

**Romanian Dative Clitic Dependencies  
in Raising Constructions**

**Dana Geber**

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**Department of Linguistics  
Faculty of Arts  
University of Ottawa**

**Dissertation Advisor: Dr. María Luisa Rivero**

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## ABSTRACT

The goal of this work is to provide an account of dative clitic dependencies in constructions with raising verbs such as *to seem* in Romanian. Dative clitic experiencers as quirky subjects and dative clitics in clitic left dislocation (CLLD) constructions are discussed from a syntactic point of view and experimentally tested in a psycholinguistics study. The study contributes to current innovations in the Minimalist Program, presenting new perspectives on Romanian clitic dependencies in raising constructions partially addressed in earlier generative grammar. This study poses new questions regarding raising, the intervention effects of dative clitic experiencers, and the effects of clitic dependencies in ditransitive constructions.

Chapter II presents an overview of Romanian raising constructions without dative experiencers. I show that Romanian possesses three raising constructions, based on the type of the embedded clause: subjunctive, infinitive, and indicative. Each of these has three potential locations for the nominative subject, argued to be generated in the embedded clause. Formal mechanisms such as Long Distance and Multiple Agree, Movement, Case and EPP are considered independent of one another.

Dative clitic experiencers in raising constructions, analyzed in Chapter III, are claimed to be quirky subjects and to structurally occupy the highest position in the sentence. Having established the role of dative clitic experiencers, I discuss raising constructions involving dative experiencers generated and/or surfacing in various positions, and their effects on operations such as Agree and Move. I then discuss Experiencer Islands, formed by matrix and embedded experiencers in the same utterance, and present the contexts in which they occur. A Grammaticality Judgment Test confirms the existence of such restriction in Romanian. Furthermore, I present an analysis of Experiencer Islands and discuss observed exceptions to the restriction. Dative clitic dependencies such as CLLD constructions and Long Distance CLLD Constructions are also analyzed in this thesis.

The experimental study presented in Chapter IV supports theoretical claims and demonstrates that Romanian speakers are aware of dative clitic dependencies, such as clitic experiencer dependencies and clitic dependencies in CLLD constructions, possess the grammatical knowledge of biclausal constructions involving dative clitic dependencies and have the ability to recognize such dependencies.

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I dedicate this thesis to my dear, wonderful son, Alex.

## LIST OF ABBREVIATIONS

\* = ungrammatical

[+Φ, +Tense] = phi-complete and tense complete

[+Φ, - Tense] = phi-complete and tense defective

1Pl = first person plural

2Sg = second person singular

2Pl = second person plural

3Sg = third person singular

3Pl = third person plural

Acc = Accusative

ANOVA = analysis of variance

C = Complementizer (head)

CD = clitic doubling

Cl = Clitic

Cl.Dat = Dative clitic

Cl.Gen = Genitive clitic

CLLD = Clitic left dislocation

CLLD-ed = Clitic left dislocated

CP = complementizer phrase

Dat = dative

Def = default

Diff = difference

DP = Determiner phrase

Emb = embedded

EPP = extended projection principle

ERP = Event-related potential

Gen = genitive

Ger = gerund

HR = hyper-raising

I = head of Inflection

Imp = Impersonal

Inf = infinitive

KP = Kase Phrase

LDA = Long Distance Agree

LF = logical form

M = mood

MP = mood phrase

Neg = negation

Nom = Nominative

NP = noun phrase

Obl = oblique

Part = participle

Perf = perfect

PF = phonological form

PIC = Phase Impenetrability Condition

Pl = plural

PP = prepositional phrase

pro = pronoun without phonetic properties

PRO = empty category, subject of an infinitive (or subjunctive) clause

Refl = Reflexive

RT = reaction time

Sg = Singular

Spec = Specifier

Spec,TP = specifier of the Tense Phrase

SPLT = syntactic prediction locality theory

Subj = subjunctive

SVO = subject-verb-object

t = trace

T<sub>comp</sub> = complete T

T<sub>def</sub> = defective T

TopP = Topic phrase

TP = Tense phrase

V = verb

VP = verb phrase

VSO = verb-subject-object

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## CHAPTER I INTRODUCTION

This dissertation examines Romanian clitic dependencies from a Minimalist perspective. It covers some topics partially addressed in earlier generative grammar, and also poses new questions with respect to raising, intervention effects of dative clitic experiencers, and the effects of clitic dependencies in ditransitive constructions. The goal of this work is to provide an account of dative clitic dependencies in raising constructions in Romanian.

Dative clitic experiencers as quirky subjects and clitic left dislocation (CLLD) constructions are discussed from a syntactic point of view. The theoretical assumptions are tested via two psycholinguistic experiments described in Chapter IV, which demonstrate that Romanian speakers possess grammatical knowledge of biclausal constructions involving obligatory clitic doubling of dative experiencers and of clitic left dislocated (CLLD-ed) elements. Dative clitic experiencers obligatorily occur in quirky constructions such as *Lui Ion îi plac copiii* ‘John likes the children’, and are considered logical subjects of psychological verbs including *a părea* ‘to seem’ and *a plăcea* ‘to like’. In ditransitive constructions, dative clitics are also obligatory in CLLD constructions. In such contexts, the dative noun phrase (NP) may or may not be present in the phrase.

The raising constructions analyzed in this dissertation include, on the one hand, constructions without dative experiencers, where the nominative subject originating in the embedded clause either raises to the matrix subject position, or to an intermediate position, or stays in situ. These are discussed in Chapter II. Comparatively, Chapter III analyzes raising constructions in which a dative experiencer is present, being generated either in the matrix clause, as the experiencer of the verb *to seem*, or in the embedded clause, as a quirky subject, or

being displaced to various positions in the clause. Analyzing raising constructions with experiencers, I show that Romanian is not free of intervention effects, but that these effects differ from the traditional definition and are caused by a clash of two dative clitic experiencers existing within the same construction.

The last part of the dissertation is dedicated to a psycholinguistic study of dative clitic dependencies in raising constructions, where I demonstrate that Romanian speakers are aware of dative clitic dependencies in biclausal constructions.

## **1. Basic Assumptions**

Raising structures are syntactic patterns in which an argument (i.e., subject) that belongs semantically to a subordinate clause is generally realized syntactically as a constituent of a higher clause. For example, sentences such as (1) are considered raising constructions.

(1) *Bill<sub>i</sub> seems t<sub>i</sub> to be angry.*

Romanian raising constructions, presented in detail in Chapter II, combine thought-provoking characteristics patterning with similar constructions found in languages such as Greek where raising occurs out of subjunctive clauses (2), and in Romance languages where raising occurs out of infinitival clauses (3). Romanian also resembles Brazilian Portuguese, in that raising is possible out of indicative clauses (4), a phenomenon referred to in recent literature as hyper-raising.

(2) *Copiii par să lucreze.*

Children.Nom seem.3Pl Subj work.3Pl

‘The children seem to work.’

(3) *Copiii par a lucra bine.*

Children.Nom seem.3Pl work.Inf well

‘Children seem to work well.’

(4) *Băieții par că au călătorit ieri.*

Boys.Nom seem.3Pl that have.3Pl traveled yesterday

‘The boys seem to have traveled yesterday.’

The three types of raising constructions presented above incorporate the following main ideas:

- a. the nominative subject agrees in phi-features with all finite verbs in the derivation;
- b. the nominative subject is generated in the embedded clause;
- c. the nominative subject can surface in various positions, such as in situ, in the matrix subject position, or in an intermediate position at the edge of the embedded clause.

Let us discuss the following constructions illustrated in (5):

(5) a. *Noi părem să dansăm bine t<sub>noi</sub>.*

We.Nom seem.1Pl Subj dance.1Pl well

- b. *Părem să dansăm bine noi.*  
 Seem.1Pl Subj dance.1Pl well we.Nom
- c. *Părem noi să dansăm bine t<sub>noi</sub>.*  
 Seem.1Pl we.Nom Subj dance.1Pl well  
 ‘We seem to dance well.’

For constructions such as (5a), I argue that movement operations of the raising type should be preserved. In cases where the nominative subject stays in its base-generation position such as (5b), I adopt a Long Distance Agree analysis, based on Alexiadou et al (to appear). In (5b) Multiple Agree applies, where the nominative NP agrees in a Long Distance fashion with the matrix verb and in a local fashion with the embedded verb. In cases where the embedded clause is infinitive, only Long Distance Agree applies. Finally, cases such as (5c), where the nominative NP surfaces in intermediate positions, are considered displacement to a Topic position above the Tense Phrase (TP). I claim that formal mechanisms such as Agree (Long Distance and Multiple Agree), Move, case valuation and EPP have a role in Romanian raising constructions and that they are independent of one another.

In Chapter III, I analyze raising constructions containing dative clitic experiencers. I demonstrate, based on traditional subjecthood tests, that dative (clitic) experiencers are logical subjects in contexts containing psychological verbs (illustrated in (6) with the verb *a plăcea* ‘to like’). In (6), the dative clitic is the obligatory element, and the dative NP *lui Ion* ‘John.Dat’ is optional. Therefore, the clitic encodes the grammatical roles of the dative element. The nominative logical object triggers verbal agreement. Thus, Romanian is a clitic doubling language where (dative) experiencers must also be obligatorily encoded in a clitic, which must

be overt, and as such, is the key element in quirky constructions. Consequently, I claim that clitics, not phrases, are the formal markers of dative experiencers in Romanian.

(6) *Lui Ion îi plac copiii.*

John.Dat Cl.Dat.3 like.3Pl children.Nom

‘John likes children.’

Regarding structural position, I conclude that dative clitics, which are quirky subjects of psychological verbs, are structurally higher than nominative NP objects and that such clitics head a High Applicative Phrase (Rivero and Geber, 2007; Rivero, 2009). Dative NP experiencers, if present, are generated in the Specifier position of the Applicative Phrase. The structure of a quirky construction such as (6) is represented below in (7):

(7) [TP T [AppP Dative Phrase *Lui Ion* [App' [Appo Dative Clitic *îi*] [<sub>vP</sub>[<sub>VP</sub> *plac* NOM *copiii*]]]]]

Regarding the location of base-generation, dative clitic experiencers are generated in the matrix clause as quirky subjects of the raising verb *to seem*, or in the embedded clause when this is a ‘quirky’ construction (i.e., with a dative logical subject and a nominative logical object). These dative clitic experiencers are analyzed based on their effects upon the nominative NP with respect to operations such as Move and Agree.

I further demonstrate that the raising of the nominative NP across a matrix dative (clitic) experiencer is possible in Romanian, as in English and unlike in other languages such as Spanish and Icelandic. This is shown in (8).

(8) *Copiii îmi par [ să fie inteligenți t<sub>copiii</sub>].*

Children.Nom me.Dat seem.3Pl [ Subj be.3Pl smart]

‘The children seem to me to be smart.’

Traditionally, it was believed that Romanian raising constructions were free from intervention effects, and that raising was possible in the presence of matrix experiencers since the nominative is allowed to raise from the embedded clause, across a dative experiencer. I show in (9) that it is not possible to combine two dative clitic experiencers in the same raising construction, a restriction which constitutes a topic of discussion within this dissertation.

(9) *\*Ne par să le placă filmele.*

Cl.Dat.1Pl seem.3Pl Subj Cl.Dat.3Pl like.3Pl movies.Nom

The intervention effects by clitics as in (9) called Experiencer Islands, noted by Rivero and Geber (2004, 2007), consist descriptively in a ban against two dative experiencers in raising constructions. A Grammaticality Judgment Task conducted with Romanian speakers confirms the fact that they do not accept two dative experiencers in the same construction.

Experiencer Islands constitute examples of standard intervention effects. A simplified schema for this violation is illustrated in (10), where a High Applicative in the matrix clause interferes with a High Applicative in the embedded clause, inducing blocking effects:

(10)

\*[ T<sub>matrix</sub> ... [AppIP DAT [AppI' [App CI] ... [T<sub>emb</sub>...[AppIP DAT [AppI' [App CI] ...NOM]]]]]]



Some apparent exceptions to this restriction appear to exist in contexts containing quantifiers. Example (11) illustrates this, as the matrix verb *seem* has a dative experiencer *Mariei* ‘Mary.Dat’ accompanied by the dative clitic *i* ‘Cl.Dat.3Sg’, whereas the embedded verb *a plăcea* ‘to like’ also has an experiencer, the dative quantifier *cuiva* ‘anybody.Dat’, which is not accompanied by a dative clitic. These two dative experiencers can co-exist in the same construction, without rendering an ungrammatical result.

I claim that the situation in (11) does not constitute an exception, showing that quantifiers and negation, as well as some generic dative lexical phrases do not always obey Experiencer Islands in certain well-defined contexts.

(11) *Mariei i- am părut noi [să fi plăcut cuiva].*

Mary.Dat Cl.Dat.3 have.1Pl seem.Part we.Nom [Subj be.Perf.1Pl like.Part someone]

‘We seem to Mary to have been liked by someone.’

The explanations I propose are based on constructions such as (12), where there is a clear semantic difference in the nature of the quantifier with or without the clitic.

- (12) a) *Muzica place cuiva. / \*Cuiva place muzica*  
 Music.Nom like.3sg someone.Dat  
 ‘Somebody likes music.’  
 Universal > existential  
 The interpretation of this sentence is ‘for any X, X likes music’
- b) *Muzica îi place cuiva.*  
 Music.Nom Dat.Cl.3Sg like.3sg someone.Dat  
 ‘Somebody likes music.’  
 Existential > Universal  
 ‘There is some (specific) X and X likes music’

Based on this difference, I propose that constructions where a quantifier is present appear to be of separate categories and comprise of different semantic values. The same situation will be shown to apply to constructions containing two dative experiencers, when one of them is a quantifier, negation, or a generic dative not doubled by the dative clitic.

In Chapter IV, I present a psycholinguistic study conducted to test the theoretical findings related to the effects of dative clitics and double clitic dependencies discussed in this dissertation. The study examines Romanian speakers’ processing of dative clitic dependencies such as clitic left dislocation (CLLD) and dative clitic experiencer dependencies, in constructions involving verbs of the raising kind (i.e., *seem*) where an independent dative constituent may move to the matrix clause or may be base-generated there. For the CLLD-ed element, I adopt the base-generation hypothesis (Cinque, 1990; among others) as opposed to the movement theory (Cecchetto, 1999, 2001; among others).

The experimental sentences resemble the simplified constructions in (13) and (14). In constructions such as (13), the dative NP *lui Ion* ‘John.Dat’ is a CLLD-ed element, which originates in the topic position of the embedded clause and is subsequently moved to the matrix clause. The dative clitic *îi* ‘Cl.Dat.3Sg’ in (13) and the dative NP *lui Ion* ‘John.Dat’ are in anaphoric relation. Subsequently, in constructions such as (14) the dative clitic in the matrix clause accompanied by the dative NP signals an overt experiencer of the verb *seem*, which is the quirky subject of the matrix clause.

(13) *Lui Ion pare să îi dea Maria cărți.*  
 John.Dat seem.3Sg Subj Cl.Dat.3Sg give.3Sg Mary.Nom books.Acc  
 ‘Mary seems to give John books.’

(14) *Lui Ion îi pare să îi dea Maria cărți..*  
 John.Dat Cl.Dat.3Sg seem.3Sg Subj Cl.Dat.3Sg give.3Sg Mary.Nom books.Acc  
 ‘Mary seems to John to give him/her books.’

The goal of the psycholinguistic study was to demonstrate that by the presence vs. absence of the dative clitic in the matrix clause, the parser would be aware of the clause and location within the clause from which the dative NP originated. If the matrix clause contains a dative clitic which is doubling a dative phrase, then the dative NP is the experiencer of the matrix verb. If, on the other hand, the clitic is absent from the matrix clause, this means that the dative is originating from the embedded clause and the lexical dative NP was fronted to the matrix clause level. In such a case of Long Distance Clitic Left Dislocation (Iatridou, 1995), the dative NP is a CLLD-

ed element generated in the embedded clause which is a CLLD construction, and is subsequently displaced via A'-movement to a Topic position within the matrix clause.

The research questions motivating this psycholinguistic study were: How do Romanian speakers process dative clitic doubling dependencies in various constructions? Are speakers aware of the difference between the two constructions based on the place of the dative clitics, namely those involving CLLD-ed elements fronted from the embedded clause to the matrix and those with matrix experiencers?

Two experiments conducted with Romanian native speakers using a self-paced reading paradigm are presented in Chapter IV. The results of the two experiments show that Romanian speakers are aware of and recognize the different types of double-clitic dependencies (e.g., quirky dative doubled by a clitic vs. CLLD construction), as well as the contexts in which these appear, based on a linguistic clue, namely the dative clitic. From a processing perspective, the results of the two experiments support the hypothesis that the parser seems to actively and incrementally build the language structure, thus supporting an interactive model of language processing, where information is used immediately as it becomes available.

## **2. Outline of the Dissertation**

The main goal of this dissertation is to provide an overview of Romanian dative clitic dependencies in biclausal constructions involving contexts containing raising type verbs.

I begin by presenting an overview of Romanian raising constructions without dative (clitics) experiencers in Chapter II. I show that there are three types of raising constructions, based on the type of the embedded clause, with raising occurring out of subjunctive embedded clauses, infinitive embedded clauses, or indicative embedded clauses. Each of these raising

types has in turn three possibilities for the nominative NP, which is argued to be generated in the embedded clause. I present subjunctive clauses where the nominative subject either stays in situ in the base-generated position (2.1) where Long Distance Agree applies (based on Alexiadou et al, to appear; Rivero and Geber, 2007); or raises to the subject position (2.2) through successive-cyclic movement (Chomsky, 2001); or moves to an intermediate position in the clause (2.3), such as in a Topic position above the TP. Furthermore in this chapter, I compare constructions in which the embedded clause is infinitive with their subjunctive counterpart, with the same three possible surfacing positions for the nominative NP (in-situ, in matrix subject position, or an intermediate position). Section 2.4 shows hyper-raising constructions inspired by Brazilian Portuguese (Martins and Nunes, 2005, 2009).

In Chapter III, I analyze raising constructions with dative (clitic) experiencers. Romanian raising constructions are free from traditional intervention effects, which have been the subject of much debate in recent literature (Ausín and Depiante, 2000; Cuervo, 2003a, 2003b; Torrego, 1996, 1998 on Spanish; Holmberg and Hróarsdóttir, 2004; Chomsky, 2006; Sigurdsson and Holmberg, 2008 on Icelandic; among others).

Chapter III starts by providing an overview of the dative clitic system and contexts for dative clitic experiencers in Romanian. I further demonstrate that the dative clitic experiencers are subjects, based on traditional subjecthood tests. Studying their structural position, I conclude that dative clitics that are quirky subjects of psychological verbs head a High Applicative phrase, based on Rivero and Geber (2007) and Rivero (2009). The dative NP experiencers are generated in the Specifier of the High Applicative phrase. On the other hand, based on Diaconescu (2004) and Diaconescu and Rivero (2007), I show dative clitics that are indirect objects head a Low

Applicative phrase and any dative lexical indirect object, if present, sits in the specifier of this phrase.

In Romanian, dative experiencers can be generated in the matrix clause or in the embedded clause. I present a crosslinguistic variation of intervention effects of matrix experiencers (or lack thereof) and show differences between transparent and opaque languages (3.1). Having established the role of dative clitic experiencers, I discuss raising constructions involving dative experiencers generated in the matrix clause and in the embedded clause respectively and also intervention effects of matrix and embedded dative experiencers upon the nominative NPs during Move and Agree. I show that embedded experiencers may surface in the matrix clause, and are displaced through an A'-movement operation, which does not interfere with the nominative NP raising.

In the same chapter, I discuss Experiencer Islands, given by matrix and embedded experiencers in the same utterance, presenting contexts and reasons for which they may occur. A grammaticality judgment test confirms the existence of the Experiencer Island restriction in Romanian, as native speakers judge sentences in which two experiencers occur in the same utterance to be ungrammatical. Furthermore, I present an analysis of Experiencer Islands (4.3) and discuss observed exceptions to this restriction.

Chapter IV discusses additional dative clitic dependencies, namely CLLD constructions, which I claim are base-generated in surface position (as opposed to moved) (Cinque, 1990; among others). I also present the so-called Long Distance Clitic Left Dislocation Constructions, where the dative clitic left dislocated element moved from the embedded clause to the Topic position within the matrix clause. This CLLD constructions discussion constitutes an introduction to the experimental study presented and discussed in Chapter IV. The results of this

study demonstrate that Romanian speakers are not only aware of dative clitic dependencies, such as experiencer dependencies and CLLD constructions, but they also possess the ability to recognize such dependencies.

Based on the theoretical proposals and experimental findings discussed in the body of this work, the dissertation concludes with Chapter V presenting a summary of the main ideas and conclusions, closing remarks, and subjects for further research. In addition, I discuss theoretical and practical implications of the findings of this thesis for the linguistic theory, including general characteristics of the verb *a părea* ‘to seem’ and characteristics of dative clitic dependencies in Romanian.

## CHAPTER II

### RAISING CONSTRUCTIONS WITHOUT DATIVE EXPERIENCERS

#### 1. Introduction

This chapter presents an overview of Romanian raising constructions mostly with the equivalent of the English verb *to seem* and brings forward new, cross-linguistically significant insights from the perspective of formal mechanisms such as Long Distance Agree, case valuation, successive-cyclic movement and EPP. This chapter addresses recent innovations in the Minimalist Program that make the raising phenomenon interesting from new perspectives partially addressed in earlier generative grammar. This discussion thereby poses new questions which will lead into the next chapter discussing dative clitic experiencer dependencies and their effects in raising constructions.

#### *1.1 Raising – General Definition*

Raising constructions constitute a well-debated topic in current linguistic literature under the Minimalist Program. Not all languages have raising verbs; English and Romanian are among those that do display raising constructions.

Raising structures are syntactic patterns in which an argument (i.e., subject) that belongs semantically to a subordinate clause is generally realized syntactically as a constituent of a higher clause. For example, sentences such as (1) are considered raising constructions.

(1) *Bill<sub>i</sub> seems t<sub>i</sub> to be angry.*

Although *Bill* is understood semantically to be the subject of the embedded clause *to be angry*, *Bill* is the syntactic subject of the verb *seem*. The verb *seem* in this example is known as a raising verb.

### ***1.2 Types of Romanian Raising Constructions***

In Romanian, raising constructions combine thought-provoking characteristics. On the one hand, these constructions pattern with Greek, as raising can occur out of subjunctive clauses (2-3), yet they also pattern similarly to other languages where raising occurs out of infinitival clauses (e.g., Italian, English, French, Spanish, among others), illustrated in (4-5). Romanian also patterns in a similar way as Brazilian Portuguese (6), where raising can occur out of indicative clauses, as illustrated in (7):

(2) *Ta pedhia fenonte na doulevoun* Greek

The children seem.Pl Subj work

‘The children seem to work.’

(3) *Copiii par să lucreze.*

Children.Nom seem.3Pl Subj work.3Pl

‘The children seem to work.’

(4) *Los niños parecen trabajar bien.* Spanish

The children.Nom. seem.3Pl work.Inf well

‘The children seem to work well.’

(5) *Copiii par a lucra bine.*

Children.Nom seem.3Pl work.Inf well

‘Children seem to work well.’

(6) *Os meninos parecem que viajaram ontem.*

Brazilian Portuguese

the boys seem-3PL that traveled. 3Pl yesterday

‘The boys seem to have traveled yesterday.’

(7) *Băieții par că au călătorit ieri.*

Boys.Nom seem.3Pl that have.3Pl traveled yesterday

‘The boys seem to have traveled yesterday.’

In (3), *copiii* ‘children’ is the semantic subject of the subjunctive verb *să lucreze* ‘Subj work’, marked by the subjunctive mood marker *să* and the verb in the embedded clause is finite. In (5), the verb *a lucra* ‘to work’ is infinitive, while in (7) the embedded clause is indicative.


In raising constructions with subjunctive and indicative clauses, all verbs agree in number and person with the nominative NP. The difference between (3) and (5) is that the latter sentence contains an infinitive embedded clause, and there is no morphological agreement between the embedded verb and the noun. However, in such constructions, the matrix verb and the nominative NP agree in person and number.

Thus, Romanian raising constructions allow extraction out of subjunctive or infinitive complements. A novel claim shows that Romanian allows, in certain circumstances, raising of the nominative subject across indicative clauses, behaving in a similar way to Brazilian

Portuguese (Martins and Nunes, 2005, 2009; Nunes, 2007, 2008), a phenomenon known in the recent literature as hyper-raising.

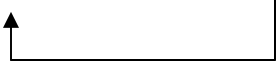
The presumption in this dissertation is that Romanian possesses three types of subject-to-subject raising constructions, illustrated below in (8-10). Thus, the hypothesis is that in (8-10) the nominative subject *copiii* ‘children’ arguably raises from the embedded clause to the subject position of the matrix clause.

a) Nominative NP raises out of infinitive clauses:

(8) Copiii par [a lucra  $t_{copiii}$  bine].  


‘Children seem to work well.’

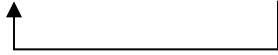
b) Nominative NP raises out of subjunctive clauses:

(9) Copiii par [să lucreze  $t_{copiii}$  bine]  


Children seem to work well.

c) Nominative NP raises out of indicative clauses:

(10) Copiii par că lucrează t<sub>copiii</sub> bine



‘Children seem to work well.’

The complement clauses in examples (8-10) differ in mood, but I argue that the movement mechanisms are roughly the same for the three types of constructions.

The embedded verbs in the various raising constructions mentioned above can be of different natures. Not only active verbs, but also reflexive verbs and passive verbs can be embedded under the matrix verb *seem*. The following examples (11-13) show the three types of subject-to-subject raising constructions with reflexive embedded verbs.

(11) *Alex pare a-și suge degetul.*

Alex.Nom seem.3Sg Inf Refl.Dat.3Sg suck.inf finger

‘Alex seems to suck his finger.’

(12) *Ei par să-și cumpere o mașină nouă.*

They.Nom seem.1PL Subj Refl.Dat.3Pl buy.3Pl a car new

‘They seem to buy for themselves a new car.’

(13) *Ion pare că se supără foarte repede.*

John.Nom seem.3Sg that Refl.3sg get upset very fast

‘John seems to get upset very quickly.’

In this chapter, I also discuss raising constructions from a different dimension, namely the position of the nominative subject. The nominative NP as logical subject of the embedded clause is able to surface in various positions in the clause. It can surface in situ (i.e., in the embedded clause) (as in (14)), in the subject position of the matrix clause (15), or in an intermediate position (16).

(14) *Par să cânte /a cânta / că cântă frumos copiii.*

Seem.3Pl Subj sing.3Pl / sing.Inf / that sing.3Pl nicely children.Nom

‘Children seem to sing nicely.’

(15) *Copiii par să cânte / a cânta / că cântă frumos.*

Children.Nom seem.3Pl Subj sing.3Pl / sing.Inf / that sing.3Pl nicely

‘Children seem to sing nicely.’

(16) *Par copiii să cânte / a cânta frumos.*

Seem.3pl children Subj sing.3Pl / sing.Inf nicely

‘Children seem to sing nicely.’

The flexibility of the nominative NP's surface position is also available for Multiple Raising constructions, characterized by two raising verbs in the same sentence, the matrix verb and an intermediate verb. This is illustrated in (17), where *a părea* 'to seem' and *a începe* 'to begin' are raising verbs and the nominative NP may appear in the matrix clause as in (17a), in the embedded clause, as in (17b), or in an intermediate position as in (17c).

- (17) a. *Noi părem [să începem [să lucrăm bine]].*  
 we.Nom Seem.1Pl Subj begin.1Pl Subj work.1Pl well
- b. *Părem [să începem [să lucrăm bine noi]].*  
 Seem.1Pl Subj begin.1Pl Subj work.1Pl well we.Nom
- c. *Părem noi [să începem [să lucrăm bine]].*  
 Seem.1Pl we.Nom Subj begin.1Pl Subj work.1Pl well  
 'We seem to begin to work well.'

