the processor chooses as antecedent for the overt pronoun the nominative logical object, in a lower position in the clause. This confirms once more, and more strongly, the prediction that the PAH holds for non-canonical subjects and that the structural configuration plays an important role in choosing an antecedent for the null versus overt pronouns. This last experiment, of all the experiments presented, shows the strongest evidence supporting the PAH. Coordinate clauses and adversative clauses with two referents, both proper names, are more prominent to the PAH than possibly subordinate clauses and/or complement clauses with only one referent presented in the discourse.

4. Conclusions

This paper reported three pilot experiments which tested the PAH first formulated by Carminati (2002). These experiments extended the contexts tested by Carminati (2002) to contexts involving non-canonical subjects. I demonstrated that the PAH holds for non-canonical contexts as well as for canonical contexts presented in Carminati (2002). This paper started from the idea that if a language has two types of pronouns in its system, null versus overt, and weak elements (such as clitics) versus lexical elements, these will have distinct functions. I have shown with the three experiments that being in a Spec,TP position a lexical element confers more prominence on an antecedent than being in a position lower than Spec,TP. This was tested by null pronoun referents choosing a dative subject antecedent in subordinate and coordinate contexts. Also, I have shown that there is a difference between the choice of the subject in subordinate clauses by the overt pronouns in contexts in which the subjects of the subordinate clause differ: dative subjects vs. nominative subjects. Another difference was found between the choice in subordinate clauses and coordinate clauses. In coordinate clauses, with the first clause being a quirky

dative construction, the division of labour between the null and overt pronoun is the clearest of all three experiments presented. There is also a difference in processing subjects in contexts with one referent only.¹² All contexts presented in this paper were pragmatically disambiguated, but not disambiguated for gender. In experiments 1 and 3, where there were two possible antecedents, they were of the same gender. In sum, the overall confirmation of the PAH by the experiments presented in this paper and also by experiments previously reported in the literature also confirms the claim that structural configuration, such as the syntactic position of the antecedent of the pronoun is very important for the processing of pronouns in Romanian.

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¹² Perhaps this is because the processor finds it easier to assign as referent an element already found in the discourse, rather than a referent not present in the context.

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