In such constructions, both raising verbs *a părea* 'to seem' and *a începe* 'to begin', as well as the lexical verbs of the most deeply embedded clause agree in person and number with the nominative<sup>1</sup>. With infinitive complements, the nominative subject agrees only with the raising verb, a fact illustrated in (18).

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<sup>1</sup> A partially similar situation with multiple raising constructions is found in Spanish, but agreement obtains just between the matrix verb and the nominative NP, since embedded verbs are infinitives.

- i. *Hoy parecemos [trabajar bien nosotros].*  
 Today seem.1Pl work.Inf well we.Nom  
 'Today we seem to work well'
- ii. *Hoy parecemos [empezar [a trabajar bien nosotros]].*  
 Today seem.1Pl begin.Inf work.Inf well we.Nom  
 'Today we seem to begin to work well.'

(18) *Astăzi părem a lucra bine noi.*

Today seem.1Pl work.Inf well we.Nom

‘Today we seem to work well.’

In summary, this sub-section presented general characteristics of Romanian raising constructions, which are possible with subjunctive, infinitive and indicative clause complements. In addition, the nominative logical subject of the most deeply embedded verb in constructions with verbs such as *seem* may occur in various positions within the clause.

### ***1.3 Characteristics of the verb seem in Romanian***

Most raising constructions in this chapter are based on examples with the verb *seem*. However, most of the claims hold with other raising verbs (e.g., *a începe* ‘to begin’, *a se nimeri* ‘to happen’). In the following, I present characteristics of the verb *seem* in Romanian.

The Romanian equivalent of the verb *to seem* can occur in various constructions: in so-called raising constructions, with subjunctive embedded clauses (19), or infinitive embedded clauses (20); in so-called hyper-raising constructions with indicative embedded clauses (21); in so-called impersonal constructions with a reflexive clitic (22); or in constructions where the verb *seem* occurs in default form (23-24). For the last example in (24), I assume that the nominative NP may surface in the matrix clause through topicalization, not raising.

(19) *Copiii par să învețe bine.*

Children.Nom seem.3Pl Subj. study.3Pl well

‘Children seem to study well.’

(20) *Copiii par a învăța bine.*

Children.Nom seem.3Pl study.Inf well

‘Children seem to study well.’

(21) *Copiii par că învață bine.*

Children.Nom seem.3Pl that study.3Pl well

‘Children seem that they study well.’

(22) *Se pare că vin copiii la masă.*

Se seem.Imp that come.3Pl children.Nom at table

‘It seems that children will come for dinner.’

(23) *Pare că noi sosim mai devreme<sup>2</sup>.*

Seem.Imp that we.Nom arrive.1Pl more early

‘It seems that we arrive earlier.’

(24) *Noi pare că sosim mai devreme.*

We seem.Def that arrive.1Pl more early

‘It seems that we arrive earlier.’

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<sup>2</sup> This sentence may be subject to dialectal variation, and may be used in sub-standard language.

Let us further discuss various raising environments in Romanian, showing differences between the Romanian equivalent of the verb *to seem* and other raising verbs. Two types of raising verbs have been identified in the recent literature (Alexiadou et. al, to appear), displaying some similar and some different characteristics:

- a) complements of aspectual verbs – *stop, continue, begin*
- b) complements of the verbs *seem, happen*.

The two classes of raising verbs mentioned above are important for the current work, as constructions belonging to each of the two environments seem to have different characteristics.

Verbs in the b) category allow a dative experiencer in the subject position as in (25), whereas verbs in the a) category do not (26). This difference will play an important role in the following chapter, where I discuss dative clitic experiencers as subjects of the verb *seem*.

(25) *Lui Ion îi părem să jucăm bine tenis.*

John.Dat Cl.Dat.3Sg seem.1Pl Subj play.1Pl well tennis

‘We seem to John to play tennis well.’

(26) \**Lui Ion îi încep să deseneze copiii.*

John.Dat Cl.Dat.3Sg begin.3Pl Subj draw.3Pl children

The difference between the verbs in the b) vs. the a) category is also important for the hyper-raising constructions, where the embedded clauses are indicatives. Constructions in the b)

category allow hyper-raising, similar to Brazilian Portuguese (27), whereas constructions in the a) category do not (28).

(27) *Copiii par că desenează frumos.*

Children.Nom seem.3Pl that draw.3Pl nicely

‘The children seem to draw nicely.’

(28) \**Copiii încep că desenează frumos.*

Children.Nom begin.3Pl that draw.3Pl nicely

The *seem* category of verbs appears to allow semantically tensed embedded clauses (subjunctives or indicatives) and can occur in hyper-raising constructions. In contrast, the previous a) category includes verbs such as *begin*, which have a different nature that does not allow ‘tensed’ subjunctives as embedded clauses.

Overall, raising verbs may be inherently different in nature, and Romanian possesses two categories of raising verbs.

Alexiadou et al. (to appear) have argued that constructions similar to the Romanian sentence illustrated in (29) where the nominative NP surfacing in the matrix clause may not involve traditional raising. In contrast, I argue in this thesis that movement operations of the raising type should be preserved in such cases, thus going against Alexiadou et al. (to appear)<sup>3</sup>.

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<sup>3</sup> Alexiadou et al. (to appear) claim that the subject in constructions such as (29) does not in fact raise to the matrix T, and they debate whether Greek and Romanian disallow raising altogether or whether raising is optional. If there is no raising, then examples where the nominative surfaces in the matrix clause involve a different operation. The authors favour the non-movement option, based on Anagnostopoulou and Alexiadou’s (2001) analysis of SVO order in Greek and Romanian as (Clitic) Left Dislocation and findings of Alboiu (2007), who provides an account of

(29) *Noi părem să dansăm bine.*

We.Nom seem.1Pl Subj dance.1Pl well

‘We seem to dance well.’

A traditional argument, which supports raising rather than a different operation (e.g., topicalization), is that idiomatic readings are preserved when parts of idioms raise (Soames and Perlmutter 1979; Rivero, 1991; Alexiadou and Anagnostopoulou, 1999; for Modern Greek), as illustrated in (30).

(30) *Când pisica nu- i acasă, șoarecii par să joace pe masă.*

When cat Neg- is at home, mice.Nom seem.3Pl Subj play.3Pl on table

‘When the cat is not at home, the mice seem free to play.’

(31) *\*Când pisica nu- i acasă, șoarecii, ei par să joace pe masă.*

When cat Neg- is at home, mice.Nom they seem.3Pl Subj play.3Pl on table

(32) *Așchia nu pare să sară departe de trunchi.*

Branch Neg seem.3Sg Subj jump.3Sg far from trunk

‘The branch does not seem to jump far from the trunk.’

Conf: ‘The apple does not seem to fall far from the tree.’

---

Romanian control and raising constructions, and where she accounts for optional subject dislocations, which depend on the ‘theme-rheme partitioning’ in Romanian.

In examples (30) and (32), the NP *șoarecii* ‘mice’ and *așchia* ‘branch’ have raised from their base-generation position in the embedded clause to the subject position of the verb *seem*. In contrast, (31) is ungrammatical because the NP *șoarecii* ‘mice’ is topicalized as opposed to being raised, as signalled by the presence of a pronoun functioning as the subject of the verb *seem*.

The remainder of the chapter is organized as follows: in Section 2, I present raising out of subjunctive clauses with the three possibilities mentioned above. These include: the nominative subject staying in situ in the base-generated position (2.1) where Long Distance Agree operations apply; the nominative subject raising to the subject position (2.2) through successive-cyclic movement; and the nominative subject moving to an intermediate position in the clause (2.3), in a Topic position above the TP, illustrated in multiple raising constructions. In Section 3, I compare constructions with infinitive embedded clause with their subjunctive counterpart. Section 4 shows hyper-raising constructions. Finally, Section 5 presents conclusions and potential topics for further research. This chapter bases the analyses partly on previous work on Romanian raising (Rivero and Geber, 2004, 2007), coupled with new insights in the current literature on raising cross-linguistically.

## **2. Raising out of subjunctive clauses**

In the Government and Binding framework, Romanian raising constructions with subjunctive complements such as (33) were a continuing source of ongoing debates because they seemed to challenge basic principles of the theory, due to two characteristics shared with other Balkan languages (Dobrovie-Sorin, 2001; Grosu and Horvath, 1984; Kempchinsky, 1987; Motapanyane,

1995; Rivero, 1989, 1991; Roussou, 2001; among others).<sup>4</sup> These characteristics consist in the nominative NP being displaced out of subjunctive clauses, on the one hand, and verbs in such clauses all agreeing in phi-features with nominatives, on the other.

(33) *Copiii par să învețe bine.*

Children.Nom seem.3Pl Subj study.3Pl well

‘Children seem to study well.’

Thus, according to the two characteristics, it is safe to assume that in (33) above, the subject *copiii* ‘children’ is moved from the subject position of the subjunctive embedded clause to the subject position of the matrix clause. Accordingly, this subject agrees in phi-features with the embedded verb and with the matrix verb *seem*.

Raising constructions with subjunctive complements are the most productive type of raising in Romanian<sup>5</sup>. There are in fact three options available for raising constructions with subjunctive complements: constructions in which the nominative subject of the embedded clause stays in situ (34), constructions in which the nominative NP raises to the subject position of the matrix clause as illustrated in (33) and (35), and finally constructions in which the nominative NP stops in an intermediate site within the clause (36).

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<sup>4</sup> Davies and Dubinsky (2004) present an overview of debates on raising and control going back to early generative grammar, with emphasis on raising to object, which is not addressed in this chapter. See Rivero and Ralli (2001: 5-8) for a summary of proposals on Balkan raising before the Government and Binding period. See Polinsky and Potsdam (2006) and Potsdam and Polinsky (In press) for criteria to distinguish between varieties of subject raising and control (as movement).

<sup>5</sup> Romanian subjunctive clauses are introduced by the subjunctive particle *să*. The Romanian subjunctive particle *să* has received various analyses in recent literature as head of the verbal functional domain, and respectively as Mood, I, or just T (Alboiu, 2000b; Cornilescu, 2000; Isac and Jakab, 2004; Motapanyane, 1995; Pîrvulescu, 2009; Rivero, 1994; Terzi, 1992; among others). Dobrovie-Sorin (1994) considers *să* as a hybrid category with both C and T properties.

a) Nominative NP stays in situ

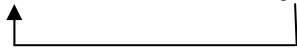
(34) *Par să lucreze bine copiii.*

Seem.3Pl Subj work.3Pl well children.Nom

‘Children seem to work well.’

b) Nominative NP raises to the matrix clause

(35) *Copiii par [să lucreze t<sub>copiii</sub> bine].*



‘Children seem to work well.’

c) Nominative NP surfaces in different intermediate landing sites in the clause

(36) *Par copiii să lucreze bine.*

‘Children seem to work well.’

These three options are also available for Multiple Raising constructions illustrated in (37):

(37) a. *Ion pare [să înceapă [să lucreze mult]].*

John.Nom seem.3sg Subj begin.3Sg Subj work.3Sg a lot

b. *Pare [să înceapă [să lucreze mult Ion]].*

Seem.3sg Subj begin.3Sg Subj work.3sg a lot John.Nom

c. *Pare* [să înceapă Ion [să lucreze mult]].

Seem.3sg Subj begin.3Sg John.Nom Subj work.3sg a lot

d. *Pare* Ion [să înceapă [să lucreze mult]].

Seem.3sg John.Nom Subj begin.3Sg Subj work.3sg a lot

‘John seems to begin to work a lot.’

The flexibility of the nominative NP results from the following assumptions:

- a) in Romanian, all verbs agree in phi-features with the nominative NP;
- b) word order is flexible;
- c) movement and the EPP feature are optional;
- d) Move and Agree are two independent operations, they do not depend on one-another; and
- e) case valuation does not depend on either of the two mechanisms Move and Agree.

In the next sub-section (2.1), I provide an analysis of constructions in which the nominative subject stays in the embedded clause in the in-situ position. I will relate these constructions with the mechanism of Long Distance Agree. In Section 2.2, I discuss constructions in which the nominative moves to the matrix subject position, relating these with A-movement and the EPP feature which I claim is optional in Romanian. In Section 2.3, I discuss multiple raising constructions and illustrate the possibility of the nominative subject moving to intermediate positions within the clause.

## 2.1 *Constructions with Subjunctive Complements and Embedded Nominatives*

In this sub-section I discuss constructions with subjunctive complements where the nominative NP stays in situ and agrees in phi-features with all verbs, as illustrated in examples (38-40). In such constructions, Long Distance Agree is established between the matrix verb *seem* and the nominative subject and the nominative case is valued by the embedded T.

(38) *Par să cânte frumos copiii.*

Seem.3Pl Subj sing.3Pl beautiful children.Nom

‘The children seem to sing beautifully.’

(39) *Părem să vedem noi un urs mare.*

Seem.1Pl Subj see.1Pl we.Nom a bear big

‘We seem to see a big bear.’

(40) *Pari să începi să lucrezi bine tu.*

Seem.Pl Subj begin.2Sg Subj work.2Sg well you.Nom

‘You seem to begin to work well.’

### 2.1.1 Subjects are generated in the embedded clause

Inspired by Greek data given by Alexiadou et al. (to appear), I demonstrate below that in Romanian, the nominative subject is also generated in the embedded clause in a post-verbal position<sup>6</sup>. The subject in (41a) cannot license a secondary predicate in the matrix clause:

- (41) a. *Părea spre sfârșitul anului Maria să vină nepregătită la școală.*  
Seemed.3sg towards end year.Gen Maria Subj come.3Sg unprepared to school  
'Mary seemed to come unprepared to school towards the end of the year.'
- b. *\*Părea nepregătită spre sfârșitul anului să vină Maria la școală.*  
Seemed.3Sg unprepared towards end year Subj come.3Sg Mary to school

(41b) is ungrammatical as the attribute *nepregătită* 'unprepared' cannot occur in the matrix clause.

Scope facts also demonstrate that the subject is generated in the embedded clause. A raised subject interacts with matrix negation, resulting in an ambiguity of scope facts, as illustrated in (42):

- (42) *Toți studenții nu par să citească această carte.*  
All students not seem.3Pl Subj read.3Pl this book  
'All the students don't seem to read this book.' ALL > NEG

---

<sup>6</sup> Generally, Romanian displays free word order. Alboiu (2000b) suggests that the unmarked word order in Romanian is VSO, based on the assumption that the verb raises to I, and the post-verbal subjects stay in their base-generated position (Cornilescu, 1997; Dobrovie-Sorin 1990, 1994; among others).

‘Not all the students seem to read this book.’ NEG > ALL

However, in Romanian (as in Greek) the embedded subject generally can only take narrow scope with respect to matrix negation. In contrast to (42), where there is an ambiguity of scope facts (subject takes scope over sentential negation or sentential negation takes scope over the subject), in (43) the only possibility involves the subject having narrow scope over sentential negation:

(43) *Nu par să citească toți studenții această carte.*

Not seem.3Pl Subj read all students this book

\*‘All the students didn’t seem to read this book.’ \*ALL > NEG

‘Not all the students seemed to read this book.’ NEG > ALL

Furthermore, the embedded subject cannot license a floating quantifier in the matrix clause.

(44) a. *Par să îi certe toți profesorii pe studenți.*

Seem.3Pl Subj Dat.Cl.3Sg scold.3Pl all teachers pe students

‘All the teachers seem to scold the students.’

b. *\*Par toți să îi certe profesorii pe studenți.*

Seem.3Pl all Subj Dat.Cl.3Sg scold.3Pl teachers pe students

(44b) is ungrammatical as the floating quantifier *toți* ‘all’ cannot occur in the matrix clause while the subject NP is in the embedded clause.

Based on Greek data of the type reproduced above in Romanian, Alexiadou et al. (to appear), Polinsky and Potsdam (2006) and Potsdam and Polinsky (in press) conclude that Long Distance Agree mechanisms are active for Greek raising constructions and that there is no Backward Raising. Inspired by their arguments, I have demonstrated that in Romanian the subject of a raising construction also belongs syntactically to the embedded clause and is not generated in a higher syntactic position.

In the following subsection, I analyze constructions such as (38-40) in light of Long Distance Agree.

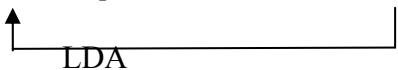
### 2.1.2 Long Distance Agree

Long Distance Agree is the phenomenon where a verb in the matrix clause matches in phi-features with a noun that stays in the embedded clause (Alboiu, 2007; Alexiadou et al., to appear; Bhatt, 2005; Bobaljik and Wurmbrandt, 2005; among others). This is illustrated in (45):

$$(45) \quad [_{CP1} \dots V_{\text{phi}} \dots \dots [_{CP2} \dots NP_{\text{phi}} \dots ]]$$

LDA
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In (46), I propose that the nominative NP *noi* ‘we’ agrees in phi-features in a long distance fashion with the matrix verb *seem*.

(46) *Părem [să lucrăm bine noi].*  


Seem.1Pl [Subj work.1Pl well we.Nom]

‘We seem to work well.’

A current ongoing debate regarding Long Distance Agree<sup>7</sup> is whether it is subject to the Phase Impenetrability Condition<sup>8</sup> or not, that is whether it can violate locality and activate across phase boundaries. One view is that if the Phase Impenetrability Condition can be violated and Agree can operate across phase-boundaries, then such a condition could be eliminated (Bošković, 2007a-b; Preminger, 2009). In contrast with this view however, Boeckx (2009) claims that agreement with a nominative NP is licensed by  $v_o$ , and not by  $T_o$ , thereby arguing that Agree does not violate the Phase Impenetrability Condition. In this way, Long Distance Agree is allowed, but the nominative must be at the edge of the embedded clause.

However, Romanian data suggest that the nominative need not be at the edge of the phase when agreeing with the matrix verb long-distance, even though the two establish an agreement relation, as illustrated in (46). Thus, I claim that while movement obeys the Phase Impenetrability Condition, Long Distance Agree does not, and therefore the verb can establish an Agree relation with the nominative NP in a long distance fashion across phase boundaries.

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<sup>7</sup> Preminger (2008) provides an account of Long Distance Agree, without appealing to a formal operation of agreement-at-a-distance. Two possible approaches are considered:

a) Agreement is established in a purely local configuration, followed by the agreeing head (and the material intervening between this head and the target noun-phrase) moving away;  
 b) Apparent Long Distance Agree is an instance of syntactic movement in which the phonological component chooses to pronounce the moved element in its lower position.

<sup>8</sup> The Phase Impenetrability Condition (Chomsky, 2000) stipulates that in a phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ , only H and its edge are accessible to such operations.

Regarding constructions in which nominative subjects remain in situ, I adopt the analysis of Alexiadou et al. (to appear), who present empirical evidence for Long Distance Agree and do not appeal to movement. However, contrary to their proposal, I claim that sentences in which the nominative NP surfaces in the matrix clause do involve movement. In other words, while in this chapter I partially adopt Potsdam and Polinsky (in press) and Alexiadou et al. (to appear)'s analysis of Long Distance Agree for Romanian raising constructions with subjects in embedded positions, I nevertheless claim that movement in raising cases where subjects do not surface in the embedded clauses should be preserved independently.

Alexiadou et al. (to appear) claim that there are two possible analyses for obligatory agreement between the matrix verb and the embedded subject, namely for instances of Long Distance Agree such as those in (46).

- a) Raising of the subject to the matrix subject position either covertly, at Logical Form (LF) or overtly with subsequent deletion of the higher/lower copy (Polinsky and Potsdam, 2006; Potsdam and Polinsky, in press);
- b) The subject remains in situ and agreement with the matrix verb is a genuine case of Long Distance Agree as a result of Agree.

The claim in a) that the subject raises to the matrix clause and the higher copy is deleted in cases such as (46) is less economical than the second claim which states that Long Distance Agree applies. A caveat to this observation is that when the subject of the embedded clause surfaces in the matrix clause or in intermediate position, movement is still involved as part of the raising process.

In summary, in Romanian, when the nominative NP stays in situ, Long Distance Agree applies between the matrix verb and the embedded nominative subject NP. Agreement is not constrained by the Phase Impenetrability Condition; therefore matrix T and/or the verb can reach into the embedded clause and establish a Long Distance Agree relationship with the embedded subject NP.

Let us turn to an analysis of raising constructions with the nominative in the subjunctive embedded clause. Inspired by Chomsky (2001, 2004, 2006), and more recently Rivero and Geber (2007) and Alexiadou et al. (to appear), I claim that the patterns in (47) involve a form of Multiple Agree between each verb as a Probe, and the nominative NP as their Goal.

- (47) *Părem să cântăm bine noi.*  
Seem.1Pl Subj sing.1Pl well we.Nom  
'We seem to sing well.'

Thus, two types of Agree relations are distinguished in (47): Long Distance Agree between the nominative NP in situ and matrix indicative T with both temporal value and phi-features, and local Agree between the nominative and the embedded subjunctive T with just phi-features (morphological tense).

According to these views, sentence (47) illustrates Multiple Agree as well as Long Distance Agree, as follows: matrix T is one Probe, Person and Number on matrix and embedded Ts are other Probes, and *noi* 'we.Nom' is the Goal for all such Probes<sup>9</sup>.

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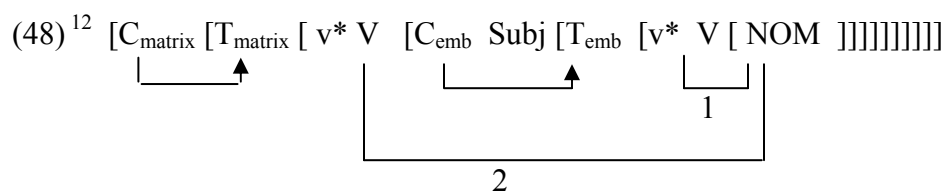
<sup>9</sup> Additional evidence is given by the fact that in Romanian, being a *pro*-drop language, the lexical NP subject may not surface at all in the clause.

In a previous analysis (Geber, 2005; Rivero and Geber, 2004, 2007), embedded subjunctives contained a defective C-T and were considered weak phases. In a cyclic fashion, each verb entered phase by phase into partial Agree with the nominative NP, whose phi-features remained visible until the strong phase, the matrix clause, with a complete (tensed) T. In the matrix cycle, matrix T had its phi-features valued by the nominative NP, and valued in turn the nominative case feature on the Goal, which was not able to be valued by the defective Ts in the embedded clause. Each  $T_{\text{def}}$  contained Person and Number as uninterpretable phi-features, so partial Agree operated in each clause in the following way: Agree was established phase by phase, cyclically, starting with the most embedded subjunctive clause. This was considered a weak phase, where Person and Number were satisfied by Match of the verb with the nominative NP. Following Chomsky (2001), defective elements were considered unable to delete matched features, which remained visible for further computation into the next phase. According to this view, the features of the nominative NP were still available when exiting this intermediate weak phase. In the last cycle, the strong phase with a complete C/T, the matrix verb Matched with the nominative NP via Agree, the nominative NP valued the phi-features on T, and, at the same time, T valued nominative case on the Goal.

Agreement patterns indicate Multiple Agree, and were considered possible as the nominative NPs could enter in agreement within the subjunctive *să*-clause, which was previously considered a weak incomplete phase, with a defective T. The only strong, complete phase was the matrix clause, thought to be the only phase able to value the nominative case.

The current analysis is comparable to Rivero and Geber's (2007). Multiple Agree takes place between the nominative NP as a Goal and all verbs in the derivation as separate Probes. The subject NP agrees in phi-features with all verbs in the sentence.

In (48), I illustrate the complete derivation for the cases in which the nominative stays in situ, such as (47). The Extended Projection Principle (EPP)<sup>10</sup> feature is not checked, as checking of this feature is optional in Romanian, only in situations when the subject moves to the matrix clause. In (48), 1 represents Local Agree<sup>11</sup> (phi-features). 2 represents Long Distance Agree between the matrix verb and the subject in situ. The matrix T's phi-features are valued by the nominative NP via Long Distance Agree, entering into a Long Distance Agree relationship with the matrix verb. The embedded phi-features are valued locally, through a local agreement relation with the verb. As such, the nominative subject is the Goal and the two verbs (matrix and embedded) are the Probes for the Long Distance Agree and the local Agree relations respectively.



In contrast to the analysis mentioned above (Rivero and Geber, 2007), there is no order of the Agree operations for the current analysis. Probes can have features matching with the Goal at the same time, and the matrix verb can ‘reach’ into the embedded clause to agree with the subject

<sup>10</sup> The Extended Projection Principle (EPP) is a linguistic hypothesis about the obligatoriness of subjects. It was proposed by Chomsky (1995) as an addendum to the Projection Principle. The basic idea of the EPP is that, in languages in which the EPP is operative, clauses must contain an NP in the subject position (i.e., in the specifier of TP). The EPP states that no matter whether the main predicate assigns a meaningful theta role to a subject, a subject must be present nonetheless. As a result, verbs which do not assign external theta roles will appear with subjects that are either meaningless (e.g., expletives such as “it” or “there”), or ones which have been moved into subject position from a lower position (e.g., subject of an embedded clause).

<sup>11</sup> Rivero and Geber (2007) considered Agreement within the embedded clause as ‘defective’, and agreement with the matrix clause as ‘complete.’ For the current proposal, I call agreement with the embedded clause ‘local’ and agreement with the matrix is referred to as Long Distance Agree.

<sup>12</sup> The arrow between the C-T shows the inheritance of features of C by T (conf. Chomsky 2004).

NP when it remains in situ. Recall that agreement is not restricted by the Phase Impenetrability Condition.

Consequently, the nominative NP enters into a Long Distance Agree relation with the matrix verb. Local agree relations are maintained, as the embedded verb and the nominative NP share phi-features<sup>13</sup>. Multiple Agree (Long Distance Agree with the matrix and partial local agree with the embedded verbs) constitute an important way of explaining the existence of phi-features of the subjunctive verbs. For example, we later see that infinitive constructions have no local Agree between the embedded verb and the subject and that Long Distance Agree is the only Agree relation.

Considering a different potential situation, the embedded subjunctive verb would agree with the embedded nominative NP at PF, as a reflex of the nominative NP's phi-features. Therefore the nominative would not necessarily enter in a syntactic Agree relation with the embedded verb. This potential situation is discarded, as the nominative NP enters in a Probe-Goal relation (in Chomsky's terminology) with each verb in the derivation.

This sub-section discussed the Agree relations in constructions in which the embedded clause is subjunctive and the nominative NP stays in its base-generated position. The next sub-section discusses nominative case valuation in such constructions.

### *2.1.3 Nominative Case Valuation*

Regarding case valuation, nominative case in raising constructions was considered, in previous literature (Alexiadou and Anagnostopoulou, 1999; Rivero and Geber, 2004, 2007; Alboiu,

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<sup>13</sup> The agreement properties (person and number) of the nominative subject NP are checked in the lower clause independently of the case properties.

2006, 2007; Iatridou, 1993; among others), to be valued at the matrix T level, this being the only possible nominative case valuator. Here I show that the nominative case may be valued at the embedded clause level.

(49) *Părem să dansăm bine noi.*

Seem.1Pl Subj dance.1Pl well we.Nom

‘We seem to dance well.’

For sentences such as (49), I adopt the idea that nominative case of *noi* ‘we.Nom’ is valued in situ, at the embedded clause level. As such, Agree and Case valuation are separate and independent of one-another, the nominative NP being able to enter into an Agree relationship with the matrix verb.

Case valuation represents a property of phasal domains rather than agreement (Alboiu, 2006, 2009; Chomsky, 2004, 2006; Pesetsky and Torrego, 2001, 2007; Sitaridou, 2002; among others). Furthermore, once the nominative case is valued, the nominative NP cannot participate in further operations (conf. Chomsky, 2000, 2001). To this end, the relation of the nominative NP in the embedded clause with matrix T is restricted to movement, semantic tense and EPP, and only indirectly related to case. The relation with the matrix T is also given by the fact that there can only be one structural nominative case valued in a given matrix clause. However, given locality conditions, as well as the potential inability of the nominative to move post case valuation, I consider that case is assigned by the closest potential case valuator. So, for the examples where the nominative NP moves to the matrix clause, matrix T is the nominative case

assigner. When it stays in situ, case is assigned at the local, embedded level. Along these lines, I claim that case valuation happens within the phase in which the nominative NP surfaces.

I partially adopt the claim in Carstens (2001) that Agree deletes the case goal only if the Probe has an intrinsic case feature, contra Chomsky (2004). I assume here that all verbs are potential Probes that can possess this feature, and case valuation depends on locality conditions. Translating these proposals to the system of uninterpretable features presented in Chomsky (2004) and adopted here, all complexes of type T/C are able to value the uninterpretable case feature on the Goal. When the subject NP stays in situ, nominative case is valued by the embedded T/C structure.

I have argued in this section that Agree and Case are independent, and that Case can be valued at the embedded clause level (Dobrovie Sorin, 2001; Mathieu, 2006; Szabolcsi, 2009; Boeckx, 2009; Alboiu, 2010; Potsdam and Polinsky, in press; among others).<sup>14</sup> Below I show that Case is independent of Tense, as a structural case relation can be valued within non-finite clauses which lack morphological Tense. Examples are illustrated below, where nominative case is assigned in a gerund clause (50) and in an infinitive clause (51) respectively:

(50) *Noi coborând, voi urcând, nu ne-am întâlnit.*

We.Nom go down.Ger you.Nom go up.Ger not Refl.Cl.1Pl have.1Pl met

‘We going down, you going up, we did not meet.’

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<sup>14</sup>Polinsky and Potsdam (2006.) and Potsdam and Polinsky (in press) argue against an Activation Condition on Agree which requires that the Goal has an unchecked feature in order to participate in an Agree relation (Bhatt 2005; Bošković, 2007a, 2007b). Chomsky (2000, 2001) suggests that the conditions on Agree (the Probe c-commands the Goal, there is no intervening element between the Probe and the Goal and the Probe and the Goal are in the same syntactic domain) (Chomsky, 2000, 2001; Baker, 2008; Polinsky and Potsdam, 2006; Potsdam and Polinsky, in press; among others) can hold if the lower clause is not a phase (i.e., lacks a CP layer). Otherwise, the Phase Impenetrability Condition would be violated and the embedded subject would be inaccessible for Agree with matrix T. A direct implication from this would be that the embedded T lacks Case, and this is valued at the matrix T level.

(51) *A scrie noi o scrisoare e complicat.*

Write.Inf we.Nom a letter is complicated

‘For us to write a letter is complicated.’

An additional argument in support of the above claim that the nominative case is valued at the embedded clause level is that subjunctive verbs of raising (e.g., such as *seem*) are able to license nominative case, as in (52).

(52) *Nu cred să pari tu cel mai deștept.*

Not believe.1Sg Subj seem.2Sg you.Nom the more smart

‘I don’t think you seem the smartest.’

Empirical evidence was provided illustrating that in Romanian a non-finite T-V complex is able to assign nominative. To this end, I adopt Alboiu’s (2010) claim that such non-finite clauses may be tenseless CPs or CPs with semantic tense, depending on the context and on the matrix clause selection.

Up to this point, I have considered that nominative case is valued at the embedded clause level, even if the embedded verb is non-finite. Recall that in Romanian, the nominative NP may surface in many positions in embedded constructions. According to Chomsky (2001), an NP that has its case feature valued is unable to participate in further operations (e.g., Agree, movement). Thus, if the subject is assigned nominative at the embedded clause level, then this item would not be able to move to a higher position in the clause. Therefore, there are two potential solutions.

The first solution involves the nominative NP getting its case valued at the embedded clause level, and then being able to participate in further operations, contra Chomsky (2001).

A more plausible solution is given by locality, the nominative NP getting its case feature checked by the closest candidate. As such, when the nominative NP remains in situ, nominative case is valued at the embedded clause level. When the nominative NP surfaces in the matrix clause, nominative case is valued by the matrix T-V complex.

In any raising construction in Romanian, there can be only one nominative NP. Therefore, there could be only one structural nominative case valuation per matrix T<sup>15</sup>. This is how the nominative NP and matrix T are considered to be in a feature checking relationship. (53) and (54) are ungrammatical, as two nominative NPs occur in the same construction, which is illicit.

(53) \**El pare copiii să fie fericiți.*

He.Nom seem.3Sg children.Nom Subj be.3Pl happy

(54) \**Noi părem să fiți fericiți voi.*

We.Nom seem.1Pl Subj be.2Pl happy you.Nom.Pl

To summarize, I consider both verbs in raising constructions (matrix and embedded) to be potential case assigners. If the subject raises to the matrix clause, it is the matrix verb that values

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<sup>15</sup> In the following chapter, I describe the phenomenon of Experiencer Islands, where I claim that there can only be one High Applicative phrase (i.e., one structural dative case assignment) per construction, so here I extrapolate this rule to the nominative structural case assignment. For further details on dative structural case assignment, please refer to the following chapter.

nominative case. If the subject stays in situ, it is the embedded verb which values the nominative case.

## 2.2 *Constructions with the Nominative NP in the Matrix Clause*

In this sub-section, I analyze constructions in which the nominative subject surfaces in the subject position of the matrix clause: Spec,TP. This is illustrated in the examples below:

(55) *Copiii par să deseneze frumos.*

Children.Nom seem.3Pl Subj draw.3Pl nicely

‘Children seem to draw nicely.’

(56) *Tu pari să conduci bine.*

You.2Sg seem.2Sg Subj drive.2Sg well

‘You seem to drive well.’

(57) *Voi păreți să aveți talent.*

You.2Pl seem.2Pl Subj have.2Pl talent

‘You seem to have talent.’

In (55-57), the subjects move from the embedded clause to the subject position of the matrix clause through A-movement. Previous analyses (Rivero and Geber, 2004, 2007) of constructions such as (55-57) argued for movement of the nominative subject step by step through the weak

phases (i.e., the subjunctive clauses). Agreement on each verb was licensed during the nominative NP's movement.

Such displaced nominatives can coexist with multiple Agree, and are interesting for two recent proposals:

- a) triggering features for NP-movement are in C (Chomsky, 2006), reformulated more recently as a characteristic of the moving element (Bošković, 2007a-b); coupled to the hypothesis that
- b) movement depends on an EPP feature divorced from case licensing (Alexiadou et al, to appear; Baker, 2008).

For the purposes of this analysis, I maintain the position advocated in a previous analysis (Rivero and Geber, 2004, 2007) that the EPP feature drives the movement of the nominative NP from the embedded subject position to the matrix subject position. Initially, the nominative NP, which is generated in the embedded clause, moves to the edge of the embedded phase (the subjunctive). I claim that this movement is not driven by the EPP feature, but by phonological requirements (Anagnostopoulou and Alexiadou, 2001).

Evidence for the above statement is provided by the following examples in mono-clausal constructions, where, even if the subject is generated post-verbally, it surfaces in the Spec,TP of the sentence.

(58) *Vin acasă copiii.*

Come.3Pl home children.Nom

(59) *Copiii vin acasă.*

Children.Nom come.3Pl home

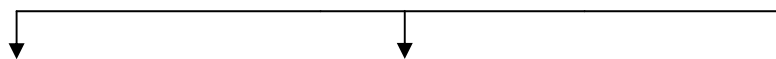
‘The children are coming home.’

Once at the edge of the embedded clause, the nominative NP can further move to satisfy the EPP feature of the matrix T. Recall that I adopt the following two ideas in justifying this claim:

- a) Movement is phase dependent and subject to the Phase Impenetrability Condition. Consequently, the NP has to be at the edge of the phase in order to move to the matrix clause;
- b) The embedded phase is seen by PF once all operations are complete, so it is not impossible for the nominative NP to move at the edge of the phase once the phase is sent to Spell-Out (conf. Bošković, 2007a-b; among others).

The patterns in (58-59) show the nominative displaced to the Spec of matrix TP, a category with a T that is complete with phi-features and Tense. However, we know from sentences with embedded nominatives that case licensing does not depend on displacement, so I adopt the common assumption that movement to the matrix subject position is triggered by the EPP feature. Such a feature is optional in Romanian.

(60)



$CP_{matrix}[C_{matrix}[TP_{matrix} \text{NOM } T_{matrix} [vP \ v \ V [TopP (NOM) [ TP_{embedded} \ T [vP \ V (NOM)]]]]]]]$

In (60), I indicate the raising path of the nominative from within vP in the most deeply embedded clause to the subject position of the matrix clause.

For Romanian, there are two possible alternatives with respect to the movement of the nominative. On one hand, one could consider that movement is driven by the EPP feature of the matrix. A second possibility is to consider Bošković's (2007a-b) account and assume that the moving element is driving this operation, satisfying the Activation Condition (i.e., an element X must have an uninterpretable feature to be visible for movement). However, for the purposes of this analysis, I adopt the first option.

As shown, Romanian displays optionality of movement in raising constructions. Boeckx (2009) claims that the optionality of Long Distance Agree could be correlated with the optionality of movement. As an alternative, I claim that in Romanian the optionality of movement results from the optionality of the EPP feature.

Takahashi (1994, 2000), among others, also considers that successive-cyclic movement is not a result of feature checking. Rather, it is a result of the requirement that all links should be as short as possible, of the Minimize Chain Links Principle (Chomsky and Lasnik, 1993). This requirement forces an element X undergoing movement of the type Y to stop at every position of type Y on the way to its final landing site independently of feature checking. For Romanian, this principle may provide the nominative NP with a possibility to stop at intermediate landing sites during the successive cyclic movement (i.e., raising to the matrix).

(61) *Par [copiii să învețe bine t<sub>copiii</sub>].*



Seem.3Pl children Subj study.3Pl well

‘Children seem to study well.’

In (61), the nominative NP *copiii* ‘children’ moves first to an intermediate position, as it stops in the intermediate landing site between its base-generated position and the matrix subject position. Regarding the intermediate position, I assume that the subject moves (in A-bar fashion) either to the Specifier of the CP (edge of the phase) or to a Topic position if we are to consider the cartographic approach of Rizzi (1997), which states that the CP is split into a number of different projections, including a Topic phrase. The reason for this position is that the nominative NP has to be at the edge of the phase in order to participate in further movement to the matrix, an operation that is subject to the Phase Impenetrability Condition.

In summary, I claim that there are two movement options available, both happening at the syntax – phonology interface. One potential option is to follow Bošković (2007a) and adopt the elimination of the EPP principle, which ensures that the sentence has a subject. Eliminating the EPP would resolve the lookahead problem, namely that the Probe enters the structure only after the moving element had started moving. Another advantage of this alternative would be that the nominative (i.e., the moving element) may stop in intermediate positions within the clause. Movement of the nominative, when displaced from the base-generated position, would be determined by the Activation Condition, meaning that movement would be driven by an uninterpretable feature of the moving element. The question that arises here is what feature

drives that movement in the absence of EPP, considering the case feature has already been resolved at local level?

The second option is to keep the EPP feature checking for movement, with the caveat that in Romanian the checking of the EPP feature is optional, and happens only at the matrix clause, and not at intermediate positions. Even though both options present advantages and disadvantages, the second option is preferred, as the EPP is widely adopted as a reason for A-movement across languages. So for the current purposes I will adopt the EPP feature as A-movement driver for Romanian in raising constructions.

The above explanation has some important consequences for my analysis as follows:

- a) Agree and Move are independent of one-another in Romanian raising constructions;
- b) A- movement is present in both raising constructions: with infinitive embedded clauses and subjunctive embedded clauses; and
- c) The moved subject can land in intermediate positions in the sentence (and also in the highest position) in both types of raising constructions and this (intermediate) movement is not EPP driven.

### **2.3 *Multiple Raising Constructions with Subjunctive Clauses***

Romanian displays multiple raising constructions with the verb *seem*, in which the nominative NP's surface position may vary. Recall that multiple raising constructions are characterized by raising verbs combined in the same structure, each embedding a subjunctive clause, as shown in (62):

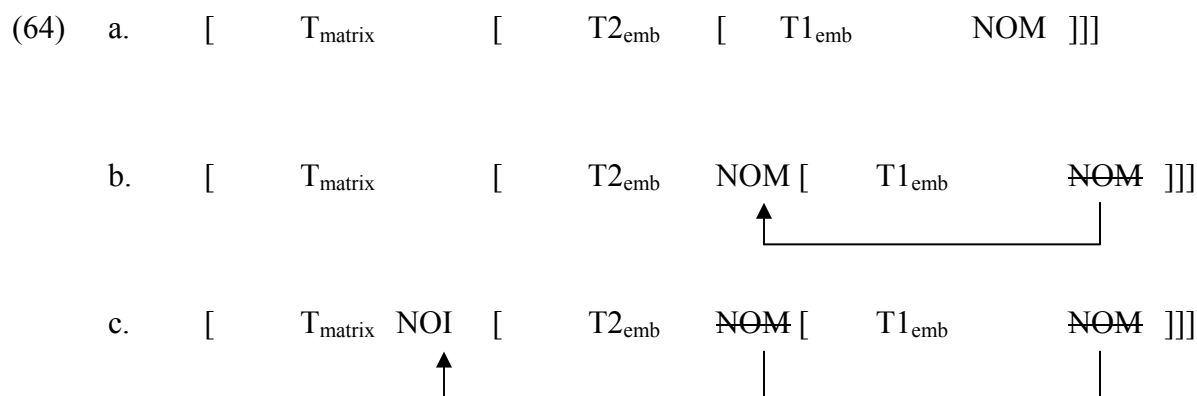
- (62) *Noi părem [să începem [să lucrăm bine]].*  
 We.Nom seem.1Pl [Subj begin.1Pl [Subj work.1Pl well]]  
 ‘We seem to begin to work well.’

In (62) the matrix verb *seem* is indicative and the embedded verb(s) are subjunctive. In previous analyses (Rivero and Geber, 2004, 2007), patterns where the nominatives precedes the matrix verb (such as (62)), were used to justify the idea that NP-movement proceeds step by step out of the most deeply embedded clause, licensing some form of agreement on each verb.

In addition, Romanian displays an option (63b-c) in which nominatives stop and surface in intermediate landing sites, as previously mentioned. Such sentences suggest partial NP-movement, combining step by step raising with Long Distance Agree.

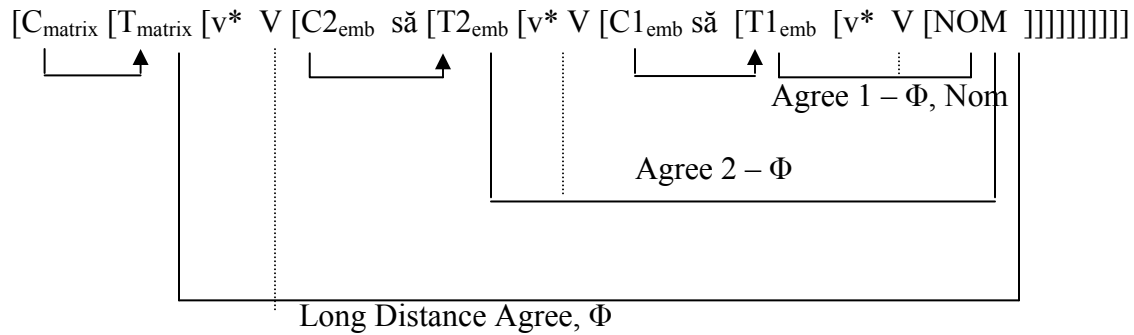
- (63) a. *Părem să începem să lucrăm bine noi.*  
 b. *Părem să începem noi să lucrăm bine.*  
 c. *Părem noi să începem să lucrăm bine.*  
 ‘We seem to begin to work well.’

Examples (63a-c) fit the (simplified) schemas in (64a-c), with Agree between matrix T and each embedded T as Probes for the nominative NP, which is the Goal. Such an analysis may be considered an instance where a single Goal serves for multiple Probes in a many-to-one relation (Chomsky, 2001; Carstens, 2000, 2001; Hiraiwa, 2001, 2005; among others).



The nominative NP contains an uninterpretable case feature  $uN$ , and phi-features. Matrix T contains both uninterpretable phi-features and deictic tense (Farkas, 1982; Iatridou, 1993; among others). Rivero and Geber (2004, 2007) considered that T-complete ( $T_{comp} = [+ \Phi, + Tense]$ ) values the case features of the embedded subject, with the two subjunctive Ts phi-complete but tense-defective ( $T_{def} = [+ \Phi, -Tense]$ ). In the absence of tense deixis,  $T_1$  and  $T_2$  were considered to be unable to license nominative case (Alboiu, 2004, 2006; Alexiadou and Anagnostopoulou, 1999; Iatridou, 1993; Pesetsky and Torrego, 2001, 2004, 2007; among others). However, in the current analysis, I have shown that even if they lack semantic tense, embedded Ts are able to value the uninterpretable case feature of the nominative NP. The uninterpretable nominative case features of the nominative in (63a) are thus valued by the most deeply embedded T and embedded verb, when the subject NP stays in situ.

(65)



The diagram in (65) encodes the following ideas: (a) features in each C are inherited by each T (Chomsky, 2006), (b) T is tensed only if it inherits deictic tense from C, and (c) nominative case is available at the embedded T level in the constructions now under consideration. More precisely, in (65), matrix T inherits Tense, Person, and Number from C<sub>matrix</sub>, and each T<sub>emb</sub> in a complement clause inherits Person and Number as uninterpretable phi-features from the C<sub>emb</sub> which c-commands it locally: T<sub>1</sub> from C<sub>1</sub> and T<sub>2</sub> from C<sub>2</sub> respectively. Agree operates in each clause simultaneously, and Person and Number features are satisfied by Match of the verb with the nominative NP, an operation identified as Agree 1 in (65).

The fact that matrix T enters into a case feature relation with the nominative subject is evidenced by the fact mentioned earlier, that there can only be one structural nominative case valued in a raising construction.

This subsection presented multiple raising constructions. The next section presents raising constructions with infinitive clauses, as well as similarities and differences with their subjunctive counterparts.

### 3. Constructions with Raising Verbs and Infinitive Embedded Clauses

Romanian resembles Romance languages, where in constructions with raising verbs such as *seem*, as in (66), the subject *copiii* ‘children’ raises from the infinitive embedded clause to the subject position of the matrix clause.

(66) *Copiii par a învăța bine.*

Children.Nom seem.3Pl Inf study well

‘The children seem to study well.’

(67) *Los niños parecen trabajar bien.*

Spanish

The children.Nom. seem.3Pl work.Inf well

‘The children seem to work well.’

In raising constructions out of infinitive clauses, the nominative NP can surface in various positions, in a similar way to their subjunctive counterparts. Therefore, the nominative NP can surface in situ (68), in any intermediate position within the clause (70) and in the subject position of the matrix clause (69) as illustrated below:

a) Nominative NP in situ:

(68) *Par a desena frumos copiii.*

Seem.3Pl Inf draw nicely children.Nom

‘The children seem to draw nicely.’

b) Nominative NP raised to the matrix clause:

(69) *Copiii par a desena frumos.*

Children.Nom seem.3Pl Inf draw nicely

‘The children seem to draw nicely.’

c) Nominative NP raised to an intermediate position:

(70) *Par copiii a desena frumos.*

Seem.3Pl children.Nom Inf draw nicely

‘The children seem to draw nicely.’

I claim that there is no semantic difference between constructions in which the verb raises from the embedded subjunctive vs. the infinitive.

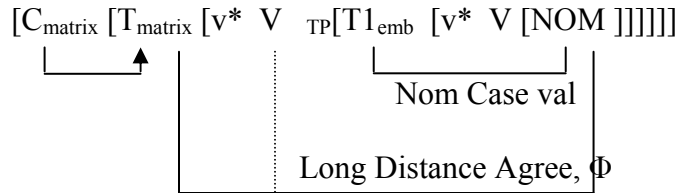
The syntactic differences between raising constructions out of infinitive embedded clauses and out of subjunctive embedded clauses are provided by the fact that the embedded verb is non-finite. Therefore, infinitive embedded clauses are characterized by lack of morphological tense, along with lack of semantic tense.

In these constructions, there is no local Agree relationship between the embedded verb and the subject NP. When the nominative NP stays in situ, Long Distance Agree applies between the matrix raising verb and the nominative NP. The matrix T-V complex is able to check the phi-features of the subject, even when this stays in the embedded clause. When the subject stays in the embedded clause, case is valued at the embedded clause level. As previously

illustrated, in Romanian, nominative case can be valued by an infinitive T, independent of Agree relations.

These relations are illustrated in the schema below in (71):

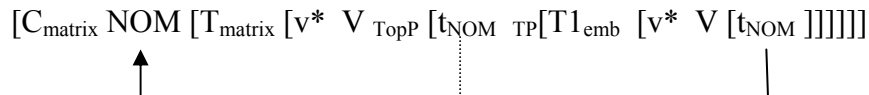
(71)



Thus, as discussed in this section, movement in raising constructions out of infinitive embedded clauses resembles movement in their subjunctive embedded clauses counterparts. The nominative NP may move into and surface in the matrix subject position, or in intermediate positions<sup>16</sup>.

The schema below illustrates the movement mechanism of the nominative NP to the Spec,TP of the matrix clause through the intermediate position, a Topic phrase:

(72)



<sup>16</sup> Romanian speakers judge sentences in which the nominative NP surfaces in intermediate positions raised out of subjunctive clauses as more natural than constructions in which the nominative NP was raised to an intermediate position out of infinitive clauses. They prefer either raising of the subject all the way up to the matrix clause, or the subject NP staying in situ. This may constitute evidence in support of the hypothesis that the embedded clause is not a syntactic phase and therefore the nominative cannot move (and stay) to its edge.



In (73) and (74), the subject *os meninos* and *băieții* ‘boys’ respectively raise to the subject position from the indicative embedded clause.

In this thesis I consider hyper-raising constructions such as (75-76) in the same way as their subjunctive and infinitive counterparts, except that the subject raises across the indicative complementizer *că*. The verb *seem* may occur in the default form (3<sup>rd</sup> person singular) as presented in (77) and (78) where there is no agreement between the matrix verb and the nominative NP. The nominative subject is able to surface in the highest position of the sentence, but this displacement is arguably realized through topicalization, and not bona fide raising. The verb *seem* can also occur in its impersonal form as *se pare* ‘se seem’ (as illustrated in (79) and (80)). Similarly, in these sentences the nominative NP can precede the impersonal verb, but this displacement is arguably realized as topicalization.

(75) *Noi părem că suntem fericiți.*

We.nom seem.1Pl that be.1Pl happy

‘We seem to be happy.’

(76) *Copiii par că se joacă frumos.*

Children.Nom seem.3Pl that se play.3Pl nice.

‘Children seem to play nice.’

(77) *Noi pare că suntem fericiți.*

We.Nom seem.Def that be.1Pl happy

‘It seems that we are happy.’

(78) *Copiii pare că se joacă frumos.*

Children.Nom seem.Def that Refl play.3Pl nice

‘It seems that children play nice.’

(79) *Noi se pare că suntem fericiți.*

We.Nom se seem.Imp that be.1Pl happy

‘It seems that we are happy.’

(80) *Copiii se pare că se joacă frumos.*

Children.Nom se seem.Imp that Refl play.3Pl nice.

‘It seems that children play nice.’

In Brazilian Portuguese, hyper-raising structures constitute an outcome of a syntactic change, as a result of the loss of the Romance type pro-drop property. However, Romanian displays hyper-raising, even though this language has not lost the pro-drop property. Therefore, pro-drop cannot be a condition for hyper-raising. As Martins and Nunes (2005, 2009) point out, it is not necessarily the case that Romance-type pro-drop and the emergence of hyper-raising are two manifestations of the same parametric change. There is no implicational dependency between the availability of null-subjects and the availability of hyper-raising, as the following types of combinations can be found:

- i. non-pro-drop + no hyper-raising – Eng, French
- ii. pro-drop + no HR (Italian)
- iii. pro-drop + HR (Romanian, Occitan)
- iv. non-pro-drop + HR<sup>17</sup>

Ferreira (2004) presents two types of evidence to show that in hyper-raising sentences in Brazilian Portuguese, the matrix NP occupies a regular subject position, rather than a topic position, as in (81a). The NP in the matrix clause agrees with the matrix verb, which is also the case in Romanian as illustrated in (81b-c):

- |      |    |   |                      |
|------|----|---|----------------------|
| (81) | a. | <i>A criança parece que gosta da baba</i>               | Brazilian Portuguese |
|      |    | ‘The child seems to like the baby-sitter.’              |                      |
|      | b. | <i>Copilul pare să o asculte pe bonă.</i>               | Romanian Subj        |
|      |    | ‘The child seems to listen to the baby sitter.’         |                      |
|      | c. | <i>Copiii par că o ascultă pe bonă.</i>                 |                      |
|      |    | The children seem that they listen to the baby sitter.’ |                      |

Comparing Brazilian Portuguese with other Romance languages, hyper-raising is not an option in European Portuguese in particular. Consider the following European Portuguese examples, where the sentence with the plural matrix verb is ungrammatical in (82b). All the embedded clauses are indicative:

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<sup>17</sup> It would be interesting to know whether this option exists in some language.

- (82) a. *A criança parece que gosta da baby-sitter.* Brazilian Portuguese  
 the child seem.3Sg that like.3Sg of-the baby-sitter  
 ‘It seems that the child likes the baby-sitter.’
- b. *\*As crianças parecem que gostam da baby-sitter.* European Portuguese  
 the children seem.3Pl that like.3Pl of-the baby-sitter  
 ‘The children seem to like the baby-sitter.’
- c. *As crianças parece que gostam da baby-sitter.* Brazilian Portuguese  
 the children seem.3Sg that like.3Pl of-the baby-sitter  
 ‘It seems that the children like the baby-sitter.’<sup>18</sup>

In Brazilian Portuguese, the assumption is that referential null subjects in matrix clauses are instances of topic-deletion, showing properties of obligatory control, such as the requirement of a local c-commanding antecedent and sensitivity to island effects, and therefore referential null subjects in embedded finite clauses are traces of A-movement rather than *pro* (Ferreira, 2004, 2009; Rodrigues, 2002, 2004). This idea is adopted by Martins and Nunes (2005, 2009), who consider referential null subjects as traces of A-movement, rather than *pro*. Therefore they consider sentences such as (83) as examples of hyper-raising constructions:

- (83) a. *As crianças parecem que gostam da babá.* Brazilian Portuguese  
 the children seem.3PL that like.3Pl of the baby-sitter  
 ‘The children seem to like the baby-sitter’

(Martins and Nunes, 2005)

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<sup>18</sup> Examples from Martins and Nunes (2005).

b. [TP [as crianças]<sub>I</sub> T [VP parecem [CP que [TP t<sub>i</sub> gostam da baba]]]]

Sentences such as (83) above are ungrammatical in European Portuguese. However, Romanian sentences parallel to (83) are grammatical, as illustrated in (84), where the assumption is that the nominative subject generated in the indicative embedded clause raises to the matrix clause.

(84) *Copiii par că o vor pe bonă.*

‘The children seem to want the nanny.’

An interesting question that arises here is whether or not Brazilian Portuguese has the options of raising out of an infinitive embedded clause and/or out of a subjunctive embedded clause. The option of raising out of a subjunctive embedded clause does not seem to exist in Brazilian Portuguese. There may be two reasons for this. First, this option is excluded in Romance languages with the exception of Romanian. Secondly, the verb *parece* ‘seem’ in Brazilian Portuguese takes an indicative complement unless it is negated (Rivero, pc).

Brazilian Portuguese verbal inflection suffered significant changes, resulting in person and number distinctions not to be overtly expressed (Martins and Nunes, 2005, 2009; Nunes, 2007, 2008; Duarte, 2004). Ferreira (2004, 2009) proposes that the weakening of verbal morphology led finite Ts in Brazilian Portuguese to be of two sorts, either phi-complete or incomplete, thereby becoming optional case-assigners. When the case-assigning version of a finite T is selected (i.e., a phi-complete T), it assigns nominative to the subject, freezing it for

further A-movement. According to Martins and Nunes (2005, 2009), the embedded T has only a number feature and is unable to value the nominative case. Therefore, the subject moves to the matrix clause, being still active and matrix T is the nominative case valuator. This is how hyper-raising constructions are derived, as illustrated in (85b).

- (85) a. *O João parece que comprou um carro novo.*      Brazilian Portuguese  
           the João seems that bought a car new  
           ‘John seems to have bought a new car.’

- b.  $[_{TP} [o \text{ João}]_{[Case:NOM]} T_{[N:default; P:default]} \text{ parece que } [_{TP} t T_{[N:default]} \dots]]$

In sum, Brazilian Portuguese exercises an option that is generally restricted to non-finite clauses in most languages: it allows A-movement out of a finite (indicative) clause, forming a hyper-raising construction, which is identical to Romanian.

In this section I have argued that Romanian also allows hyper-raising constructions. The analysis I propose for Romanian is similar to the analysis proposed for Brazilian Portuguese with the exception that I consider both verbs to be potential case assigners in Romanian. The optionality of case valuation is also found in hyper-raising situations, where the indicative verb in the embedded clause is able to value nominative. As in the other raising constructions described in previous sections, in hyper-raising all verbs can assign nominative case. However, only one of the verbs (matrix or embedded) will be able value nominative case based on locality, according to the place where the nominative NP is situated, assuming that in a derivation, there can be only one nominative case valuation.

The nominative subject in Romanian hyper-raising constructions may occupy the same positions as in their raising constructions with subjunctive embedded clauses counterparts, either in the embedded clause, in an intermediate position, or in the subject position of the matrix clause, as illustrated in (86).

- (86) a. *Părem că dansăm bine noi.*  
 Seem.1Pl that dance.1Pl well we.Nom
- b. *Părem noi că dansăm bine.*  
 Seem.1Pl we.Nom that dance.1Pl well
- c. *Noi părem că dansăm bine.*  
 we.Nom seem.1Pl that dance.1Pl well  
 ‘We seem to dance well.’

In (86a) the verb *părem* ‘seem’ and *dansăm* ‘dance.1Pl’ agree with the nominative subject *noi* ‘we.Nom’. When the subject is in the embedded clause, Long Distance Agree operates between the matrix verb and the subject. Local Agree takes place between the embedded verb and *noi* ‘we.Nom’, which gets its case valued in the embedded clause. In (86c), where the nominative NP moves to the subject position of the matrix clause, the subject raises in a similar way as in the subjunctive raising constructions through A-movement, this movement being driven by the EPP feature of T.

The above proposals abandon some of the Government and Binding theories that did not allow raising across a CP, nor across an indicative complementizer. It looks like the ability to raise across an embedded indicative clause is dependent on the properties of the (raising) verb. It

would be interesting for further research to investigate whether there exists a language other than Romanian which allows the three options mentioned above.

An important difference between raising constructions out of subjunctive embedded clauses and hyper-raising constructions is that hyper-raising in Romanian is possible only in certain circumstances. Recall that Alexiadou et al. (to appear) consider the raising verbs *seem* and *happen* to behave slightly differently compared to other raising verbs. Their complements seem to pattern like F-subjunctives in Landau's (2004) terminology. It seems that such verbs are unique in Romanian in so far as they allow indicative complements as embedded clauses. I propose that only such verbs allow hyper-raising and not all Romanian raising verbs have this option. This is in agreement with Manzini (2009), who claims that the presence of a control vs. raising reading depends solely on the properties of the selecting matrix verb.

Consider the differences in (87) with verbs such as *seem* and *happen* vs. other raising verbs, such as *begin*<sup>19</sup>:

(87) a. *Copiii par că învață bine lecția.*

Children.Nom seem.3Pl that learn.3Pl well the lesson

'Children seem that they learn well the lesson'.

b. *Băieții s-au nimerit (așa) că au fost în același loc.*

Boys.Nom Refl.3Sg have.3Pl happened (so) that have.3Pl been in the same place

'The boys happened that they were in the same place'.

c. *\*Voi începeți că scrieți lucrarea.*

You.Nom start.2Pl that write.2Pl the paper

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<sup>19</sup> There may be dialectal differences among Romanians regarding these sentences, especially sentences such as b).

‘\*You start that write the paper.’

Sentences such as (87a) and (87b) are grammatical for some Romanian speakers, as the matrix verbs *a părea* ‘seem’ and *a (se) nimeri* ‘happen’ respectively allow hyper-raising constructions. However, with verbs such as *a începe* ‘begin’, hyper-raising constructions are impossible for the same Romanian speakers. I propose that the contrast comes from the fact that verbs such as *begin* do not take an indicative complement, therefore it is the choice of the matrix verb that allows for hyper-raising constructions.

The mechanism for hyper-raising is comparable with the raising mechanism found with subjunctive complements, with the difference that the embedded clause in hyper-raising is indicative (T-complete). According to Martins and Nunes (2005, 2009), the availability of a phi-incomplete finite T in Brazilian Portuguese (a finite T lacking a person feature) is the crucial ingredient that allows such hyper-raising derivations.

In Brazilian Portuguese, hyper-raising constructions are considered possible because of incomplete Ts (which resembles the explanation offered by Rivero and Geber, 2007 for Romanian raising with subjunctive complements). However, for Romanian, a more plausible explanation for hyper-raising consists in the properties of the matrix verb: whether it allows raising out of its embedded indicative complement or not.

## **5. Conclusions**

This chapter discussed raising constructions in Romanian, with the view that some of their well-known and some of their less known characteristics are theoretically interesting from a recent perspective inspired by minimalism.

All Romance languages display standard raising options out of an infinitive embedded clause complement. Romanian however, displays raising not only out of infinitive embedded clauses, but also raising out of subjunctive embedded clauses and hyper-raising constructions, with raising out of indicative clauses.

The chapter paid particular attention mainly to two characteristics:

- a) In raising constructions with embedded subjunctive or indicative clauses, all verbs agree in person and number with the nominative NP; and
- b) The nominative NP appears in various positions within the construction.

In raising constructions with subjunctive embedded clauses, I considered three options, listed below:

- a) The nominative NP may stay in the base-generated position, in the embedded clause:

(88) *Părem să dansăm bine noi.*

- b) The nominative subject may raise to the subject position of the matrix clause:

(89) *Noi părem să dansăm bine t<sub>noi</sub>.*

- c) The nominative subject may raise to an intermediate position:

(90) *Părem noi să dansăm bine t<sub>noi</sub>.*

‘We seem to dance well.’

In all the cases above (88-90), a feature checking relationship is established between the matrix T and the nominative NP regardless of its position.

When the nominative NP stays in situ, Long Distance Agree applies between the matrix verb and the nominative NP. I considered that Long Distance Agree is not subject to the Phase Impenetrability Condition, in contrast to the movement operation. Local Agree applies between the embedded verb and the nominative subject.

When the nominative NP is displaced to the subject position of the matrix clause, I proposed an A-movement operation. The subject moves to satisfy the EPP feature of matrix T, which is optional in Romanian. First, the subject is displaced to the edge of the embedded phase and after that can move further to the Spec of the matrix T. I considered that both verbs are potential case assigners. Once its case is valued, the NP cannot participate in further operations, so I concluded based on locality conditions that in cases such as (88) case is valued at the embedded level, whereas in constructions such as (89) case is valued at the matrix level, after movement has been completed.

Constructions such as (90), with the subject NP stopping in an intermediate position are considered to be based on pronunciation needs, as there is no EPP feature to be checked at the embedded clause level. The subject stops in a Topic position of the embedded clause, at the edge of the phase, which allows it to move further to the matrix clause.

As in subjunctive counterparts, in raising constructions out of infinitive embedded clauses, the nominative NP can surface in various positions, in situ, in any intermediate position within the clause, or in the subject position of the matrix clause.

I adopted the position that there is no semantic difference between constructions in which the verb raises from the embedded subjunctive clause vs. the infinitive. The syntactic differences are given by the fact that the embedded verb is non-finite, with the embedded clauses characterized by lack of morphological tense and semantic tense. In these constructions, there is no local Agree relationship between the embedded verb and the subject NP. When the nominative NP stays in situ, Long Distance Agree applies between the matrix raising verb and the nominative NP. The matrix T-V complex is able to check the phi-features of the subject, even when this stays in the embedded clause. When the subject stays in the embedded clause, case is valued at the embedded clause level. Regarding movement, raising constructions out of infinitive embedded clauses resemble their raising out of subjunctive clause counterparts. The nominative NP may move through A-movement to the matrix subject position, or may remain in intermediate positions.

Romanian also resembles Brazilian Portuguese, and displays hyper-raising constructions where the nominative NP can raise across an indicative complementizer. The nominative subject in Romanian hyper-raising constructions may occupy the same positions as in their subjunctive counterparts, in the embedded clause, in an intermediate position, or in the subject position of the matrix clause.

As there is a limited number of verbs that can participate in hyper-raising constructions in Romanian, I concluded that it is a choice of the matrix verb that accounts for the availability of such constructions.

In further research, it would be interesting to analyze Romanian hyper-raising constructions in more detail and to examine from a syntactic and semantic point of view similarities and differences between these and other raising constructions.

In the next chapter, I discuss dative experiencer clitic dependencies in raising constructions.

## CHAPTER III

### DATIVE CLITIC EXPERIENCERS DEPENDENCIES IN RAISING CONSTRUCTIONS

#### 1. Introduction

The focus of this dissertation is on dative clitic dependencies within raising constructions. In this chapter I concentrate on dative NPs as experiencers, which are obligatorily doubled by dative clitics and on dative clitic experiencer dependencies. Dative clitics can be generated in the matrix clause, as experiencers of the raising verb *seem*, or in the embedded clause when this is a so-called ‘quirky’ construction (i.e., with a dative logical subject and a nominative logical object). Recall that in Chapter II I presented an overview of raising constructions without dative clitic experiencers. This chapter builds on the same proposals for mechanisms such as Agree, A-movement, case valuation and EPP.

It is well known that raising verbs can take dative experiencers. However, languages vary with respect to whether raising is possible in such cases. For example, English allows raising of a nominative NP across a dative experiencer, as illustrated in (1), whereas other languages such as Spanish do not, as illustrated in (2).

(1) *John seems to Mary to be the best candidate.*

(2) \**Juan le parece (a María) ser el mejor candidato.*

John.Nom Cl.Dat.3Pl seems (Mary.Dat) be.Inf the best candidate

‘\*John seems to Mary to be the best candidate.’

As in English, raising of the nominative NP across a matrix dative experiencer is possible in Romanian, both out of a subjunctive complement, as in (3) and (4) and out of an infinitival complement as in (5).

(3) *Copiii îmi par [t<sub>copiii</sub> să fie inteligenți].*  
 Children.Nom me.Dat seem.3Pl [t Subj be.3Pl smart]  
 ‘The children seem to me to be smart.’

(4) *Noi vă părem să vorbim tare.*  
 We.Nom Cl.Dat.2Pl seem.1Pl Subj speak.1Pl loudly  
 ‘We seem to you to speak loudly.’

(5) *Copiii îi par Mariei a lucra bine t<sub>copiii</sub>.*  
 Children.Nom Cl.Dat.3Sg seem.3Pl Mary.Dat to work.Inf well  
 ‘Children seem to Mary to work well’.

In (3) the nominative NP *copiii* ‘children’, subject of the embedded subjunctive clause, raises across the dative (clitic) experiencer of the matrix verb *seem*. In (4) the subject *noi* ‘we.Nom’ raises across the matrix clitic experiencer *vă* ‘Cl.Dat.2Pl’. Note that in this sentence, the nominative NP is first person plural, and the dative (clitic) experiencer of the verb *seem* is second person plural, so the combination between these persons is licit and does not create blocking effects. In (5) the nominative subject *copiii* ‘children’ of the infinitive embedded clause raises across the dative lexical experiencer *Mariei* ‘Mary.Dat’, which is doubled by the

dative clitic *îi* ‘Cl.Dat.3Sg’. All of these examples show that clitics must be present when the dative is an experiencer, a topic I discuss in the next subsection.

### ***1.1 Dative clitics must be present with dative experiencers***

Romanian is a clitic doubling language where (dative) experiencers must also be obligatorily encoded in a clitic, which can either be doubled by an NP or stand alone. The dative NP<sup>20</sup> may or may not be present in the constructions, but the dative clitic is obligatory. Therefore, the dative clitic is the key element in such constructions, as illustrated in (6).

- (6) a. *Lui Ion îi plac copiii.*  
John.Dat Cl.Dat.3 like.3Pl children.Nom  
‘John likes children.’
- b. *Îi plac copiii.*  
Cl.Dat.3Sg like.3Pl children.Nom  
‘She/He likes children.’
- c. *\*Lui Ion plac copiii.*  
John.Dat like.3Pl children.Nom

In (6a) the dative clitic experiencer of the verb *to like* is doubled by the dative NP *lui Ion* ‘John.Dat’. In (6b), the dative clitic occurs on its own and is the logical subject of the verb *a plăcea* ‘to like’. (6c) is ungrammatical because the dative NP cannot occur on its own in such a

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<sup>20</sup> The dative lexical NP could be a dative noun or a dative strong pronoun. Dative pronouns are productive in Romanian.

construction. Such paradigms show that clitics, not phrases, are the formal markers of dative experiencers in Romanian.

In conclusion, the dative clitic must always be present in so-called quirky subject constructions with logical subjects in dative case.

### ***1.2 Position of the dative clitic experiencers in raising constructions***

In Romanian raising constructions, dative clitic experiencers can surface in the embedded clause or in the matrix clause but with different semantic roles. In (7), the dative clitic is the experiencer subject of the verb *seem* and is base-generated in the matrix clause. In (8), the dative clitic surfaces in the embedded clause and is the quirky subject of the verb *to like*. In contrast to its dative NP counterpart, which can move from the embedded clause and may surface in the matrix clause, the dative clitic does not move, it always stays in situ. In (9), the dative clitic is base-generated in the embedded clause, however, the dative NP surfaces in the matrix clause.

However, it is not possible for raising constructions to combine two dative clitic experiencers, a restriction which constitutes a topic of discussion in this chapter. Thus (10) is ungrammatical, as a matrix clitic is combined with an embedded clitic. Therefore, dative clitics produce blocking effects.

(7) *Îmi par să danseze bine copiii.*

Dat.Cl.1Sg seem.3Pl Subj dance.3Pl well children.Nom

‘Children seem to me to dance well.’

(8) *Par să îi placă sporturile de iarnă.*

Seem.3Pl Subj Dat.Cl.3Sg like.3Pl sports of winter

‘S/he seems to like the winter sports.’

(9) *Lui Ion par să îi placă copiii.*

John.Dat seem.3Pl Subj Dat.Cl.3 like.3Pl children.Nom

‘John seems to like children.’

(10) *\*Ne par să le placă filmele.*

Dat.Cl.1Pl seem.3Pl Subj Dat.Cl.3Pl like.3Pl movies.Nom

While two clitic experiencers are not possible in raising constructions, when a dative experiencer phrase, which is a quirky subject of the embedded clause, is displaced to the matrix, the result is grammatical, as illustrated in (11).

(11) a. *Lui Ion noi părem [să îi plăcem ].*

John.Dat we.Nom seem.1Pl [Subj Cl.Dat.3Sg like.1Pl ]

b. *Noi lui Ion părem să îi plăcem.*

We.Nom John.Dat seem.1Pl Subj Cl.Dat.3Sg like.1Pl

c. *Noi părem lui Ion să îi plăcem.*

We.Nom seem.1Pl John.Dat Subj Cl.Dat.3Sg like.1Pl

‘John seems to like us.’

The dative NP in (11a-c) belongs semantically in the embedded clause as the ‘logical’ subject of the verb *to like*, but can be ‘displaced’ out of its clause, along with the nominative NP, and land in various positions within the construction.

The possibility of raising or displacement for both the nominative theme from the embedded clause in (11), as well as the dative NP will be accounted for using Chomsky’s (2006) double chain approach based on Rivero and Geber (2007), combined with an alternative solution. Both the nominative NP and the dative NP in examples such as (11) may move independently of each other, each creating a chain that does not affect the other.

### ***1.3 Blocking effects by clitic experiencers in Romanian***

Traditionally, it was believed that Romanian raising constructions were free from intervention effects, and that raising was possible in the presence of matrix experiencers since the nominative NP is allowed to raise from the embedded clause, across a dative experiencer. However, we just saw that there are intervention effects caused by clitic experiencers. These intervention effects in Romanian had remained unnoticed in the literature until recently and were called Experiencer Islands when first noted by Rivero and Geber (2007): namely dative experiencers in both matrix and embedded clauses are not allowed, and therefore the derivation crashes. This is illustrated in (12).

(12) \**IȚi părem [să îi plăcem].*

Cl.Dat.2Sg seem.1Pl Subj Cl.Dat.3Sg like.1Pl

‘\*He seems to you to like us. We seem to you to appeal to him.’

Based on Rivero and Geber (2007), I will further discuss intervention effects in constructions such as (12), which are characterized by a clash of dative clitic experiencers, occurring in both the matrix and the embedded clause.

To summarize, Experiencer Island Effects consist, descriptively, in a ban against two dative experiencers in raising constructions – one in the matrix and a second in the embedded clause.

#### *1.4 Exceptions to Experiencer Islands*

Experiencer Island effects usually happen when two dative clitic experiencers occur in the same construction, one in the matrix clause, and one in the embedded clause. However, there are some apparent exceptions to the just noted restriction in contexts involving quantifiers, as illustrated in (13).

In (13), the matrix verb *seem* has a dative experiencer *Mariei* ‘Mary.Dat’ with the clitic *i* ‘Cl.Dat.3Sg’. In turn, the embedded verb *a plăcea* ‘to like’ also takes an experiencer, a quantifier dative *cuiva* ‘anybody.Dat’ which is not accompanied by a dative clitic. These two dative experiencers can co-exist in the same construction, not rendering an ungrammatical result.

In this chapter, I claim that quantifiers and negation, as well as some dative lexical phrases do not always obey Experiencer Islands in certain well-defined contexts for principled reasons.

(13) *Mariei i- am părut noi [să fi plăcut cuiva].*

Mary.Dat Cl.Dat.3Sg have.1Pl seem.Part we.Nom [Subj be.Perf.1Pl like.Part someone]

‘We seem to Mary to have been liked by someone.’

The explanation I propose in Section 4 for the absence of Experiencer Islands effects is based on constructions such as (14), where there is a clear semantic difference in the nature of the quantifier with or without the clitic.

(14) a) *Muzica place cuiva. / \*Cuiva place muzica.*

Music.Nom like.3sg someone.Dat

‘Somebody likes music.’

Universal > existential

The interpretation of this sentence is ‘for any X, X likes music’

b). *Muzica îi place cuiva.*

Music.Nom Dat.Cl.3 like.3sg someone.Dat

‘Somebody likes music.’

Existential > Universal

The interpretation of this sentence is ‘There is some (specific) X and X likes music’

Based on this difference, I propose that constructions where a quantifier is present without the clitic such as (14a) are different and have different semantic values. This difference also applies to constructions with two dative experiencers, when one is a generic NP not doubled by the dative clitic, or a negative NP.

Thus, dative clitic experiencers in Romanian raising type constructions can be generated in the embedded clause or in the matrix clause, as experiencer of the verb *seem*. Romanian

seems free of intervention effects as the nominative is able to raise across a dative experiencer, but Experiencer Islands prohibit two dative experiencers in a raising construction.

This chapter is structured as follows: in Section 2.1, I provide an overview of the dative clitic system and contexts for dative clitic experiencers in Romanian. In 2.2, I demonstrate that dative clitic experiencers are subjects, based on traditional subjecthood tests. In 2.3, I study their structural position and conclude that they head a High Applicative phrase, based on Rivero and Geber (2007) and Rivero (2009). In Section 3, I present crosslinguistic variation of intervention effects of matrix experiencers (or lack thereof) (3.1). Having established the role of dative clitics experiencers, I discuss raising constructions involving dative experiencers generated in the matrix clause and in the embedded clause respectively in 3.2. In 3.3, I also discuss intervention effects of matrix and embedded dative experiencers upon the nominative NPs during Move and Agree. In Section 4, I discuss Experiencer Islands, showing contexts in which they occur (4.1) and reasons for which they occur. In this section, I present a Grammaticality Judgment Test to confirm the existence of the restriction in Romanian (4.2). Furthermore, I present an analysis of Experiencer Islands (4.3). The last sub-section discusses observed exceptions to the Experiencer Island restrictions (4.4). Section 5 will present conclusions and topics for further research.

## **2. Dative Subjects in Romanian**

In this section, I adopt the idea that dative clitic experiencers are ‘true’ subjects located in the head of a High Applicative Phrase. In Section 2.1, I present an overview of the Romanian dative clitic system, and subsequently I demonstrate that dative clitic experiencers are logical subjects in 2.2. In Section 2.3, I discuss the structural positions of Romanian dative clitics experiencers in comparison with dative clitics found in ditransitive constructions.

## 2.1 The Romanian Dative Clitic System

Clitics are considered to be morphemes that have syntactic characteristics of words, but are phonologically bound to other words. Clitics have been characterized as being ‘bound words’, affix-like elements in non-argument position on the one hand, or syntactic categories, independent words, on the other hand. Additionally, clitics encode features of the verb connected with agreement, case and theta-role (Borer, 1981; Aoun, 1981; Jaeggli, 1982)<sup>21</sup>.

Romanian is similar to other Romance languages in having a rich clitic system. Generally, in Romanian, clitics occur in dative and accusative cases and surface in positions adjacent to verbs. When the verb is indicative, the clitic precedes it, and when the verb is in imperative mood, as well as with non-finite verbs the clitic occurs after the verb, as illustrated in (15-17):

(15) *Ion            îți            dă            o carte.*

John.Nom Cl.Dat.2Sg give.3Sg a book.Acc

‘John gives you a book.’

(16) *Dă                            -i                            o carte.*

Give.2.Imperative-Cl.Dat.3Sg a book

‘Give him/her a book.’

---

<sup>21</sup> Relating to specificity, it is assumed that accusative clitics are associated with specificity and referentiality distinctions, whereas dative clitics are not. I show later in this chapter that in quirky clitic doubling constructions dative clitics imply specificity. In double object constructions, clitics are salient in the discourse, therefore referential.

(17) *Este necesar a -i da ajutor.*

Be necessary Inf-Cl.Dat.3Sg give help

‘It is necessary to help him/her.’

Clitics have been analyzed under two different points of view in generative grammar. Lexical analyses provide a morphophonological perspective and consider clitics as derivational affixes. Syntactic analyses on the other hand consider clitics as independent words, which are either base-generated in the surface position (Kayne, 1989, 1990; Sportiche, 1989, 1993) or derived through movement (Jaeggli, 1982; Roberge, 1990; among others). These two directions are also found for Romanian clitics: a syntactic analysis, where clitics are words, and thus are independent syntactic objects (Dobrovie Sorin, 1990, 1994; Alboiu, 2000a; among others), and a morphophonological analysis. The latter considers clitics not to be lexical elements, but affix-like elements, dependent and attached to words, cliticization to be a lexical operation, and clitics to be the ‘spell-out’ of certain morphosyntactic features of the verb (Monachesi, 2000; Popescu, 2000; Ortmann and Popescu, 2000).

Monachesi (1998, 2000) distinguishes three classes of clitics in Romanian, illustrated in the following table<sup>22</sup>:

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<sup>22</sup> Monachesi also includes accusative clitics. For the current purpose, I will refer to dative clitics only.

**Table 1: Romanian Dative Clitics**

Person	1Sg	2Sg	3Sg	1Pl	2Pl	3Pl
Class 1	îmi	îți	îi	ne/ni	vă/vi	le
Class 2	mi-	ți-	i-	ne-/ni-	v-/vi-	le-
Class 3	-mi	-ți	-i	-ne/-ni	-vă	le

Class 1 includes those clitics that occur in front of verbs (proclitics), Class 2 includes clitics that can occur before verbs [or auxiliaries (n.a.)] that begin with the vowels *a* or *o*, or accusative clitics (n.a.), and Class 3 include clitics that follow the verbs.

The Grammar of Romanian Academy (2005) provides an account for the distribution of dative clitics, dividing them into two categories: free and conjunct<sup>23</sup>. In relation to a verb, clitics can be quirky subjects (18) (n.a.) or indirect objects (19). In relation to a noun, clitics can be attributes (20). In relation to a noun and a verb simultaneously, clitics can have a possessive reading (21). Dative clitics may also appear in relationship with a class of genitive prepositions as in (22). Ethical datives occur in constructions such as (23):

(18) *Îi place teatrul.*

Cl.Dat.3 like.3Sg theatre.Nom

‘He likes theatre.’

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<sup>23</sup> Free clitics keep their syllabic status and occur on their own, whereas conjunct clitics are grouped with another word (which starts with a vowel) forming a syllable with it.

(19) *Îi spun.*

Cl.Dat.3Sg say.1Sg

‘I tell him/her.’

(20) *Cartea-ți*

Book Cl.Dat.2

‘your book’

(21) *Ți -am văzut fiica.*

Cl.Dat.2Sg have.1 seen.1 daughter

‘I/We have seen your daughter.’

(22) *deasupra-ți*

On.Adv Cl.Dat.2

On you

(23) *mi ți arată el ție*

Cl.Dat.1Sg Cl.Dat.2Sg show.3sg he.Nom you.Dat

‘He will show it to you on me’.

So-called possessor raising constructions and datives clitics as benefactives are present as well, illustrated in (24) and (25) respectively. In possessor raising contexts, a dative clitic is interpreted as the possessor of the nominative NP in postverbal position, as in (24).

(24) *I se vede fața.*

Dat.Cl.3Sg Repl see.3sg face.Nom

‘One can see his/her face.’ or ‘His/her face can be seen.’

(25) *I se face un tort.*

Dat.Cl.3Sg Repl make.3Sg a cake.Nom

‘One makes a cake for Mary’.

Now consider (26-27), where the dative clitic represents the experiencer of a state (e.g., hunger, thirst, cold, etc.). The dative in preverbal position cannot trigger verbal agreement, there is no nominative noun, so the verb gets default agreement: third person singular. The same situation is present in examples (28-30):

(26) *Le e foame/sete/frig.*

Dat.Cl.3Pl be.Def hunger/thirst/cold

‘They are hungry/thirsty/cold.’

(27) *Ne e rău.*

Dat.Cl.1Pl be.Def bad

‘We feel sick.’

(28) *Ne pasă de tine.*

Dat.Cl.1Pl care.Def of you.Obl

‘We care about you.’

(29) *Nu îmi pasă.*

Not Dat.Cl.1Sg care.3Sg

‘I don’t care.’

(30) *Îi e că nu mai vii.*

Dat.Cl be.Def that not more come.2sg

‘John is worried that you don’t come anymore.’

Therefore, in Romanian there are quirky nominativeless constructions<sup>24</sup>, syntactically resembling Icelandic constructions where there is one argument and the verb is characterized by default agreement. In general, in these constructions, the dative is the experiencer of a state, such as hunger, thirst, fear, etc. The verb is then followed by a noun with oblique case, which is not nominative.

Still another type of quirky construction illustrated in (31) involves a dative in preverbal position and a verb equipped with the reflexive clitic *se*. The most natural interpretation of these

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<sup>24</sup>Romanian displays another kind of quirky constructions beyond the scope of this thesis, illustrated in (i) and (ii), which resemble Slavic feel-like constructions (Rivero, 2003, 2004a; Marušić and Žaucer 2004, 2006). Such constructions are also present in Spanish illustrated in (iii).

(i) *Ne vine să mâncăm ceva dulce.*  
Cl.Dat.1Pl come.Def Subj eat.1Pl something sweet.  
‘We feel like eating something sweet.’

(ii) *Îmi vine rău.*  
Cl.Dat.1Sg come.Def bad  
‘I feel sick.’

(iii) *Me da miedo.*  
‘I am afraid.’

sentences is with the dative as the causer of the action induced by the verb, where *John* could be the possessor of the glasses<sup>25</sup>.

- (31) *Lui Ion i se sparg ochelarii.*  
John.Dat Dat.Cl.3Sg se break.3Pl glasses.Nom  
'John breaks the/his glasses.'

Another construction with a quirky subject and a verb equipped with the reflexive clitic *se* is with the verb *a se cuveni* 'to deserve', which can only appear in a dative-subject/nominative-object pattern.

- (32) *(Lui Ion) i se cuvin copiii.*  
(John.Dat) Dat.Cl.3Sg se deserve.3Pl children.Nom  
'John deserves the children.'

In Romance languages, constructions such as (32) display person restrictions reminiscent of Icelandic, as first noted by Rivero (2004b) for Spanish and by Rivero and Geber (2003) for Romanian. In quirky constructions in Icelandic, the nominative NP triggering verbal agreement is third person singular or plural, and cannot be first or second person, as illustrated in (33). Romanian is similar, as illustrated in (34).

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<sup>25</sup> If an overt possessor is added to example (31), the interpretation with the dative as possessor can be eliminated:

- i. *Lui Ion i se sparg ochelarii Mariei.*  
John.Dat Dat.Cl.3Sg se break.3Pl glasses.Nom Mary.Gen  
'John breaks Mary's glasses.'

- (33) a. *ég veit að honum líka þeir.*  
 I know that he.Dat like.3Pl they.Nom  
 ‘I know that he likes them.’
- b. *\*ég veit að honum líkið þið.*  
 I know that he.Dat like.2Pl you.Nom  
 ‘\*I know that he likes you.’
- c. *\*ég veit að honum líkum við.*  
 I know that he.Dat like.1Pl we.Nom  
 ‘\*I know that he likes us.’

(Sigurðsson, 2002)

- (34) a. *I se cuvine copilul/el.*  
 Dat.Cl3Sg Refl.3 deserve.3Sg child/he.Nom  
 ‘John deserves the child/him.’
- b. *\*I ne cuvenim noi.*  
 Dat.Cl.3Sg Refl.1Pl deserve.1Pl we.Nom  
 ‘\*John deserves us.’
- c. *\*I vă cuveniți voi.*  
 Dat.Cl.3Sg Refl.2Pl deserve.2pl you.Pl.Nom  
 ‘\*John deserves you.’

This section presented data and outlined views on the Romanian dative clitic system, including dative clitic experiencers in constructions with psychological verbs. In the next section, I show that such clitics are subjects.

## ***2.2 Dative Clitic Experiencers are Subjects***

The subjecthood of quirky elements has been extensively discussed for Romance languages and various analyses have been proposed to capture their properties. Masullo (1992, 1993) argues for non-nominative preverbal subjects in Spanish (dative, accusative and locative), providing new tests of subjecthood<sup>26</sup>. Dumitrescu and Masullo (1996) suggest that Romanian resembles Spanish. Fernández Soriano (1999b) discusses dative anticausative constructions in Spanish, whose core is an anticausative / inchoative base such as *The window broke* to which a dative noun phrase is added as illustrated in (35) and (37). Romanian is similar as in (36) and (38).

(35) *A Juan se le rompio el coche.* Spanish

John.Dat Refl Dat.Cl break.3Sg the car.Nom

‘John breaks the/his car.’

(36) *Lui Ion i s- a spart fereastra.*

John.Dat Cl.Dat.3Sg Refl have.3Sg break window.Nom.

‘John broke the window.’

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<sup>26</sup> See Belletti and Rizzi (1988) for an earlier analysis.

(37) *A Pedro se le ha quemado la comida.* Spanish

Peter.Dat se Dat.Cl have burnt the food.Nom

‘Peter burnt the/his food.’

(38) *Li se ard prăjiturile.*

Cl.Dat.3Pl Refl burn.3Sg cakes.

‘They burn the cakes.’

Fernández-Soriano (1999) argues that in the type of constructions illustrated in (35-38), the dative has an external theta-role and is a quirky subject in the Specifier of the Event Phrase, above the VP, where the subject in transitive constructions would be generated. Cuervo (1999, 2003) considers dative experiencers as quirky subjects in a High Applicative phrase, which is the analysis adopted in this dissertation.

(39) *(Lui Ion) îi plac copiii.*

(John.Dat) Dat.Cl.3Sg like.3pl children.Nom

‘John likes the children.’

(40) *Ne plăceți voi.*

Cl.Dat.1Pl like.2Pl you.Nom

‘We like you.’

The constructions illustrated in (36), (38), (39) and (40) have a dative clitic in common, and the contention is that this dative clitic is the logical subject of the sentence. Dative clitics

obligatorily appear in the sentence, regardless of the presence or absence of the dative NP. The nominative NP triggers verbal agreement, and therefore the verb can be 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> person, singular or plural.

Depending on the verb, in Romanian, a dative clitic can be the logical subject of psychological verbs such as *a plăcea* ‘to like’ as in (39-40), transitive verbs that can participate in anticausative alternation<sup>27</sup> as in (36), verbs which denote states or change of states as in (38), and unaccusative verbs<sup>28</sup>.

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<sup>27</sup>Transitive verbs that participate in the anticausative alternation can take a dative subject when they are used intransitively, i.e. without an accusative complement, and their theme is nominative, that is in the frame that is known as inchoative, anticausative, or unaccusative.

- i. a. *Ion sparge ochelarii.*  
John.Nom break.3Sg glasses.Acc  
‘John breaks the glasses’
- b. *Lui Ion i se sparg ochelarii.*  
John.Dat Dat.Cl.3Sg Refl.3 break.3Pl glasses.Nom  
‘John breaks the/his glasses’
- ii. a. *Ion pierde copiii.*  
John.Nom loses.3Sg children.Acc  
‘John loses the children.’
- b. *Lui Ion i se pierd copiii.*  
John.Dat Dat.Cl.3Sg Refl.3 lose.3Pl children.Nom  
‘John loses the children.’
- iii) a. *Ana arde mâncarea.*  
Ann.Nom burn.3Sg food.Acc  
‘Ann burns the food.’
- b. *Anei i se arde mâncarea.*  
Ann.Dat Dat.Cl.3Sg Refl.3 burn.3sg food.Nom  
‘Ann burns the food.’

The interpretation of the b. sentences in the examples above is that the dative subject is somehow responsible for the action denoted by the verb. It could be the causer, without necessarily intervening intentionally in the action. The dative subject could also be the possessor of the nominative NP.

<sup>28</sup> Another category of verbs with dative experiencers is represented by verbs expressing bodily functions such as *a sângera* ‘to bleed’, *a lăcrima* ‘to tear’ as in the following examples, which could be also considered possessor raising:

- i. *Anei îi sângerează piciorul.*  
Ann.Dat Dat.Cl.3sg foot.Nom  
‘Ann is bleeding from her foot.’
- ii. *Mie îmi lăcrimează ochii.*

Using tests of subjecthood, I demonstrate in this sub-section that dative experiencers are quirky subjects.

The first test generally used to prove the subjecthood property is word order. However, Romanian displays free word-order, and this test is therefore not conclusive.

Binding is a widely accepted subjecthood test to support the claim that Romanian quirky datives and thus the obligatory clitics that encode them behave like subjects<sup>29</sup>. Consider the following examples<sup>30</sup>:

- (41) a. *Fiecărui copil îi place jucăria sa.*  
 Each child.Dat Cl.Dat.3Sg like.3sg toy.Nom his.  
 ‘Each child likes the/his toy.’
- b. *\*Fiecare jucărie<sub>i</sub> îi place copilului său<sub>i</sub>.*  
 Each toy.Nom Cl.Dat.3Sg like.3Sg child.Dat his.

(41a) shows that the quantifier *fiecărui* ‘each.Dat’ which belongs to the dative phrase *fiecărui copil* ‘each.Dat child’ can bind the possessive pronoun *sa* ‘his’ in the nominative theme, thus

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I.Dat Dat.Cl.1sg tear.3pl eyes.Nom  
 ‘I have tears in my eyes.’

<sup>29</sup> Concerning binding, Fernandez Soriano (1999) gives arguments that a quantifier in the dative phrase can bind a pronoun in the theme, showing that the dative argument is higher than the theme.

i. *A cada cocinero se le quemo su pescado* Spanish  
 To every cook.Dat se Cl.Dat burned his fish.  
 ‘Each cook’s fish burned on him’.

ii. *\*Cada pescado se le quemo a su cocinero*  
 Each fish se Cl.Dat burned to its cook.

<sup>30</sup> The sentences presented here demonstrate that the dative lexical NP is the element that undergoes binding, as it is impossible to show binding constraints with clitics. However, the clitic cannot be missing from the sentence.

showing that the dative experiencer is higher than the nominative theme. (41b) is ungrammatical as the nominative NP cannot bind the pronoun in the dative phrase *copilului* ‘child.Dat’.

Another test to prove the subjecthood of the dative experiencer is the quirky dative as controller, illustrated in (42) and (43), where the dative experiencer *lui Ion* ‘John.Dat’ and/or the dative clitic *îi* ‘Cl.Dat.3Sg’ is the controller of PRO in the embedded sentence:

(42) *(Lui Ion<sub>i</sub>) îi<sub>i</sub> place PRO<sub>i</sub> să danseze.*  
 John.Dat Cl.Dat.3Sg like.3sg PRO Subj dance.3sg  
 ‘(John) / {S/he} likes to dance.’

(43) *(Lui Ion<sub>i</sub>) i<sub>i</sub> se cuvine PRO<sub>i</sub> să câştige.*  
 John.Dat Cl.Dat.3Sg Refldeserve.3sg PRO Subj win.3sg  
 ‘(John) / {S/he} deserves to win.’

Masullo (1992), following Belletti and Rizzi (1988), uses other tests to prove the subject property of dative NPs in preverbal position to distinguish these from left-dislocated elements. Those tests also apply to Romanian. Unlike left-dislocated constituents, quirky subjects can appear as quantified NPs (or NPs with negatives), as illustrated in (44-46).

(44) *Nimănui nu îi place muzica.*  
 Nobody.Dat not Dat.Cl.3Sg like.3Sg music.Nom  
 ‘Nobody likes music.’

(45) *Oricui i se cuvine un premiu.*

Everybody Dat.Cl3Sg Refl deserve.3Sg a prize.Nom

‘Everybody deserves a prize.’

(46) *\*Nimănui, comitetul nu i- a dat un premiu.*

Nobody.Dat the committee not Dat.Cl.3Sg have.3Sg given a prize

In sum, we can conclude that in Romanian there are dative quirky subject constructions. Datives pass traditional tests of subjecthood such as binding and control, thus proving that they are generated in a position higher than the theme and therefore can be considered as subjects.

### ***2.3 The Structure of Dative Quirky Subjects in Romanian***

In this sub-section, I will now adopt current assumptions and consider that dative subjects in Romanian are structurally superior to nominative themes, because they head a High Applicative phrase (Rivero, 2009; Rivero and Geber, 2007; McGinnis, 2004, in the sense of Pylkkänen, 2002, 2008 and Cuervo, 2003). According to this view, the essential subject-like item is the dative clitic as head of the High Applicative phrase, and the dative lexical NP, if present, is the Specifier of the Applicative Phrase. As previously mentioned, the dative clitic is the obligatory element in a quirky subject construction, whereas the lexical dative may either be present or absent. According to this view, the schema for the dative in (47) is represented in (48):

(47) *Lui Ion îi place munca.*

John.Dat Cl.Dat.3Sg like.3Sg work

‘John likes work.’

(48) [<sub>AppIP</sub> lui Ion [<sub>AppI</sub> îi]]

cf Rivero, 2009

Traditionally, applicatives are constructions in which a verb bears a specific morpheme that licenses an oblique or non-core argument that would not otherwise be considered a part of the argument structure of the verb. Building on Marantz (1993), Pylkkänen (2002) argues that, crosslinguistically, applicative phrases fall into two syntactic and semantic types that she labels High and Low respectively. A High Applicative sits above the VP roughly speaking, and denotes a semantic relation between an individual and an event. When viewed as High Applicatives, dative experiencers are reminiscent of agents, which Kratzer (1996) considers non-core arguments of the verb in a Voice Phrase outside the VP. According to Rivero (2009), one advantage of analyzing dative subjects (i.e., clitics) as heads of High Applicative phrases is that it justifies the obligatoriness of the dative clitic. Furthermore, High Applicatives c-command the nominative theme so that traditional subjecthood properties of dative experiencers are also captured under the applicative analysis.

In contrast with High Applicative phrases, Low Applicatives are within the VP, and denote a transfer of possession between two entities. A notable example of a Low Applicative is the goal in the so-called Double Object Construction (see Pylkkänen, 2002 for English, Finnish,

and Japanese; McGinnis, 2001 for Albanian, Icelandic, and Italian; Cuervo, 2003 for Spanish; Diaconescu, 2004; Diaconescu and Rivero, 2007 for Romanian)<sup>31</sup>.

In consequence, Romanian has both Low Applicatives and High Applicatives. Diaconescu (2004) and Diaconescu and Rivero (2007) argue that Romanian (dative) clitic goals<sup>32</sup> in ditransitive constructions are Low Applicatives.

Diaconescu and Rivero (2007) and Diaconescu (2004) argue that the clitic is the head of a Low Applicative phrase, and the dative is not an argument of the verb, but rather is introduced by an applicative head, which merges below the verb. In this thesis, I adopt Diaconescu (2004)'s position of the dative clitic in ditransitive constructions as the head of the Low Applicative Phrase, whereas the doubled dative NP is in the Specifier of this phrase. For Diaconescu (2004) the applied argument is inherently dative and the theme is accusative, with the dative being generated in a position higher than the accusative. Clitic doubling is obligatory, because the clitic functions as the head of the Low Applicative phrase.

Following Demonte (1995) and Cuervo (2003) for Spanish, Diaconescu (2004) and Diaconescu and Rivero (2007) argue that in Romanian, the presence and absence of the clitic in ditransitive constructions result in semantic and syntactic differences between them (idea also proposed by Anagnostopoulou, 2003 and Slavkov, 2007). For sentences (49) and (50),

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<sup>31</sup>See also Alsina and Mchombo (1993), Anagnostopoulou (2003), Baker (1988, 1996), Bresnan and Kanerva (1989), Hale and Keyser (1993), among many others for related discussion.

<sup>32</sup> For clitic doubling constructions in ditransitive sentences, there are generally two major syntactic analyses concerning the clitic itself. The first proposal assumes that the clitic starts from a position (which in turn varies among different proposals) and then moves to its surface position (Kayne, 1975, 2000; Aoun, 1981; Phillipaki-Warburton, 1977, 1987; Phillipaki-Warburton et al., 2004; Rivero, 1986; Anagnostopoulou, 1994). The non-movement proposal postulates that the clitic is base-generated in surface position (together with the doubled DP) (Jaeggli, 1982; Suñer, 1988; Dobrovie-Sorin, 1990; Tsakali, 2006). Another option is to consider a reconciliation of the two approaches, both movement and base-generation (Sportiche, 1993), where the structural analysis of clitic doubling constructions is similar to *wh*-constructions, negative quantifiers, focus, and other constructions involving movement. Uriagereka (1995) considers the doubled phrase as the specifier of a determiner head - the clitic, which heads its own projection (also Checchetto, 1999; Belletti, 2005; Leonetti, 2008; among others).

Diaconescu (2004) proposes the structures in (51) that encode the syntactic differences:

(49) *Ion îi aduce Elenei flori.*

John.Nom Cl.Dat.3Sg bring.3Sg Helen.Dat flowers.Acc

‘John brings Helen flowers.’

(50) *Ion aduce flori Elenei.*

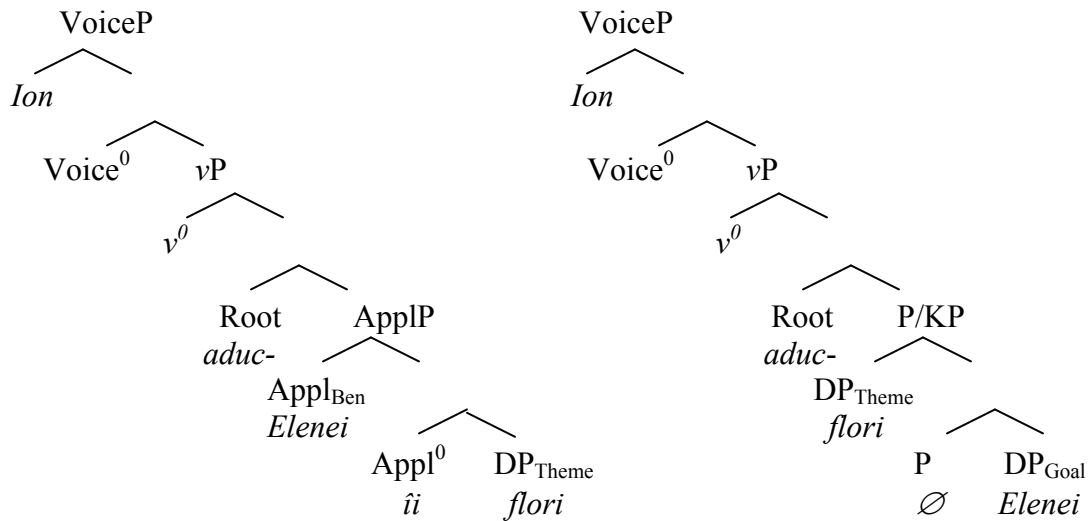
John.Nom bring.3Sg flowers.Acc Helen.Dat

‘John brings flowers to Helen.’

(51)

a. Clitic doubled dative construction

b. Non doubled datives



As a consequence of the fact that the clitic is generated as the head of the Low Applicative phrase, I adopt a movement analysis of the dative clitic in ditransitive constructions, while the dative lexical noun that follows the verb is generated in the surface position. The dative clitic

moves from the Specifier of the Low Applicative phrase to the preverbal position. This is illustrated in (52):

(52) [CP C [TP Ion [T îi [vP [v aduce [AppIP Elenei [Appl îi [DP flori]]]]]]]].

In sum, I presented above a brief overview of Romanian dative clitics in ditransitive constructions as they relate to an Applicative analysis of datives. Dative clitics in ditransitive constructions are generated in the head of Low Applicative phrases, and they move to the preverbal position.

Returning to Romanian dative experiencers, I adopt the idea that they share characteristics with Spanish ‘quirky subjects’ (Cuervo, 2003b on Spanish; Diaconescu, 2004 on Romanian; Rivero and Diaconescu, 2007 on the diachrony of experiencers in Spanish and Romanian), and I adopt the analysis according to which they are High Applicative phrases between TP and vP. This hypothesis justified in detail in the cited references, captures why dative clitics must be obligatory: they must head the Applicative. The (optional) dative phrase, if present, sits in the specifier of the Applicative phrase (53).

(53) [TP T [AppP Dative Phrase *Lui Ion* [App' [Appo Dative Clitic îi] [vP[vP *place* NOM *munca*]]]]

Thus Romanian dative experiencers share all the noted characteristics of Spanish dative experiencers called ‘quirky subjects’<sup>33</sup> (Masullo 1993, Cuervo 1999, 2003b, Fernández Soriano 1999a, 1999b), which can be captured under a High Applicative analysis.

### **3. Intervention Effects of Dative Clitic Experiencers**

In this section, I outline effects of dative clitic experiencers in raising constructions. In 3.1, I provide a cross-linguistic overview of languages, some of which display blocking effects of experiencers on nominatives and some of which do not (e.g., English). Furthermore, in 3.2, I show the lack of classical intervention effects in Romanian, followed by a discussion regarding the effects of matrix and embedded experiencers in Romanian raising constructions in 3.3.

#### ***3.1 Crosslinguistic Variation in Intervention Effects of Experiencers on Nominatives***

In English, a subject is able to move across an experiencer, as in (54). This is in apparent violation of the Minimal Link Condition or an equivalent locality condition, as the nominative NP moves into a higher position beyond the closest potential position.

(54) *John seems to Mary [t to be the best candidate].*

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<sup>33</sup>See Eythórsson and Barðdal (2005) for an overview and references on the properties of oblique subjects in Germanic. See Moore and Perlmutter (2000) for an analysis of dative subjects in Russian and Sigurdsson (2002) for a comparison of Russian and Icelandic.

In (54), the subject of the embedded clause *John* moves across the Dative experiencer *Mary* up to the subject position of the matrix clause. The equivalent is not possible in other languages, and this phenomenon is known in the generative grammar as an intervention effect.

Intervention effects of matrix dative experiencers on raising nominatives have been at the center of various theoretical debates (Ausín and Depiante, 2000; Cuervo, 2003a, 2003b; Torrego, 1996, 1998 on Spanish; Holmberg and Hróarsdóttir, 2004; Chomsky, 2006; Sigurdsson and Holmberg 2008 on Icelandic; among others)<sup>34</sup>. Holmberg and Hróarsdóttir (2004) note that in Icelandic a dative experiencer blocks agreement between the matrix verb (the matrix T) and the embedded subject of the infinitival clause, and it also blocks raising of the embedded subject. If the experiencer is *wh*-moved or relativized or topicalized, agreement is still blocked, but raising is possible:

- (55) a.    \**Herstarnir*    *virðast* *mer*    [*t vera seinir*].  
           the horses.Nom seem.3Pl I.Dat    be    slow  
           ‘The horses seem to me to be slow.’
- b.    *Hverjum hafa hestarnir*       *virst*    [*t vera seinir*]?  
           Who.Dat have the horses.Nom seemed    be    slow?

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<sup>34</sup> According to Hiraiwa (2005), the cause of blocking effects is the Defective Intervention Constraint, which constitutes a ‘representational’ locality condition. This prohibits the establishment of an Agree relation when a closer but inactive goal intervenes between a probe and another goal in the configuration. Sigurdsson and Holmberg (2008) suggest that at the basis of intervention are Person Restrictions. Their explanation is given in terms of relativized minimality of individual features. Accordingly, Person Restriction caused by intervention and thus agreement restrictions in Icelandic Dative - Nominative constructions are structural, and not an inherent property of the Icelandic Dative. Person Restrictions constitute a special case of Dative intervention, where the dative intervenes between Tense/Number/Person. From this, in their view, it results that intervention effects are caused by morphological and not syntactic factors.

‘To whom have the horses seemed to be slow?’

In Italian and French, matrix experiencers allow raising when they are clitics, (56a) and (57a), but prohibit raising when they are dative NPs, (56b) and (57b).

(56) a. *Gianni non gli sembra [t fare il suo dovere].*

John.Nom Neg Cl.Dat.3Sg seems do.Inf the his duty

‘John does not seem to him to do his duty.’

b. *\*Gianni sembra a Piero [t non fare il suo dovere].*

John.Nom seems to Peter Neg do.Inf the his duty

‘\*John seems to Peter not to do his duty.’

(57) a. *Paul lui semble [t être malade].*

Paul Cl.Dat.3 seems be.Inf sick

‘Paul seems to him to be sick.’

b. *\*Paul semble à Valerie [t être malade].*

Paul seems to Valerie be.Inf sick

‘\*Paul seems to Valerie to be sick’.

Languages with clitic doubling also show variation. In Spanish and Greek, dative or genitive experiencers are necessarily encoded in a clitic, which can be doubled by an NP or appear without an NP.

In Spanish, the dative clitic blocks raising<sup>35</sup>, regardless of the presence or absence of a doubling lexical NP (Torrego, 1996, 1998), as in (58):

- (58) \**Juan le parece (a María) [t ser el mejor candidato].*  
John.Nom Cl.Dat.3 seems (Mary.Dat) be.Inf the best candidate  
'\*John seems to Mary to be the best candidate.'

In Greek, the embedded subject can move across the clitic with or without the doubling lexical NP, as in (59). Anagnostopoulou (2003) suggests that clitics facilitate extraction:

- (59) *Ta pedhia dhen tis fenonte (tis Maria) [t na meletun].*  
The children.Nom Neg Cl.Gen.3 seem.3Pl the Mary.Gen Subj study.3Pl  
'The children do not seem to Mary to study.'

Several explanations have been provided for the differences between languages with respect to intervention effects on nominatives. Boeckx (1999) divides languages respectively into two categories: transparent, where the dative experiencer does not block movement of the nominative across a dative (e.g., English), and opaque, where such a movement is illicit (e.g., Icelandic, Spanish, among others)<sup>36</sup>. Romanian is seemingly part of the transparent languages, since the

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<sup>35</sup>According to Cuervo (2000, 2003) *seem* + *experiencer* is a control verb rather than a raising verb. She shows that for Spanish and Italian, the predicates formed by *parecer* and *sembrare* and a dative experiencer argument select for a control infinitival complement clause, not for a raising clause.

<sup>36</sup> According to Boeckx (1999, 2000), the contrast is due to the difference in case marking of the dative. Languages should pattern one way or the other depending on the inherent vs. structural case marking of the dative experiencer.

nominative is able to raise to the matrix clause position across a dative experiencer, which is in apparent violation of classical intervention effects.

### 3.2 Apparent Lack of Intervention Effects in Romanian

As stated above, in Romanian, raising of the nominative across a dative experiencer is possible. Therefore, standard blocking effects in raising constructions with datives noted in Spanish and Icelandic for instance, are altogether absent as in (60a-d), with a dative experiencer as semantic component of the matrix clause.

- (60) a. *Copiii            îi            par    Mariei [să lucreze bine].*  
 Children.Nom Cl.Dat.3Sg seem.3Pl Mary.Dat [Subj work.3Pl well]
- b. *Îi            par    Mariei [să lucreze bine copiii].*  
 Cl.Dat.3Sg seem.3Pl Mary.Dat [Subj work.3Pl well children.Nom]
- c. *Mariei    îi            par            [să lucreze bine copiii].*  
 Mary.Dat Cl.Dat.3Sg seem.3Pl       [Subj work.3Pl well children.Nom]
- d. *Mariei copiii            îi            par    [să lucreze bine].*  
 Mary.Dat children.Nom Cl.Dat.3Sg seem.3Pl [Subj work.3Pl well]  
 ‘The children seem to Mary to work well.’

In (60a-d), the experiencer is signaled by an obligatory clitic together with the dative phrase *Mariei* ‘Mary.Dat’. The nominative NP can appear in the matrix as in (60a) and (60d), or in the embedded clause as in (60b-c). The clitic has a fixed position within the clause it modifies

semantically, but the dative phrase can occupy several positions. In this way, Romanian resembles English, but contrasts with both Spanish and Icelandic, where nominatives cannot appear in the matrix with a dative experiencer (61a-b).

- (61) a. \**Los niños le parecen a María [trabajar bien].* Spanish  
 Children.Nom. Cl.Dat.3Sg seem.3Pl to Mary [work.Inf well]  
 ‘\*The children seem to Mary to work well.’
- b. \**Herstarnir virðast mér [vera seinir].* Icelandic  
 Horses.Nom seem.3Pl I.Dat [be slow]  
 ‘\*The horses seem to me to be slow.’

Another notable difference between Romanian and Icelandic concerns agreement. Icelandic nominatives and raising verb complexes do not agree when dative experiencers undergo Wh-movement, as in (62). In contrast, Romanian nominative NPs always agree with all verbs, as in (63).

- (62) *Hverjum hafa hestarnir virst [vera seinir]?* Icelandic  
 Who.Dat have.3Sg horses.Nom seem [be slow]?  
 ‘To whom have the horses seemed to be slow?’
- (63) *Cui i-au părut copiii [să lucreze]?*  
 Who.Dat Cl.Dat.3Sg have.3Pl seem children.Nom [Subj work.3Pl]  
 ‘To whom have the children seemed to work?’

In Romanian, dative clitic experiencers do not prevent agreement between the matrix verb and the embedded nominative NP. Spanish also has embedded nominatives, but matrix experiencer clitics block agreement with them as in (64b). In Icelandic, intervening dative phrases block agreement between the raising verb and the nominative, but datives fronted by NP-movement allow such an agreement, as in (65). Romanian shows no such variation, since agreement is always obtained.

(64) a. *Hoy parecen trabajar bien los niños.* Spanish

Today seem.3Pl work.Inf well the children

‘Today the children seem to work well.’

b. *\*Hoy te parecen trabajar bien los niños.*

Today 2Sg.Dat seem.3Pl work.Inf well the children

‘\*Today the children seem to you to work well.’

(65) *Mér virðast herstarnir vera seinir.* Icelandic

I.Dat seem.3Pl horses.Nom be slow

‘The horses seem to me to be slow.’

Still another difference between Icelandic and Romanian consists in person restrictions. Icelandic nominatives that agree with the verb cannot be first or second person if there is a matrix experiencer, as in (66a). However, this restriction disappears if there is no verb agreement, as in (66b) (data adapted from Sigurdsson, 1996). Comparatively, we know that

Romanian raising verbs must agree with nominative NPs, and (67a-b) illustrate that such nominatives are not restricted in person when they co-occur with a dative experiencer.

- (66) a. \**þeim höfum alltaf fundist við vinna vel.* Icelandic  
 They.Dat have.1Pl always found we.Nom work well
- b. *þeim hefur alltaf fundist við vinna vel.*  
 They.Dat have.3Sg always found we.Nom work well  
 ‘We have always seemed to them to work well.’

- (67) a. *Noi îi părem Mariei să lucrăm bine.*  
 We.Nom Dat.Cl.3 seem.1Pl Mary.Dat [Subj work.1Pl well]  
 ‘We seem to Mary to work well.’
- b. *Voi îi păreți Mariei*  
 You. Nom. Pl Dat.Cl.3 seem.2Pl Mary.Dat  
*să lucrați bine.*  
 [Subj work.2Pl well]  
 ‘You (Pl) seem to Mary to work well.’

All of the above phenomena indicate that Romanian raising constructions involving matrix experiencers are less restricted as to intervention phenomena compared to parallel constructions in Spanish and Icelandic. In Romanian, datives do not block relations for nominatives, which can be in any person. To this effect, consider sentences in (68a-c) which contain complements with a psychological verb, a dative experiencer, and a nominative theme.

- (68) a. *Noi părem [să îi plăcem lui Ion].*  
 We.Nom seem.1Pl [Subj Cl.Dat.3Sg like.1Pl John.Dat]
- b. *Lui Ion părem [să îi plăcem noi].*  
 John.Dat seem.1Pl [Subj Cl.Dat.3 like.1Pl we.Nom]
- c. *Lui Ion noi părem [să îi plăcem].*  
 John.Dat we.Nom seem.1Pl [Subj Cl.Dat.3 like.1Pl]  
 ‘John seems to like us.’

Thus, a dative experiencer argument of a lower clause does not prevent agreement, (68b), or movement of the nominatives, as in (68a) and (68c).

Above, we saw that matrix experiencers trigger intervention effects in Spanish, not Romanian. To add to the puzzle, embedded experiencers do not trigger effects in either language, so counterparts of (68a-c) are also fine in Spanish, as in (69).

- (69) *Nosotros parecemos gustar-le a Juan.* Spanish  
 We.Nom seem.1Pl like.Inf-Cl.Dat.3 to John  
 ‘John seems to like us.’

So far, then, Romanian seems free of the intervention effects noted for Spanish and Icelandic.

That is:

- a) Agreement between verbs and nominative NPs always obtains, with the position of nominative and dative NPs immaterial;

- b) Nominative NPs can move across matrix and embedded experiencer clitics, whether the dative phrase is present or absent;
- c) Embedded experiencer dative phrases can move across nominatives;
- d) *Wh*-moved matrix experiencers allow agreement between nominative NPs and verbs; and
- e) Nominative NPs always agree with all verbs, and are not restricted in person.

### ***3.3 Experiencer Effects in Romanian Raising Constructions***

In this section, I discuss raising constructions with dative (clitic) experiencers that are generated in the matrix and the embedded clause respectively, and apparent intervention effects of matrix dative experiencers, embedded dative experiencers and both combined, first on Move and subsequently on Agree of embedded nominatives.

#### *3.3.1 Matrix Experiencers*

The verb *seem* can take a dative experiencer in its argument structure, and in such a case, the dative clitic is its quirky subject, as in (70). The clitic sits in a High Applicative head, and the dative lexical experiencer, if present, is in the Specifier of the High Applicative phrase. Thus, the experiencer is the subject of *seem*, which in such contexts creates an epistemic relationship between the experiencer and a proposition (Cuervo, 2003).

(70) *Copiii îi par profesorului să învețe bine.*

Children.Nom Cl.Dat.3Sg seem.3Pl teacher.Dat Subj study well

‘Children seem to the teacher to study well.’

According to Boeckx (2000), Holmberg and Hróarsdóttir (2004), and Park and Park (2004), blocking by a dative element in raising constructions takes place between the launching and the landing site of the movement. Stepanov (2001) claims that post-cyclic insertion of dative experiencers is not plausible, therefore the dative experiencer of the matrix verb seems to be inserted in syntax. This is true also in Rivero and Geber (2007), where, as already stated, we argued that datives are positioned in a High Applicative phrase as quirky subjects. Based on these assumptions, the construction illustrated in (71), with a matrix experiencer and an in-situ nominative has the simplified schema in (72):

- (71) *Îți părem să lucrăm bine noi.*  
 Cl.Dat.2Sg seem.1Pl Subj work.1Pl well we.Nom  
 ‘We seem to you to work well.’

- (72) [TP<sub>matrix</sub> T<sub>matrix</sub> [**AppIP** **DAT** [**AppI**’ [**App** **Cl**] [<sub>vP</sub> v [T<sub>emb</sub> ... NOM]]]]]

In summary, I consider matrix dative clitic experiencers to be quirky subjects, to head a High Applicative phrase between TP and vP, and to allow movement of the nominative NP to the Specifier of the matrix TP, as well as Long Distance Agree relations with the matrix T, as discussed in the next sub-sections.

### 3.3.1.1 Matrix Experiencers and Move By Nominatives

As stated, Romanian allows raising of nominatives out of subjunctives and infinitives across a matrix dative clitic experiencer, as illustrated in (73) and (74).

(73) a. *Copiii îi par [să danseze bine].*

Children.Nom Dat.Cl.3Sg seem.3Pl Subj dance.3Pl well

‘The children seem to Mary to dance well.’

b. *Copiii îi par [a dansa bine].*

Children.Nom Dat.Cl.3Sg seem.3Pl Inf dance well

‘The children seem to Mary to work hard.’

(74) [TP<sub>matrix</sub> T<sub>matrix</sub> [AppIP **DAT** [AppI' [App **CI**] [<sub>vP</sub> V ... [T<sub>emb</sub> ... NOM]]]]]



Thus, a matrix dative experiencer that is necessarily indicated by a dative clitic does not block Move of a nominative NP in Romanian. This is similar to Greek, but differs from Spanish, as illustrated in (75):

(75) a. *Ta pedhia dhen tis fenonte tis Maria na meletun.* Greek

‘The children do not seem to Mary to study.’

b. *\*Juan le parece a María ser el mejor candidato.* Spanish

‘\*John seems to Mary to be the best candidate.’

It seems that matrix dative clitic experiencers are the elements which make the movement of nominatives from the embedded clause to the matrix clause possible in Romanian. This could be

explained in several ways<sup>37</sup>. According to Anagnostopoulou (2003), the feature of the dative clitic moves out of the way, letting the nominative move. McGinnis (2001, 2004) proposes that in some Romance languages the dative clitic heads a High Applicative phrase, which has a phasal status, and therefore has an optional EPP feature which attracts a lower DP. Thus, the nominative NP is able to move into the Specifier position of the High Applicative Phrase providing an escape hatch for the nominative, which is then able to move further to check the EPP feature of the matrix T. McGinnis does not discuss obligatory clitic doubling languages, but hers seems to be the preferred solution amongst the two solutions mentioned above. I adopt this option for Romanian, where the nominative NP optionally moves for EPP reasons. Therefore, I conclude that Romanian matrix dative experiencers do not block the movement of the nominative NP to the matrix subject position because such a movement is EPP driven.

### 3.3.1.2 Matrix Experiencers and Agree By Nominatives

With respect to the effects of matrix dative clitic experiencers on Agree, consider the raising constructions in (76-77), involving an experiencer dative clitic that is part of the argument structure of the matrix. In (76) and (77), clitics are experiencers of *seem* with subjunctive and infinitive embedded clauses respectively.

(76) *Îmi par [să fie inteligenți copiii].*

Cl.Dat.1Sg seem.3Pl Subj be.3Pl intelligent children.Nom

‘The children seem to me to be intelligent.’

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<sup>37</sup>One proposal is that the matrix T attracts the closest NP with a structural case feature. But this is doubtful for Romanian, as the dative is a quirky subject and displays structural case together with inherent case.

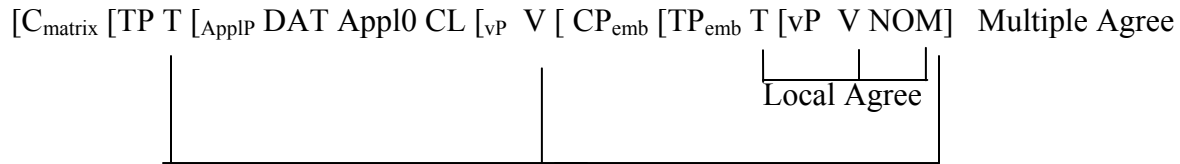
(77) *Îmi par [a fi inteligenți copiii].*

Cl.Dat.1Sg seem.3Pl Inf be intelligent children.Nom

‘The children seem to me to be intelligent.’

Examples (76) and (77) show that a matrix clitic experiencer (with or without a lexical dative NP) allows Long Distance Agree between the matrix T and the nominative NP in situ with subjunctive or infinitive embedded clauses. Moreover, local Agree obtains between the various subjunctive Ts and the nominative NP.<sup>38</sup> (78) shows multiple agree relations between the nominative NP and the matrix and the embedded verb.

(78)



Long Distance Agree

In summary, Romanian dative experiencers that belong to the matrix clause have a feature composition that makes them generally transparent to nominative NPs in raising constructions. This idea receives further support from the behavior of dative clitic experiencers in raising constructions that belong to the embedded clause, and not the matrix clause.

<sup>38</sup> In contrast, a Spanish matrix experiencer blocks Long Distance Agree with a nominative, which is compatible with the idea that *parecer* with an experiencer is a control verb (Cuervo, 2003), as illustrated below.

- (i) \**A María le parecen ser inteligentes los niños.*  
 Mary.Dat Cl.Dat.3 seem.3Pl be.Inf intelligent the children.Nom  
 ‘\*The children seem to Mary to be intelligent.’

### 3.3.2 *Embedded Experiencers*

The hypothesis is that the dative clitic in the High Applicative phrase is the ‘essential’ quirky subject and gets inherent and structural case. As such, the nominative subject moves in a cyclic fashion and also agrees with all verbs in the derivation. The dative which raises does not block any operation.

Dative experiencers (i.e., quirky subjects) in Romanian display both inherent dative case and structural case. The structural case is valued by the verb in the clause in which the dative is a quirky subject (Boeckx, 2003; Alexiadou, 2001; Alexiadou and Anagnostopoulou, 2001).

I propose that in Romanian raising constructions with an embedded quirky subject clause, structural case is valued in situ, within the embedded clause. This means that both nominative and structural dative cases in the embedded clause are valued before the matrix clause is added by the embedded verb.

In quirky embedded clauses, the dative clitic experiencer stays in situ and cannot move to the matrix clause. Under the assumption that clitic experiencers in quirky constructions have both inherent and structural case, the structural dative must be valued at a local level. There is no reason to establish a case relation between the embedded dative clitic quirky subject and the matrix verb. However, a feature relation has to be established between the quirky dative and the matrix T, as there can only be one dative experiencer per raising construction, and as a consequence only one High Applicative phrase.

Thus, movement of the nominative NP is driven by the EPP feature, whose checking in Romanian is optional and allows the nominative NP to land in intermediate positions. The dative experiencer clitic quirky subject of the embedded clause cannot move. As a best case scenario, the dative NP, if present, can be displaced to the matrix clause. I claim that this movement is

motivated by pronunciation needs, as opposed to the movement of the nominative NP, which is for EPP purposes.

Interestingly, both the dative and the nominative NPs may raise to the matrix position: each one of them may raise (due to EPP driven movement) or both may raise at the same time, as illustrated in (79a, b):

- (79) a. *Noi lui Ion părem să îi plăcem.*  
We.Nom John.Dat seem.1Pl Subj Dat.Cl like.1Pl  
'John seems to like us.'
- b. *Lui Ion noi părem să îi plăcem.*  
John.Dat we.Nom seem.1Pl Subj Dat.Cl like.1Pl  
'John seems to like us'.

In sum, the nominative NP raises successively to the matrix clause to check the EPP feature. The dative NP raises post-cyclically to an A-bar position. Therefore, a two movement chain approach is maintained. However, they do not interfere, as the nominative NP is raised to the matrix clause to the equivalent of an A-position, whereas the dative NP is displaced to an A-bar position.

### 3.3.2.1 *Embedded Experiencers and Nominatives*

In the following construction, the raising verb embeds a quirky clause with a dative subject experiencer, a nominative object, and a psych-verb.

(80) *Noi părem [să îi plăcem (lui Ion)].*

We.Nom seem.1Pl Subj Cl.Dat.3Sg like.1Pl (John.Dat)

‘John / {he/she} seems to like us.’

(80) shows that embedded experiencers do not block Move of the nominative NP to the matrix clause<sup>39</sup>. In examples such as (81), an experiencer dative NP argument of the embedded clause, when present, may occur in the matrix clause as well, while the nominative arguably surfaces in the embedded clause.

(81) *Lui Ion părem să îi plăcem (noi).*

John.Dat seem.1Pl Subj Cl.Dat.3 like.1Pl (we.Nom).

‘John seems to like us.’

However, the dative clitic experiencer as logical subject of the embedded clause stays in situ. In the embedded clause, the logical object gets nominative case and the phi-features of the embedded verb are matched with the nominative NP. In the matrix clause, the EPP feature is optionally satisfied by the nominative NP, which may move to the matrix. In the same lines as Chapter 2, Long Distance Agree applies between the matrix T-V and the embedded nominative. Nominative case is valued by the closest T.

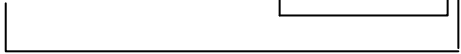
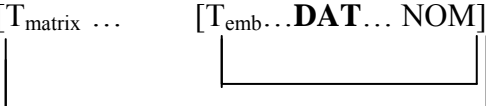
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<sup>39</sup>The Spanish case is similar to Romanian, embedded experiencers do not block Move of the nominative NP to the matrix:

i. *Nosotros parecemos [empezar [a gustarle a Juan]].*  
We.Nom seem.1Pl begin.Inf Cl.Dat.3 like.Inf John.Dat  
‘John seems to begin to like us.’


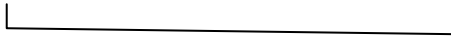
Thus, dative experiencers and nominative NPs do not interfere with each other in raising constructions. Dative experiencers may be semantic clause-mates of nominatives, or constituents of higher clauses, but they never block Long Distance Agree or local Agree of nominative NPs with matrix C/T and embedded C/T. Assuming experiencers are below T, and above their nominative clause-mates, in Rivero and Geber (2007), Agree relations between T and nominatives across experiencers are as in simplified schemas in (83a-b), corresponding to (82a-b).

- (82) a. *Le părem să dansăm bine noi.*  
 Cl.Dat.3Pl seem.1Pl Subj dance well we.Nom  
 ‘We seem to them to dance well.’
- b. *Părem să le plăcem noi.*  
 Seem.1Pl Subj Cl.Dat.3Pl like.1Pl we.Nom  
 ‘They seem to like us.’

- (83) a.  $[T_{\text{matrix}} \dots \mathbf{DAT} \dots [T_{\text{emb}} \dots \mathbf{NOM}]]$   

- b.  $[T_{\text{matrix}} \dots [T_{\text{emb}} \dots \mathbf{DAT} \dots \mathbf{NOM}]]$   


In (83a-b), lines identify Agree operations. The line from  $T_{\text{matrix}}$  is for Long Distance Agree, and those from  $T_{\text{emb}}$  for Local Agree.

Along the same lines, movement of the nominative to the matrix clause is not blocked. To reach the matrix, the nominatives of (82a-b) cross a matrix Applicative in the first instance, and a clause-mate Applicative in the second instance, as depicted in (84a-b).

- (84) a.  $[TP_{matrix} \text{ NOM } [T_{matrix} \dots \text{ DAT} \dots [T_{emb} \dots \text{ NOM}]]]]$   

- b.  $[TP_{matrix} \text{ NOM } [T_{matrix} \dots [T1_{emb} \dots \text{ DAT} \dots \text{ NOM}]]]]$   


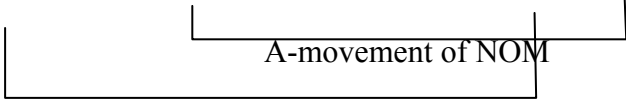
If nominative NPs front in order to check the EPP feature of  $C_{matrix}/T_{matrix}$ , matrix and clause-mate applicatives are not interveners for such an operation.

In addition, I claim that the fronting of the dative lexical experiencer, if present, is not a case of raising of the A-movement type. Therefore, a dative experiencer may undergo A-bar movement, and arguably land in an A-bar position, but this does not affect its relationship with the nominatives.

Therefore both matrix and embedded experiencer phrases can front to a position preceding the nominative NP, as in (85), and with the schema in (86):

- (85) *Lui Ion noi părem [să îi plăcem].*

‘John seems to like us.’

- (86)  $\text{DAT } [TP_{matrix} \text{ NOM } [T_{matrix} \dots [T1_{emb} \dots \text{ DAT} \dots \text{ NOM}]]]]$   
  
 A-bar movement of the DAT

If one considers the landing site of the dative phrase as an A-bar position such as topic/contrastive focus, and fronted nominatives form A-chains by landing in Spec-TP, there should be no intervention effects in such sentences. In other words, a dative experiencer may undergo A-bar movement, and arguably land in an A-bar position, but this has no effect on agreement with nominatives, because phrasal A-bar movements do not bleed or feed Intervention. No type of dislocation of dative experiencer phrases in the domain of the probe affects agreement.

To summarize, in Romanian matrix and embedded experiencers allow both movement of the nominative NP across a dative experiencer and Long Distance Agree between the matrix T and the nominative NP (which may stay in situ or may move to the matrix clause). Therefore, Romanian raising constructions seem free of intervention effects of dative experiencers over nominative objects.

### 3.3.3 *Matrix and embedded experiencers combined*

Up to now, Romanian appears to be a language free of intervention effects. But the combination of matrix experiencers and embedded experiencers in raising constructions produces blocking effects, due to the interaction of the two dative clitic experiencers.

(87) \**Îți*        *părem*    [*să*    *îi*        *plăcem noi*].

Cl.Dat.2Sg seem.1Pl Subj Cl.Dat like.1Pl we.Nom

‘\*He seems to you to like us.’

- (88) \**Ne par să le placă copiii.*  
 Cl.Dat.1Pl seem.3Pl Subj Cl.Dat.3Pl like.3Pl children.Nom  
 ‘\*They seem to us to like children.’

The matrix dative clitic experiencers *îți* ‘Cl.Dat.2Sg’ in (87) and *ne* ‘Cl.Dat.1Pl’ in (88), combined with the embedded dative clitic experiencers *îi* ‘Cl.Dat.3Sg’ in (87) and *le* ‘Dat.Cl.3Pl’ in (88) respectively result in ungrammatical constructions. This evidence suggests that the combination of matrix and embedded experiencers blocks all operations: Move by a nominative NP to the matrix subject position, fronting of the embedded experiencers, and Agree between matrix T and the nominative NP. This situation will be discussed in more detail in Section 4, but I propose that the formal source of the deviance in (87-88) is the ‘quirkiness’ of the dative clitic experiencer in the embedded clause, which demands a relation with the matrix T<sup>40</sup>. A non-experiencer dative does not yield the same result so the dative in the ‘double object construction’ does not create intervention effects, as illustrated in (89):

- (89) *Îți părem să îi dăm Mariei un cadou.*  
 Dat.Cl.2Sg seem.1Pl Subj Dat.Cl.3Sg give.1Pl Mary.Dat a present.  
 ‘We seem to you to give Mary a present.’

Furthermore, the dative responsible for the blocking effect doesn’t have to be in the matrix clause. In a multiple raising construction, when a verb such as *begin* is in the matrix position,

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<sup>40</sup>In a previous analysis (Rivero and Geber, 2007), it was Agree that was thought to have a relation with the dative clitic experiencer. I discard this proposal for the purposes of the current chapter.

and the verb *seem* is in an embedded clause with a dative experiencer of its own the ungrammaticality effects are maintained (90):

(90) \**Noi începem să îți părem să îi plăcem.*

We.Nom begin.3Pl [Subj Dat.Cl.2 seem.1Pl [Subj Dat.Cl.3 like.1Pl]

\*'He begins to seem to you to like us.'

As stated above, for situations in which two dative experiencers are combined, intervention effects occur, and all operations appear to be blocked. Rivero and Geber (2004, 2007) proposed that, contrary to appearances, Romanian dative experiencers do not interfere with nominatives, while matrix datives act as interveners for embedded datives. They assumed that embedded datives combine inherent case and the equivalent of structural case, entering into an Agree relation with matrix T, as structural case valuator (including the quirky subjects' structural case). According to these views, a matrix experiencer was considered to be an intervener that prevented an embedded quirky experiencer from licensing its structural case with a complete T, leading to a Minimal Link Condition violation.

To summarize this section, both matrix and embedded dative experiencers allow Move and Multiple Agree or Long Distance Agree involving embedded nominatives. However, when two dative experiencers co-occur in a raising-type construction, they block each other.

## 4. Romanian Experiencer Islands

### 4.1 Characteristics of Romanian Experiencer Islands

This section studies raising constructions with blocking effects. Consider (91a-e).

- (91) a. \**Îți părem [să îi plăcem].*  
Cl.Dat.2Sg seem.1Pl [Subj Cl.Dat.3Sg like.1Pl]  
'\*He seems to you to like us.'
- b. \**Îți părem [să îi plăcem noi].*  
Cl.Dat.2 seem.1Pl [Subj Cl.Dat.3 like.1Pl we.Nom]  
'\*He seems to you to like us.'
- c. \**Mariei îi părem [să îi plăcem lui Ion].*  
Mary.Dat Cl.Dat.3 seem.1Pl [Subj Cl.Dat.3 like.1Pl John.Dat]  
'\*John seems to Mary to like us.'
- d. \**Noi îți părem [să îi plăcem lui Ion].*  
we.Nom Cl.Dat.2 seem.1Pl [Subj Cl.Dat.3 like.1Pl John.Dat]  
'\*John seems to you to like us.'
- e. \**Lui Ion îți părem [să îi plăcem noi].*  
John.Dat Cl.Dat.2 seem.1Pl [Subj Cl.Dat.3 like.1Pl we.Nom]  
'\*John seems to you to like us.'

The sentences in (91) illustrate Experiencer Islands. In these constructions, a matrix raising verb is combined with an embedded psychological verb. Each clause has a dative experiencer clitic

doubled by the dative phrase which can be present or absent. (91a) is a construction with two dative clitics, no lexical dative, and a nominative that is phonologically null. Besides two clitic experiencers, (91b) and (91c) display overt nominatives, the first in the embedded clause, and the second displaced to the matrix. The pattern in (91e) with an embedded nominative has one clitic per clause; the initial dative phrase shares Person and Number with the clitic in the embedded clause, and as such seems displaced from that clause, which, as we saw in the previous section, would not cause an intervention effect. We can deduce that the problem in (91a-e) is a collision of two dative clitic experiencers.

A second illustration of an Experiencer Island with a sequence of two raising verbs followed by a psychological verb is in (92a-b).

- (92) a. \**Începem [să îți părem [să îi plăcem noi]].*  
 Begin.3Pl [Subj Dat.Cl.2 seem.1Pl [Subj Dat.Cl.3 like.1Pl we.Nom]]
- b. \**Noi începem [să îți părem [să îi plăcem]].*  
 We.Nom begin.3Pl [Subj Dat.Cl.2 seem.1Pl [Subj Dat.Cl.3 like.1Pl]]  
 ‘\*He begins to seem to you to like us.’

In (92a-b), one clitic belongs to the intermediate raising verb, and the other to the most deeply embedded psychological verb. The nominative, as theme of the lower verb, can appear in the embedded clause or be displaced to the matrix as in (92b), which does not cause an intervention conflict. The problem in (92a-b) is the collision of the two clitic experiencers. By removing one of them, the resulting sentences are well formed, as illustrated in (93a-b). Constructions whose complements altogether lack an experiencer are also well formed, as in (94a-b).

(93) a. *Începem [să părem [să îi plăcem noi]].*  
 Begin.3Pl [Subj seem.1Pl [Subj Dat.Cl.3 like.1Pl we.Nom]]

b. *Noi începem [să părem [să îi plăcem]].*  
 We.Nom begin.3Pl [Subj seem.1Pl [Subj Dat.Cl.3 like.1Pl]]  
 ‘He begins to seem to like us.’

(94) a. *Începem [să îți părem [să lucrăm bine noi]].*  
 Begin.1Pl [Subj Dat.Cl.2 seem.1Pl [Subj work.1Pl well we.Nom]]

b. *Noi începem [să îți părem [să lucrăm bine]].*  
 We.Nom begin.1Pl [Subj Dat.Cl.2 seem.1Pl [Subj work.1Pl well]]  
 ‘We begin to seem to you to work well.’

We can further establish that the restriction in (91-92) is due to a collision of (clitic) experiencers, by comparing them to indirect objects. In Romanian, ditransitive verbs take (preferably clitic doubled) dative indirect objects, as in (95). In raising constructions, such indirect objects can combine with matrix experiencers, as in (96a-b).

(95) *Mihaela (îi) trimite Mariei o scrisoare.*

Mihaela (Dat.Cl.3) sends Mary.Dat a letter

‘Mihaela sends Mary a letter.’

(96) a. *Îți părem [să îi dăm Mariei un cadou].*

Dat.Cl.2 seem.1Pl [Subj Dat.Cl.3 give.1Pl Mary.Dat a present]

b. *Îți părem [să dăm Mariei un cadou].*

Dat.Cl.2 seem.1Pl [Subj give.1Pl Mary.Dat a present]

‘We seem to you to give a present to Mary.’

Based on Rivero (2009), Diaconescu (2004), Diaconescu and Rivero (2007) and Rivero and Geber (2007), I adopted the position that dative experiencers are High Applicatives, and indirect objects are Low applicatives, and therefore do not block one another when they are combined in the same construction such as (96). The interference resulting in blocking effects occurs only when two High Applicatives are present.

In summary, Romanian is free of the blocking effects identified in other languages as already discussed in this chapter, but does display a restriction called Experiencer Island, which is caused by dative clitic experiencers.

A grammaticality judgment task was conducted with Romanian speakers to verify judgments on the Experiencer Island effects. The experiment described in the next sub-section supports the hypothesis that native speakers do not accept two dative experiencers in the same construction.

#### ***4.2 Grammaticality Judgment Test***

Experiencer Island phenomena had not been identified in the literature until Rivero and Geber (2007), so a grammaticality judgment test was conducted to empirically demonstrate the existence of such a phenomenon.

#### 4.2.1 Participants

16 native speakers of Romanian living in Bucharest, Romania and Ottawa, Canada respectively participated voluntarily in this grammaticality judgment task.

#### 4.2.2 Materials and Procedure

The experimental task reported here was a written multiple-choice grammaticality judgment test, containing 24 sets of experimental items, which had four conditions each (A, B, C and D). The critical condition was A, which according to the hypothesis, was ungrammatical. Sentences representative of this condition contained two dative experiencers and a subjunctive embedded clause. The other three conditions minimally modified condition A, as follows: condition B had a 3<sup>rd</sup> person (default) *seem*, an indicative embedded clause, with two dative experiencers. In condition C, there was no dative experiencer in the matrix clause and the embedded clause was subjunctive. Condition D differed from the other three conditions as the embedded indicative clause was not a quirky clause, but a clause in which the subject was nominative (and the object, if present, was accusative). In addition to the test sentences, there were six grammatical Romanian sentences as high controls, six ungrammatical sentences as low controls and six ungrammatical fillers. These sentences were chosen such that the high controls would undoubtedly be marked with 1 and the low controls and the ungrammatical fillers would be marked with 5. All of these sentences were biclausal, consisting of a matrix clause and an embedded clause, either indicative or subjunctive. A sample set of sentences, as well as an example of a high control, low control and filler sentence are illustrated in Table 2 below.

*Table 2. A sample set of experimental items and examples of fillers*

Condition	Example
<b>Filler</b>	
A	*Lui Ion îți părem să îi plăcem noi. John.Dat Dat.Cl.2 seem.1.pl Subj Dat.Cl.3 like.1.pl we.nom 'John seems to you to like us.'
B	Lui Ion îți pare că îi plăcem noi. John.Dat Dat.Cl.2 seem .3sg that Dat.Cl.3 like.1.pl we.nom 'John seems to you to like us.'
C	Lui Ion părem să îi plăcem noi. John.Dat seem.1.pl Subj Dat.Cl.3 like.1.pl we.nom 'John seems to like us.'
D	Îți pare că pe Ion îl iubim noi . Dat.cl.2sg seem.3sg that pe John Acc.Cl.3 love.1pl we.nom 'It seems to you that we love John.'
High Control	Adelina i-a propus Andreei să meargă împreună la tenis la sfârșit de săptămână. 'Adelina has proposed to Andrea to go together at tennis in the weekend.'
Low Control	*Mama încearcă să povestea o citească. Mother try.3sg Subj story Acc.Cl read.3sg
Filler	*Cred că mamei s-a ars. Believe.1sg that mother.dat Refl.3 has burn.Part

Four questionnaires were constructed following the method of Latin Square Design. Each subject saw six tokens of each condition.

Subjects were asked to read each sentence and rank it from 1 to 5, according to the following criteria:

1. Perfect.
2. Almost perfect.
3. Neither good, nor bad.
4. Almost unusable.
5. Completely unacceptable.

Therefore, each subject had to judge forty-two sentences. Each questionnaire consisted of six ungrammatical sentences, eighteen grammatical sentences, six grammatical high controls, six ungrammatical low controls and six ungrammatical filler sentences. No one test sentence was repeated within a questionnaire, and each subject saw only one questionnaire.

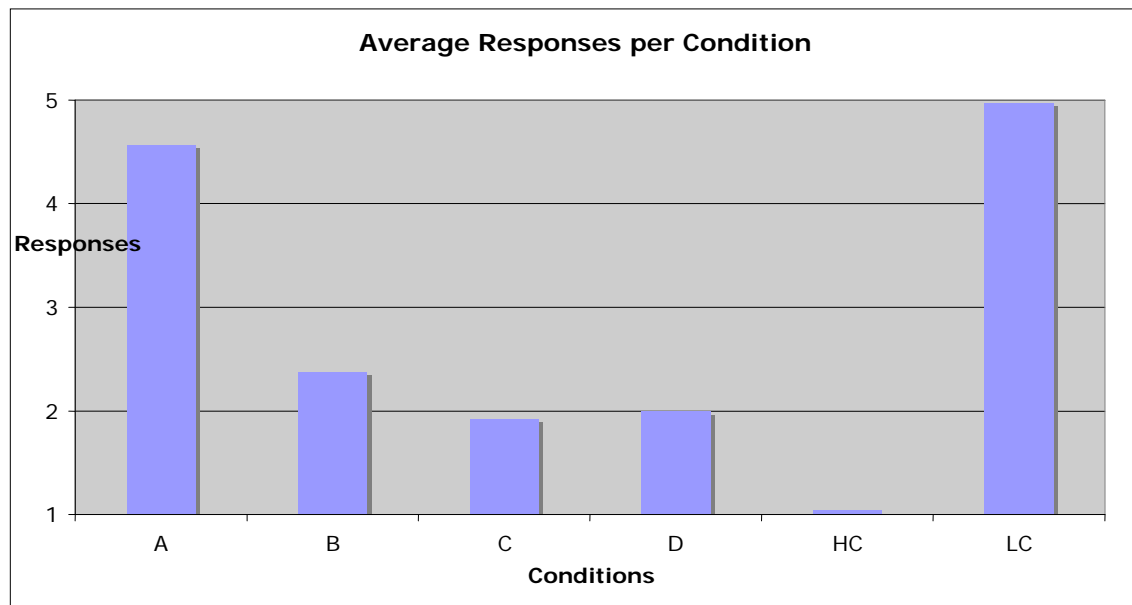
### 4.2.3 Results

The average results are summarized in Table 3 below:

*Table 3. Average results of Romanian speakers' judgments.*

<b>Condition</b>	<b>Average</b>
<b>Filler</b>	
A	4.57
B	2.38
C	1.92
D	1.99
High Control	1.04
Low Control	4.97

A graphic presentation of the results is shown below in Figure 1:



*Figure 1:* Descriptive statistics: Romanian native speakers found the items in condition A to be unacceptable with an average of 4.57/5.

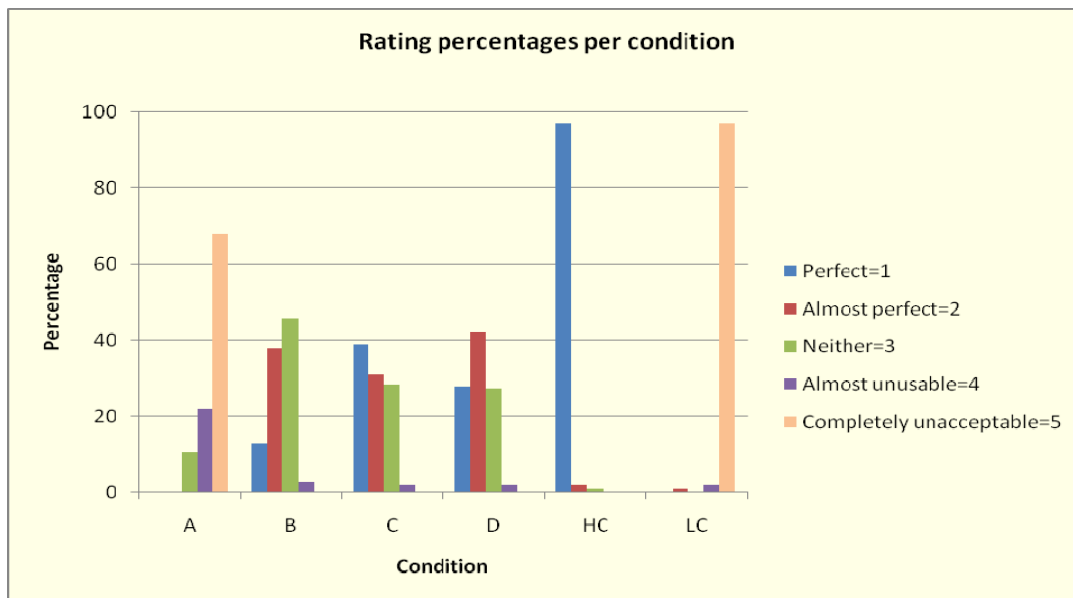
Three paired-samples *t*-tests were conducted, which compared mean rating for condition A with the mean rating for conditions B, C, and D, respectively. All three comparisons were statistically significant ( $p < .05$ ) with  $p < .001$ .

The table below summarizes the percentage of participants per rating and per each condition, e.g., 68% of the participants considered items in condition A ungrammatical, and while there was some variation in terms of low rating, no participants considered items in condition A as *perfect* or as *almost perfect*.

**Table 5: Percentage of participants per rating and per each condition**

Condition	Almost		Neither=3	Almost	Completely
	Perfect=1	perfect=2		unusable=4	
A	0	0	10	22	68
B	13	38	46	3	0
C	39	31	28	2	0
D	28	42	27	2	0
HC	97	2	1	0	0
LC	0	1	0	2	97

Figure 2 below illustrates these findings.



In conclusion, the results show that Romanian speakers consider constructions with two dative experiencers (one in the embedded clause and one in the matrix clause) ungrammatical. When there is only one dative experiencer in the construction, either in the matrix or in the embedded clause, the utterance is judged as grammatical.

### ***4.3 An Analysis of Experiencer Islands***

In this section, I provide an analysis of raising constructions with matrix and embedded dative experiencers. The analysis is based on the main idea that dative clitics, and not dative phrases, create conflicts and intervention effects, and induce ‘Experiencer Islands’ within the hypothesis that dative experiencers are High Applicative phrases headed by dative clitics.

In a previous analysis, Rivero and Geber (2007) considered that dative clitics must all form an Agree-chain with matrix T. Datives do not interfere with nominatives because the chain they form with matrix T is independent from the nominative chain. The second hypothesis investigated by Rivero and Geber (2007) was that the Minimal Link Condition (MLC) (Chomsky 1995, 2000, 2001, 2004) regulates the behavior of dative experiencer clitics. All clitic experiencers must be licensed by matrix T, and (standard) locality prevents more than one such clitic to be licensed by such a T, so there can only be one experiencer per construction.

Therefore, according to that analysis, moved or in situ dative phrases are not interveners for (local or long distance) Agree on nominatives, and embedded nominatives do not have priority in raising over embedded/matrix dative phrases in order to satisfy the EPP feature of  $C/T_{\text{matrix}}$ . Further, embedded/matrix datives and nominatives can move independently to the matrix without creating Intervention effects. Rivero and Geber (2007) considered that such a freedom of the position of the dative and nominative NPs can be captured with Move being

dependent on (prior) Agree (Chomsky, 2001). They assumed that in Romanian raising constructions, syntactic Agree applies between dative experiencers (via the clitic head in the High Applicative), nominatives, and  $C/T_{\text{matrix}}$ , and that the resulting nominative and dative A-chains are distinct. Thus, if Move is parasitic on Agree, and experiencers and nominatives both involve Agree with  $C/T_{\text{matrix}}$ , dative and nominative phrases should enjoy a similar freedom of movement, and therefore be equivalent candidates to check/satisfy the EPP feature in  $C/T_{\text{matrix}}$ . In the current chapter, I partially adopt Rivero and Geber (2007)'s proposals, with a few differences.

In Section 3, I showed that High Applicatives in the matrix clause and the embedded clause do not block the relations between T and the nominative NP generated in the embedded clause. Therefore, in any circumstance, the relation between Ts and the nominative NP are unproblematic. The conflict arises when there are two High Applicative phrases are present, one in the matrix clause and one in the embedded clause. Rivero and Geber (2007) considered that a Complete Agree relation with the matrix T values the case features of the nominative. In Chapter II, I showed that the nominative structural case feature may be valued in the embedded clause. However, I nevertheless showed that a case-related feature still has to be checked with the matrix T, as there can only be one nominative NP per raising construction.

Rivero and Geber (2007) thought that the dative structural case of the embedded quirky dative subject was valued by the matrix T. Earlier I showed that the structural case of the dative clitic experiencer can be valued in the embedded clause, as supported by simple quirky constructions such as *Îi place ciocolata* 'S/he likes chocolate', where the quirky subject gets structural case valued by the only T in the sentence. However, I propose in addition that a case-related feature relationship is also established between matrix T and the experiencer (i.e., the

High Applicative), in a similar way as there is an additional feature relationship with the nominative. For the purposes of this thesis, I call this latter feature checking relationship related to the dative, ‘Q’. Thus, due to locality, matrix T cannot value features on the two experiencer clitics heading the two High Applicatives, one in the matrix and one in the embedded clause.

A raising construction with only one Applicative in the complement clause is well formed, as in (97) with N- and Q-chains indicated:  $T_{matrix}$  can be a Probe for both Goals because each contains a different uninterpretable feature, so Q and N-chains are licit.

(97)



Since clitic dative experiencers and nominative NPs do not interfere with each other, I propose that these two features are different, and this allows matrix T to enter into a checking relationship with each in a parallel fashion, without intervention effects between the dative and the nominative.

The Q feature, however, must be checked with all dative experiencers. Therefore, constructions in which two High Applicatives are present lead to a conflict, because they violate locality. Matrix T is the category with the Q feature, and thus functions as the Probe. The closest dative experiencer is the Goal, and the feature is checked. More remote Applicatives cannot count as local Goals and their Q-feature must remain unvalued. Therefore, Experiencer Islands constitute examples of standard intervention effects, based on locality. A simplified

schema for this violation is illustrated in (98), where a High Applicative in the matrix clause interferes with a High Applicative in the embedded clause, inducing blocking effects:

(98)

\*[ T<sub>matrix</sub> ... [AppIP DAT [Appl' [App CI] ... [T<sub>emb</sub>...[AppIP DAT [Appl' [App CI] ...NOM]]]]]]



According to Rivero (2009), the licensing category for High Applicatives is deictic T, thus we can think of Q mentioned above as a feature related to deictic T. Locality prevents T from licensing more than one head at a time, so two experiencers are banned in a construction. Rivero (2009) finds that locality is at the basis of the intervention, as the High Applicative phrase in the matrix clause counts as an intervener for the Agree relationship between matrix T and the embedded high applicative.

In this sub-section, I discussed raising sentences that can contain one nominative and no more than one dative clitic experiencer per construction. I proposed that both the nominative and the dative are licensed by a special structural case related feature checking relationship with the matrix T (Q-feature and an N-feature respectively), and suggested that such features may be related to deictic tense. This accounts for why nominatives and datives can coexist, but no two elements with the same feature composition (i.e., two structural datives, or two structural nominatives) may be present in the same construction.

#### ***4.4 Exceptions to Experiencer Islands - Dative clitics can be absent***

As previously mentioned, dative clitics are usually obligatory in quirky subject constructions, and the lexical NP may or may not be present. The clitic is the logical subject of the sentence, occupies the head of a High Applicative phrase, and the dative NP is the Specifier of the High Applicative phrase.

Experiencer Islands occur with two dative clitic experiencers in the same sentence, that is, with two High Applicative phrases in the same construction. There are some apparent exceptions to the Experiencer Island restriction in contexts with quantifiers, negation and generic NPs as in (99-100) or (101).

(99) *Mariei îi parem să plăcem cuiva.*

Mary.Dat Cl.Dat.3Sg seem.1Pl Subj like.1Pl someone

‘It seems to Mary that someone likes us.’

(100) *Nouă ne pareți să plăceți tuturor.*

We.Dat Cl.Dat.1Pl seem.2Pl Subj like.2Pl all

‘It seems to us that all like you.’

(101) *Matematica le pare elevilor să nu placă nimănui.*

Math.Nom Cl.Dat.3Pl seem.3sg pupils.Dat Subj not like.3Sg nobody.Dat

‘It seems to the pupils that no one likes mathematics.’

In this section, I propose two potential explanations for the apparent exception to the Experiencer Island restriction in Romanian, showing that the grammatical status of such sentences does not contradict, but in fact supports Experiencer Islands.

As shown by Rivero and Geber (2007), a similar situation is available in Spanish, in so far as clitic doubling is not present with quantificational dative experiencers.

Recall that Experiencer Islands occur when two dative clitics clash. In general, quantifiers are among the only cases when datives do not require clitic doubling. So, here we encounter a vicious circle. It is (almost) impossible to show that dative lexical NPs (unless they are quantifiers) can be grammatical without clitics, because they cannot occur without clitics. However, consider the following sentences (102-103). In (102-103), the nominative subject is *bomboanele* ‘candy’ and the matrix experiencer *mamelor* ‘mothers.dat’ is doubled by the clitic *le* ‘Cl.Dat.3Pl’. In the embedded clause, the experiencer subject is *copiilor* ‘children.Dat’. In constructions (102) and (103), the embedded dative clitics are missing. The constructions are grammatical, because the dative NP *copiilor* ‘children.dat’ may be interpreted in the generic sense (all children). When both dative clitics are present as in (104), the sentences are clearly ungrammatical.

(102) *Mamelor le par bomboanele să placă copiilor.*

Mothers.Dat Cl.Dat.3Pl seem.3Pl candy.Nom Subj like.3Pl children.Dat

‘It seems to the mothers that children like candy’.

(103) *Bomboanele le par mamelor să placă copiilor.*

Candy.Nom Cl.dat.3Pl seem.3Pl mothers.Dat Subj like.3Pl children.Dat

‘It seems to the mothers that children like candy.’

- (104) a. \**Mamelor le par bomboanele să le placă copiilor.*  
Mothers.Dat Cl.dat.3Pl seem.3Pl candy.Nom Subj Cl.Dat.3Pl like.3Pl children.Dat
- b. \**Bomboanele le par mamelor să le placă copiilor.*  
Candy.Nom Cl.dat.3Pl seem.3Pl mothers.Dat Subj Cl.Dat.3Pl like.3Pl children.Dat
- ‘Children seem to mothers to like candy’.

In summary, exceptions to the Experiencer Island restriction are found in sentences containing dative negative elements, quantifiers, or generic NPs that are not doubled by dative clitics.

These situations are not random and three additional points should be mentioned. First, clitic experiencers have not always been obligatory in Romanian. Rivero and Diaconescu (2007) show that, diachronically, psychological constructions with dative experiencers such as (105) and (107) did not require a clitic in earlier stages. So clitic doubling was not necessary in contexts where it is now obligatory, as illustrated in (105) and (107) vs. (106) and (108).

(105) ... *ce Domnului acela om place*

Which god.Dat that man.Nom like.3sg

‘...because that man pleases God’ / ‘... because God likes that man.’

*Doroftei, Psaltirea in versuri, 1673*

(106) a. \**Acelui domn place omul.*

That gentleman.Dat like.3Sg man

b. *Acelui domn îi place omul*

That gentleman.Dat Cl.Dat.3Sg like.3Sg man

‘That gentleman likes the man.’

(107) *Și cu o învățătură de cele ce plac lui*

And with a teaching of those which pleased he.Dat

‘And with a teaching of those that pleased him.’

*N. Basarab, Invățăturile lui Neagoe Basarab. 1650*

(108) a. \**Cu o învățătură din cele ce lui plac*

With a teaching of those that him.Dat please

b. *Cu o învățătură din cele ce lui îi plac*

With a teaching of those that him.Dat Cl.Dat.3Sg please.3pl

‘With a teaching of those that please him.’

At present, constructions such as (106a) and (108a) that lack clitic doubling are ungrammatical.

The repair strategy for the two constructions is to add the clitic preceding the verb *a plăcea* ‘to like’ in both constructions, as in (106b) and (108b).

Rivero (2009) proposes that the syntactic and probably semantic status of earlier experiencers not represented by dative clitics as in (109) corresponded to Locatives, and they

later morphed into Applicatives. Clitic doubling then became obligatory<sup>41</sup>.

(109) *Și tot cela ce pofteste ca să placă mie*

And every one who wishes that Subj like.3sg I.Dat

‘And everyone who wishes that he pleases me (DAT pronoun).’

*A. Ivireanul, Didahii. 1710*

This suggests that within the same stage of the language there may be two types of dative experiencers: High Applicatives and Locatives.

Secondly, another issue that is worth mentioning here is that word order matters in constructions that may fall under Experiencer Islands. When the dative experiencer is post-verbal, it is easier for the clitic to be missing than if the dative experiencer is pre-verbal.

Thirdly, the animate vs. inanimate distinction should also be taken into consideration. For example, if the sentence in (110b) the NP *bomboanele* ‘candy.Nom’ is substituted by *profesorii* ‘teachers’, from inanimate objects to animate entities, the sentences are degraded.

(110) a. *Mamelor le par bomboanele să placă copiilor.*

Mothers.Dat Cl.dat.3Pl seem.3Pl candy.Nom Subj like.3Pl children.Dat

‘It seems to the mothers that children like candy’.

b. *?Mamelor le par profesorii să placă copiilor.*

Mothers.Dat Cl.dat.3Pl seem.3Pl teachers.Nom Subj like.3Pl children.Dat

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<sup>41</sup> Rivero (2009) shows that Spanish behaved in the same way, dative experiencers changed from locative to applicative from medieval to later Spanish.

‘?It seems to the mothers that children like teachers’.

While the semantics of raising constructions with experiencers has seldom been studied (see Sauerland, 2003 and Szabolcsi, 2007), the explanation I propose for the absence of Experiencer Island effects with quantifiers is based on constructions such as (111), where there is a clear semantic difference in the nature of the quantifier with or without the clitic combined with word-order.

(111) *Muzica place cuiva.* / \**Cuiva place muzica*

Music.Nom like.3sg someone.Dat

‘Somebody likes music.’

Universal > existential

The interpretation of this sentence is ‘for any X, X likes music’

(112) *Muzica îi place cuiva.*

Music.Nom Dat.Cl.3 like.3sg someone.Dat

‘Somebody likes music.’

Existential > Universal

There is some (specific) X and X likes music.

In (111) there is a quantifier with a generic sense, which cannot occur preverbally without the clitic. In the second sentence (112), the dative quantifier is ambiguous between generic and specific readings. Similarly, with a universal quantifier, constructions are possible without a

dative clitic, when the experiencer is postverbal, as illustrated in (113a). When the quantifier dative is in preverbal position, the clitic is obligatory (113b).

(113) a. *Munca place tuturor.*

Work.Nom like.3Sg all

‘All like work.’

b. *\*Tuturor place munca.*

All.Dat like.3sg work

The same situation is available for a dative quantifier when combined with a negation, where the clitic must be present in pre-verbal position, as illustrated in (114):

(114) a. *Munca nu place nimănu.*

Work.Nom not like.3sg nobody.Dat

‘Nobody likes work.’

b. *\*Nimănu nu place munca.*

Nobody.Dat not like.3Sg work

Consider the following example (115) with two dative experiencers in raising constructions, which are also exceptions to the Experiencer Islands:

(115) a. *Fiecăruia îi pare să placă cuiva.*

Everyone.Dat Cl.Dat.3 seem3sg Subj like.3Sg someone.Dat

‘Everyone seems to like someone.’

b. \**Fiecăruia îi pare cuiva să îi placă.*

Everyone.Dat Cl.Dat.3 seem3sg someone.Dat Subj Cl.Dat.3Sg like.3Sg

There are two differences between the two sentences above. First, the dative experiencer quantifier in the embedded clause in the first sentence (115a) is in post-verbal position. Secondly, when *cuiva* ‘anyone.Dat’ is accompanied by the dative clitic in the second sentence, it interferes with the other dative clitic in this construction. This situation is found in raising constructions as well. Even when two experiencers are present in the constructions, where a dative quantifier is present in post-verbal position and it is not doubled by the dative clitic, the sentence is grammatical.

In a similar fashion, in sentences where both experiencers are quantifiers (or negation), one seems to take scope over the other, as in (116-117).

(116) a. *Fiecăruia îi pare să nu placă nimănu.*

Everyone.Dat Cl.Dat.3Sg seem.3sg Subj not like.nobody

‘Everyone seems to not be liked by anyone.’

b. \**Fiecăruia îi pare nimănu să nu îi placă.*

Everyone.Dat Cl.Dat.3Sg seem.3Sg nobody.Dat Subj not Cl.Dat.3Sg like.3Sg

(117) a. *Nimănu nu îi pare să placă cuiva.*

Nobody.Dat not Cl.Dat.3Sg seem.3Sg Subj like.3Sg somebody.Dat

‘Nobody seems to be liked by someone.’

b. \**Nimănui nu îi pare să îi placă cuiva.*

Nobody.Dat not Cl.Dat.3Sg seem.3Sg Subj Cl.Dat.3Sg like.3Sg somebody.Dat

The above are raising constructions in which two dative experiencers are combined, a quantifier and a negation. When two dative clitics are present, as in (116b) and (117b) the construction is ungrammatical. This constitutes further evidence that it is the combination of the two clitics that trigger the Experiencer Island restriction.

The explanation here is twofold. On the one hand, the hypothesis that an Experiencer Island is provoked by the interference of the two dative clitics is confirmed. Therefore, the Experiencer Island restriction is a structural ban. Secondly, in post-verbal position, dative quantifiers and sometimes nouns may occur without the dative clitic, but only if the quantifier or the NP has a generic interpretation. In such cases, I propose that there is no High Applicative phrase in the clause. Semantically, it is a question of specificity vs. genericity. When accompanied by a clitic in pre-verbal position, quantifiers (and negation) are ambiguous between a specific and a generic interpretation. Without a clitic, they may only be interpreted as generic.

Based on this difference, I propose that constructions containing a quantifier, negation or generic NP appear to be of a separate category in so far as their structure does not contain a High Applicative phrase. Therefore, they are not in fact exceptions to Experiencer Islands, as they do not contain two High Applicative phrases (i.e., two dative clitics). While I will not suggest a specific structure for quantifiers and other phrases that do not require clitic doubling other than suggesting that they are not applicatives, it would be interesting to study these constructions in

more depth, and check whether languages which display intervention effects of the Spanish or Icelandic types also allow such exceptions.

## 5. Conclusions

In this chapter, I discussed dative clitic experiencers in raising constructions. Dative clitics may occur in various contexts, as experiencers of psychological verbs, of raising verbs such as *seem*, and of states, such as hunger, thirst, cold, among others. Based on traditional subjecthood tests, such as binding and control, I concluded that dative clitic experiencers are logical subjects of such quirky constructions. Regarding their structural position, I adopted the idea that they head a High Applicative phrase. The dative NP, if present, occupies the Specifier of the High Applicative Phrase positioned between TP and vP.

Romanian lacks well-known intervention effects similar to those of Spanish and Icelandic, and resembles English, in that it allows a nominative NP generated in the embedded clause to raise across a matrix experiencer. Matrix or embedded (clitic) experiencers do not block operations such as Move and Agree of nominatives. However, when matrix experiencers are combined in the same construction, the sentence becomes ungrammatical. Ungrammatical constructions with a matrix and an embedded experiencer constitute Experiencer Islands, and consist descriptively in the ban of two dative clitics experiencers in the same construction. The existence of Experiencer Islands was confirmed empirically by a grammatical judgment test conducted with 16 Romanian native speakers. Analytically, I proposed that the ban results from the co-existence of two High Applicative phrases in the same construction, as only one (the closest) can enter into a feature checking relation with the matrix T, and I argued that this feature is perhaps related to case and connected to deictic tense. That is, even though structural case can

be valued in situ, an additional structural relationship has to be established at the same time with the matrix T.

I noted exceptions to the rule that dative clitic experiencers must always be present, as with quantifiers, negations, or generic dative NPs in post-verbal position, and I proposed that these elements do not contain High Applicative phrases in their structure. However, when they occur in preverbal position, quantifiers and negations, and generic NPs must also be clitic doubled. I argued that such constructions in fact do not constitute exceptions to the Experiencer Island, as they do not contain two dative clitic experiencers (i.e., two High Applicative phrases) which would result in the derivation crashing.

## CHAPTER IV

### SENTENCE PROCESSING OF DATIVE CLITIC DOUBLING DEPENDENCIES

#### 1. Introduction

In this chapter, I present a psycholinguistic study that tests the effects of dative clitics and double clitic dependencies on the processing of clitic-left dislocation (CLLD) constructions involving verbs of the raising kind (i.e., *seem*). In constructions such as (1), the dative NP *lui Ion* ‘John.Dat’ is a clitic-left dislocated (CLLD-ed) element, which originates in the topic position of the embedded clause and moves to the matrix clause, as I will show in the next section. The dative clitic *îi* ‘Cl.dat.3Sg’ in (1) and the dative NP *lui Ion* ‘John.Dat’ are in anaphoric relation. In constructions such as (2) the dative clitic in the matrix clause doubled by the clitic signals an overt experiencer of the verb *seem*, which is the quirky subject of the matrix clause, as previously shown in Chapter III.

- (1) *Lui Ion pare să îi dea Maria cărți.*  
John.Dat seem.3Sg Subj Cl.Dat.3Sg give.3Sg Mary.Nom books.Acc  
‘Mary seems to give John books.’

- (2) *Lui Ion îi pare să îi dea Maria cărți..*  
John.Dat Cl.Dat.3Sg seem.3Sg Subj Cl.Dat.3Sg give.3Sg Mary.Nom books.Acc  
‘Mary seems to John to give him/her books.’

The goal of the study is to demonstrate that by the presence vs. absence of the dative clitic in the matrix clause, the parser will be aware of the originating clause of the dative lexical NP. If the

matrix clause contains a dative clitic which is doubling a dative phrase, then the dative NP is the experiencer of the matrix verb. As shown in Chapter III, the matrix dative experiencer has the role of quirky subject. If the clitic however is absent from the matrix clause, then it means that the dative is originating in the embedded clause and the lexical dative NP was fronted to the matrix clause level. In this case, the dative NP is a CLLD-ed element generated in the embedded clause which is a CLLD construction, discussed in the next section.

This study is set out to investigate the following questions: how do Romanian speakers process dative clitic doubling dependencies in various Romanian constructions? Are Romanian speakers aware of the difference between the constructions in (1) and (2) based on the place of the dative clitics, namely those involving CLLD-ed elements fronted from the embedded clause to the matrix and those with matrix experiencers?

In this chapter, two experiments conducted with Romanian native-speakers using a self-paced reading paradigm will be presented. The findings of the two experiments show that Romanian speakers are aware of and recognize the kind of double-clitic dependencies (e.g., quirky dative doubled by a clitic vs. CLLD construction), and the contexts in which these appear, based on a linguistic clue, namely the dative clitic. Such contexts may be CLLD constructions, as in (1), and quirky subject constructions in the matrix clause followed by double object constructions in the embedded clause, as in (2).

From a psycholinguistic perspective, the results of the two experiments support the hypothesis that the Romanian parser seems to build actively and incrementally the language structure, supporting an interactive model of language processing, where the information is used immediately as it becomes available.

The nature of syntactic representations constitutes an important area of language processing research. The current chapter aims to study, from a language processing perspective, the effect of dative clitics and double dative clitic dependencies in Romanian constructions involving the raising type verb *seem*, where an independent dative constituent may or may not prepose to the matrix clause.

The double clitic dependencies (a dative noun doubled by a dative clitic) occurring in the structures illustrated in (1) and (2) are, to my knowledge, being used for the first time in a language processing study. These dependencies differ from filler–gap dependencies as in (3) with respect to the ordering of elements (although word-order is flexible in Romanian).

(3) *Who did the housekeeper from Germany urge the guests/ [t] to consider [t]?*

This chapter is structured as follows: Section 2 presents an analysis of CLLD constructions as theoretical background for the two language processing experiments. In Section 3, I present information about current models of sentence processing. Section 4 presents additional background related to the sentence processing study presented in this chapter. The two experiments will be also presented in Section 4, followed by a general discussion in Section 5. The last section (6) will state conclusions and topics for further research.

## **2. Dative Clitic Dependencies in Ditransitives Under Raising Verbs**

Chapter III discussed clitic dependencies for quirky subjects in complement clauses of raising verbs. This section discusses clitic dependencies for indirect objects in ditransitive complements of raising verbs, as an introduction to the language processing study involving such

constructions. I begin with an overview of clitic dependencies known as clitic doubling<sup>42</sup> (CD) and clitic left dislocation (CLLD) with dative clitics in ditransitive constructions, as in (4) and (5).

(4) *Ana îi dă Mariei flori.*  
Ann.Nom Cl.Dat.3Sg give Mary.Dat flowers.Acc  
'Ann gives Mary flowers.'

(5) *Mariei Ana îi dă bomboane.*  
Mary.Dat Ann.Nom Cl.Dat.3Sg give.3Sg candy.Acc  
'Ann gives candy to Mary.'

In the ditransitive construction I dub a CD construction in (4), the dative indirect object *Mariei* 'Mary.Dat' follows the verb and is doubled by the dative clitic *îi* 'Cl.Dat.3Sg'. In the ditransitive pattern in (5), which I dub a CLLD construction, the indirect object *Mariei* 'Mary.Dat', a clitic left dislocated (CLLD-ed) element, doubled by the clitic *îi* 'Cl.Dat.3Sg' precedes the verb and surfaces in the highest position of the clause. In sentence (5), there is an intonational pause when pronouncing the CLLD-ed element.

The ditransitive construction (5) above can be embedded under *a părea* 'to seem', as illustrated in (6).

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<sup>42</sup> See Hill and Tasmowski (2008) for a general overview of Clitic Doubling constructions.


- (6) *Lui Ion pare să îi cumpere Maria o jucărie.*  
 John.Dat seem.3Sg Subj Cl.Dat.3Sg buy.3Sg Mary.Nom a toy  
 ‘Mary seems to buy John a toy.’

In (6), the indirect object *lui Ion* ‘John.Dat’, doubled by clitic *îi* ‘Cl.Dat.3Sg’, precedes the matrix verb *seem*. I propose that *lui Ion* ‘John.Dat’ is a CLLD-ed element which originates in the embedded clause but surfaces in the matrix clause. Example (7) shows a biclausal construction with the matrix verb *seem*, in which the CLLD-ed element equivalent to the one in (6) stays in situ, that is, in the embedded clause.

- (7) *Pare [ lui Ion să îi cumpere Maria o jucărie. ]*  
 Seem.3Sg John.Dat Subj Cl.Dat.3Sg buy.3Sg Mary.Nom a toy  
 ‘Mary seems to buy John a toy.’

In studies of Romance languages, debates exist regarding CD and CLLD constructions such as the ones presented above as to whether doubled phrases should be analyzed in terms of movement or base-generation.

I will adopt a base-generation analysis without movement for the CLLD-ed dative phrase, with subsequent left dislocated A’-movement to a higher position when it appears in biclausal constructions, such as in (6). In other words, dative NPs are fronted from the Topic position of a subjunctive or an indicative clause to the matrix with the raising verb *seem* in (8-9).

- (8) a. *Pare [ lui Ion să îi cumpere Maria jucării.]*  
 Seem.3Sg John.Dat Subj Cl.Dat.3Sg buy.3Sg Mary.Nom toys.Acc  
 ‘Mary seems to buy John toys.’
- b. *Lui Ion pare [~~lui Ion~~ să îi cumpere Maria jucării.]*  
  
 John.Dat Seem.3Sg Subj Cl.Dat.3Sg buy.3Sg Mary.Nom toys.Acc  
 ‘Mary seems to buy John toys.’
- (9) a. *Pare că lui Ion îi cumpără Maria jucării.*  
 Seem.3Sg that John.Dat Cl.Dat.3Sg buy.3Sg Mary.Nom toys.Acc  
 ‘Mary seems to buy John toys.’
- b. *Lui Ion pare că îi cumpără Maria jucării.*  
 John.Dat seem.3Sg that Cl.Dat.3Sg buy.3Sg Mary.Nom toys.Acc  
 ‘Mary seems to buy John toys.’

The examples above differ according to the nature of the complement of the verb *seem*, which in (8) is subjunctive and in (9) is indicative.

In the next sub-section, I present CLLD in ditransitive constructions, and in Section 2.2 I discuss constructions such as (8b) where the CLLD-ed element is displaced to the matrix clause, a phenomenon known in the literature as Long Distance Clitic Left Dislocation.

## 2.1 Clitic-Left Dislocation (CLLD) in Ditransitive Constructions

In this section, I discuss dative clitic doubling dependencies in CLLD constructions, a specific topic which, to my knowledge, has not been previously discussed for Romanian. An example is presented in (10).

- (10) *Lui Ion Maria îi dă o carte.*  
John.Dat Mary.Nom Cl.Dat.3Sg give.3Sg a book.Acc  
'To John, Mary gives him a book.'

In (10), the dative NP *lui Ion* 'John.Dat' I label CLLD-ed element surfaces in the leftmost position of the ditransitive clause. Such CLLD constructions are characterized by a lexical NP in the leftmost part of the sentence, and a clitic agreeing with it in person, number and case, which doubles the phrase.

As stated above, I assume that CLLD as in (10) is distinct from clitic doubling in the so-called double object construction as in (4) above (see Cinque, 1990; Iatridou, 1995; Leonetti, 2008; among others). In CD constructions, the dative NP is a specifier of a Low Applicative phrase headed by a clitic, while in CLLD constructions the NP is in a higher position (for opposing views on the distinction between them, see Philippaki-Warbuton et al., 2004, among others)<sup>43</sup>.

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<sup>43</sup> An additional argument in support of the difference between the two constructions consists in the fact that there are languages that have CLLD, but do not have clitic doubling, as illustrated below (Cinque, 1990 for Italian):

- i. \*lo conosciamo (a) Gianni  
him know Gianni
- ii. Gianni, lo conosciamo.

In CLLD constructions, where the indirect object is CLLD-ed, dative clitics are obligatory (Dobrovie-Sorin, 1990), as illustrated in (11). When the dative clitic is missing as in (12), the construction becomes ungrammatical.

- (11) *Băiatului îi voi trimite bani mâine.*  
Boy.Dat Cl.Dat will send money tomorrow  
'I will send the money to the boy tomorrow.'

- (12) \**Băiatului voi trimite bani mine.*  
Boy.Dat will send money tomorrow

There are two different trends to analyze the CLLD-ed element. One group considers that a CLLD-ed element moves from its postverbal base position to its surface position (Cecchetto, 1999, 2001; Belletti, 2005; Dobrovie-Sorin, 1990, 1994; among others). Another group claims that the CLLD-ed element is base-generated in its surface position in the leftmost position of the clause (Cinque, 1977, 1990; Chomsky, 1977; Rivero, 1980; Hirschbühler, 1974, 1975; Grohmann, 1997; Arnaudova, 2003; among others). In this chapter, I adopt a base-generation theory for the dislocated phrase in CLLD constructions, but as already stated earlier, not for the clitics themselves.

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Gianni him know  
'Gianni, we know him.'

(13) *Lui Ion Maria îi dă bomboane.*

John.Dat Mary.Nom Cl.Dat.3Sg give.3Sg candy.Acc

‘Mary gives John candy.’

In (13), the dative clitic *îi* ‘Cl.Dat.3Sg’ is generated in the head of the Low Applicative phrase and moves to a pre-verbal position, as shown in chapter III. The CLLD-ed lexical element precedes the subject and is above TP, being generated in TopP immediately below CP (contra Iatridou 1995, who assumes that the CLLD-ed element is base-generated in the Specifier position of CP). I base my assumption on the structure of the left periphery as suggested in Rizzi, 1997, 2002; Cinque and Rizzi, 2008. This is shown in (14).

(14)

[<sub>CP</sub> Spec [<sub>C</sub> [<sub>C</sub> [<sub>TopP</sub> CLLD Element [<sub>TP</sub> Subject T [<sub>vP</sub> ...V [<sub>AppIP</sub> **Dat Cl** [<sub>DP</sub> Theme]]]]]]]

Empirical evidence for the position of the CLLD-ed element is provided by biclausal constructions where it must be below the sentential complementizer, but above the subjunctive particle, as in (15-18).

(15) *Vrea lui Ion să îi dea bomboane Maria.*

Want.3sg John.Dat Subj Cl.Dat give candy Mary.Nom

‘S/he wants to John Mary to give him candy.’

(16) \**Vrea să lui Ion îi dea bomboane Maria.*

Want.3sg Subj John.Dat Cl.Dat give candy Mary.Nom

(17) *Vrea ca lui Ion să îi dea bomboane Maria.*

Want.3Sg Comp John.Dat Subj Cl.Dat give candy Mary.Nom

‘S/he wants to John Mary to give him candy.’

(18) *El crede că lui Ion îi dă bomboane Maria.*

He think.3Sg that John.Dat Cl.Dat give.3sg candy Mary

‘He thinks that to John Mary gives candy.’

(19) \**El crede lui Ion că îi dă bomboane Maria.*

He think.3sg John.Dat that Cl.Dat give.3sg candy Mary

(20) *El lui Ion crede că îi dă bomboane Maria.*

He John.Dat think.3sg that Cl.Dat give.3sg candy Mary

‘He thinks that to John Mary gives candy.’

(21) *Ion lui Alex pare să îi dea cartea.*

John.Nom Alex.Dat seem.3sg Subj Cl.Dat.3 give.3sg book

‘John seems to give the book to Alex.’

(22) \**Ion pare să lui Alex îi dea cartea.*

John.Nom seem.3sg Subj Alex.Dat Cl.Dat.3 give.3sg book

Support that the dative CLLD-ed NP is base-generated in the highest position of the clause is given by (15) – (22). In (15), (17) and (21), the CLLD-ed element is generated in a position above the subjunctive complementizer *să*. It cannot be generated below, as illustrated in (16) and (22). Sentences (17-20) show that the CLLD-ed element *lui Ion* ‘John.Dat’ has to be generated in a position below CP. If it is generated above, the sentence is ungrammatical (as in (19)). Sentences (15), (20) and (21) show that the dislocated element can be displaced to a position preceding the matrix verb in a biclausal construction.

To summarize, the CLLD-ed element in ditransitive constructions is base-generated in a Topic phrase below CP, but above the phrase which hosts the subjunctive marker. In the next section, I discuss constructions in which the CLLD-ed NP is displaced to a preverbal position in the matrix clause.

## ***2.2 Long Distance Clitic Left Dislocation (CLLD) Constructions***

It is well-known that CLLD-ed elements can surface far away from the clause containing the clitic. More specifically, in constructions with verbs such as *seem* and a subjunctive/indicative embedded clause, the CLLD-ed dative NP occurs in the matrix clause and the clitic remains in the embedded clause. This is known in the literature as Long Distance Clitic Left Dislocation (conf. Iatridou, 1995) and is illustrated in (23).

(23) *Lui Ion părem să îi dăm noi o carte.*

John.Dat seem.1Pl Subj Cl.Dat.3Sg give.1Pl we.Nom a book.Acc

‘We seem to give John a book.’

Constructions such as (23) were previously discussed by Iatridou (1995) for Modern Greek, who claimed that the CLLD-ed element is moved from the higher Specifier of CP into the matrix clause. I regard dislocation of the dative NP to the matrix clause in a biclausal construction as topicalization, which follows the base-generation of the CLLD-ed dative phrase in a Topic phrase of the embedded clause. The NP lands in a Topic position, preceding the verb in the matrix clause. This is illustrated in the schema in (24):

(24)

[<sub>CP</sub> [<sub>TOPP</sub> [ <sub>vP</sub> V seem [<sub>CP</sub> Spec [<sub>C'</sub> [<sub>C</sub> [<sub>TOPP</sub> **CLLD Element** [<sub>TP</sub> Subject T [<sub>vP</sub> .V [<sub>AppIP</sub> Dat Clitic [<sub>DP</sub> Acc]]]]]]]]]]

Topicalized elements which have been previously CLLD-ed may occur in biclausal constructions, with indicative embedded clauses and various verbs such as *to seem, know, and believe*, among others. With matrix verbs such as *a crede* ‘to believe’ (25), the dative NP indirect object *lui Alex* ‘Alex.Dat’ of the embedded verb can surface in a CLLD position within the embedded clause, or topicalized preceding the matrix verb as in (26).

(25) *El crede că lui Alex îi dă cartea.*

He believe.3sg that Alex.Dat Cl.Dat.3 give.3Sg book.Acc

‘He believes that he gives Alex the book.’

(26) *El lui Alex crede că îi dă cartea.*

He Alex.Dat believe.3sg that Cl.Dat.3 give.3Sg book.Acc

‘He believes that he gives Alex the book.’

In summary, this section discussed CLLD constructions where the embedded clause is a ditransitive sentence and the matrix clause contains a raising verb. I claimed that the CLLD-ed element is base-generated in a Topic Phrase below CP. When it occurs in the matrix clause with a raising verb, the displacement is through topicalization to a Topic position of the matrix clause.

### 3. Psycholinguistic Background

Investigations into the way the language processor manages various phenomena, such as referential dependencies, filler-gap dependencies, and empty categories constitute examples of some of the recent research showing that the parser is equipped with knowledge of grammar and the ability to build actively and incrementally (on a word-by-word basis) the upcoming sentence structure.

That the grammatical structure of sentences is computed by the parser in an incremental<sup>44</sup> fashion has been shown in studies looking at ambiguous sentences (Pickering and van Gompel, 2006). For example, in sentences such as (27) below, it has been shown that the parser encounters difficulties at the agentive phrase *by the lawyer* (Ferreira and Clifton, 1986; Trueswell, Tannenhaus and Garnsey, 1994; among others):

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<sup>44</sup> Incrementality represents the situation where each word in a sentence is interpreted immediately as it is encountered.

(27) *The evidence examined by the lawyer turned out to be unreliable.*

The difficulty encountered at the point of reading the agentive phrase suggests a preference for the main clause analysis, with a delay arising upon the realization that this is not the correct one. These are “Garden Path” sentences (Bever, 1970), where the reader is incorrectly expecting a different sentence structure. This and other data suggest that people do not wait until the end of a sentence before syntactically analyzing it (which is compatible with a serial account) and in fact, they process sentences incrementally, word by word, which conforms to a parallel account and is incompatible with a serial approach.

Current accounts within the sentence processing literature assume that syntactic processing is either serial or parallel. Serial models, on the one hand, assume that the processor adopts only a single analysis at a time and uses only syntactic information. Parallel accounts (constraint-based models), on the other hand, assume that in cases of ambiguity, syntactic analyses are activated concomitantly.

The serial account corresponds to the idea that the parser adopts one analysis versus another (e.g., the main clause analysis). When the parser realizes the ‘mistake’, reanalysis takes place. On the other hand, a ranked parallel account suggests that the parser adopts more than one analysis, leaving open different solutions, but one analysis is ranked higher than the other.

The difference between the two is that in a serial account, people ‘garden path’ if they choose an incorrect analysis. In a ranked parallel account, people ‘garden path’ if their highest ranked analysis is incorrect. According to van Gompel and Pickering (in press), it is difficult to test whether the processor is serial or parallel (e.g., Gibson and Perlmutter, 2000; Lewis, 2000), as both accounts predict comparable garden path effects.

Another way of discriminating between the models is to investigate whether processing difficulty occurs because of reanalysis (conforming to a serial Garden Path model), or competition (conforming to parallel accounts/constraint-based theories). In an eye-movement reading task, Van Gompel, Pickering, Pearson, and Liversedge (2005) compared the processing of globally ambiguous sentences such as (28a) (where either *the bodyguard* or *the governor* may be retiring) with semantically disambiguated sentences (28b, c) and unambiguous sentences (28d).

(28)

- a. *I read that the bodyguard of the governor retiring after the troubles is very rich.*
- b. *I read that the governor of the province retiring after the troubles is very rich.*
- c. *I read that the province of the governor retiring after the troubles is very rich.*
- d. *I read quite recently that the governor retiring after the troubles is very rich.*

According to constraint-based models, strong competition should occur in (28a), because both analyses are equally plausible. In (28b, c) competition should be weaker because plausibility affects syntactic ambiguity resolution. However, the results show that (28a) is easier to process than (28b, c). These results present difficulties for both the Garden Path model and the constraint-based approaches, which cannot explain why low attachment sentences (where relative clauses and/or prepositional phrases are attached to the lowest possible element) such as (28b) are harder to process than globally ambiguous sentences such as (28a), as it never has to reanalyze when both analyses are plausible, as in (28a), or when the sentence is unambiguous, as in (28d) (see also Traxler et al., 1998; Van Gompel, Pickering, and Traxler, 2001).

In the field of syntactic processing, one of the main research areas is concerned with how initial parsing decisions are made, based on the language parameters and on strategies on how to interpret a string of words. For example, in English the parser would always assume a subject-verb-object structure or agent - action - patient. This situation refers to the encapsulation phenomenon. Encapsulation is a property of modularity which is explained by Fodor as “the mind consists of separate, specialized components that exist independently of a central store of general knowledge” (Fodor, 1983, in Pickering and Van Gompel, 2006 p. 3). Modular accounts refer to syntactic information alone and do not take into consideration the plausibility of the alternative analyses. The “Garden-Path” Theory (Frazier, 1979, 1987) assumes serial processing and stipulates that the language processor is modular and initially uses only syntactic information. Non-structural information such as semantics, context, and frequency are employed only at later stages of processing. When the initial analysis is inconsistent with this later information, reanalysis must occur and therefore processing difficulty (in terms of time it takes to read or parse a sentence) is seen.

The Garden Path model stipulates that minimal attachment and late closure determine people’s initial analysis of ambiguous sentences. These principles are considered to be universal and thus apply to all ambiguities in all languages. The minimal attachment parsing strategy states that upon seeing/hearing a new word in a sentence we assume it is part of the previous phrase, thus minimizing the number of syntactic nodes that need to be posited. This strategy is posited to explain processing difficulties in locally ambiguous sentences, such as reduced relatives, object/complement ambiguities and others. In general, minimal attachment is the ‘wrong’ way to go for these types of sentences and, since this strategy was used, the parser is now required to reanalyze the sentence. In other words, minimal attachment stipulates that an

ambiguous phrase is attached to the preceding tree structure using the fewest number of nodes. Consider (29):

(29) *The spy saw the cop with binoculars but the cop didn't see him.*

Frazier (1987) assumed that VP-attachment in the first clause *the spy used binoculars to see the cop* involves a [V NP PP]VP structure, whereas NP-attachment *the cop had binoculars* involves an [V [NP PP] NP]VP complex NP structure. Since VP-attachment has fewer nodes than NP-attachment, it is the minimally-attached analysis and is therefore adopted initially. Rayner, Carlson and Frazier (1983) tested this prediction by contrasting it with (30), where the VP analysis is implausible:

(30) *The spy saw the cop with a revolver.*

Using eye-tracking, they found that readers had more difficulty with sentences such as (30) than with sentences such as (29), and suggested that they attach to the VP in both cases, but then revise their initial decision in (30). Minimal attachment is used to explain processing difficulties in a number of other types of locally ambiguous sentences, including reduced relatives, object/complement ambiguities and ambiguities caused by head-final verbs in languages like Dutch.

The late closure strategy stipulates that incoming material is attached into the constituent currently being processed. It deals with two different types of ambiguity. First, it predicts that a phrase would form part of the current constituent (with *the socks* being the object of knitting),

rather than start a new constituent (*the socks* as subject of the main clause *the socks fell to the floor*), as in (31). Secondly, it predicts that a phrase would form part of the most recent constituent possible, as in (32) (*Sue left yesterday* vs. *John said yesterday*):

(31) *When Mary was knitting the socks fell to the floor.*

(32) *John said that Sue left yesterday.*

The late closure principle accounts for parsing preferences in many other ambiguities. For example, it predicts that in (33), the relative clause *that was tasty* prefers to attach low to the most recent clause *the sauce* rather than high to *the steak* (Traxler, Pickering and Clifton, 1998; Gilboy, Sopena, Clifton, and Frazier, 1995).

(33) *The steak with the sauce that was tasty didn't win a prize.*

Late closure coincides with a preference for attachment to the most recent phrase, which makes similar predictions to recency principles in other theories (Gibson, 1998).

The Garden Path account assumes a third parsing principle, known as the active filler strategy, which accounts for the way in which people process unbounded dependencies, as found in relative clauses and questions such as (34).

(34) *Who did the housekeeper from Germany urge the guests/ [t] to consider [t]?*

The active filler strategy predicts that the processor tries to fill the gap as early as possible. Because the gap following *urge* might occur earlier than following *consider*, the active filler strategy predicts a misanalysis in (34), resulting in processing difficulty.

In contrast to modular accounts, such as Garden Path models, interactive accounts assume that all the information the parser perceives can be used immediately during sentence processing. According to interactive models, the parser activates all possible analyses in parallel and the analysis that is ultimately activated depends on the amount of support it receives from various sources of information, including semantic and frequency information. These types of models also assume that the syntactic information is stored with individual lexical items (MacDonald et al, 1994; Trueswell, 1996). Thus, in interactive accounts, all relevant information can be used immediately and in an interactive fashion (Trueswell and Tannenhaus, 1994). This is in contrast to the modular accounts where only some types of information (namely syntactic information) can affect which analysis is preferred.

Working memory and its limitations are also important factors to be considered during on-line sentence processing. Gibson (1998) proposed the syntactic prediction locality theory (SPLT), which claims that two non-linguistic factors contribute to sentence complexity: storage costs and integration costs. Sentence processing and comprehension involves integrating new input words into the current syntactic structure. Each integration has a syntactic component (e.g., syntactic category predictions, linking dependencies or various elements in a chain), a semantic and a discourse component (assigning thematic roles). Longer distance integrations are more 'costly' than shorter ones. According to Gibson (1998), there is a memory/storage cost associated with remembering each category "required to complete the current input string as a grammatical sentence" (Gibson, 1998, p. 13). Linguistic integration and storage access the same

pool of working memory resources (Just and Carpenter, 1992); therefore, the greater the memory cost, the smaller the resources available for the computation (integration). If there is less storage space, integrations take longer. Both storage and integration costs increase as more new discourse referents are introduced since the prediction of a syntactic dependency is made at the first linguistic element, and each element requires both integration and storage. SPLT provides a memory cost motivation for strategies predicting early-gap filling (e.g., active-filler strategy) and that the locality component of the SPLT predicts that integration costs are larger when there is a long-distance dependency than when the dependency occurs between two local elements.

Another psycholinguistic model worth mentioning is the neurocognitive model (Friederici, 2004; Grodzinsky and Friederici, 2006), which suggests that parsing is done in phases. In an initial phase (Phase I), local phrase structure building based on word category information takes place. This is followed by Phase II, in which further syntactic and semantic processes take place in parallel. The final stage of processing is integration, when the final interpretation is achieved. During the first phase, the parser identifies the category information (e.g., determiner, noun, verb) based on which the local phrase structure is built. For example, in English, when reading a determiner, the system starts to build an NP. In the second phase, the parser builds relationship within the structure (e.g., subject-verb, verb-object, etc.), builds dependencies (e.g., filler-gap, clitic doubling) and links chain elements. The syntactic integration phase happens when hierarchical structure is built and the final sentence interpretation is reached.

In this chapter, the results of the two experiments support the hypothesis that the Romanian parser seems to build actively and incrementally the language structure, supporting an

interactive model of language processing, where the information is used immediately as it becomes available.

This chapter further investigates the attribute of the parser of building the sentence structure actively and incrementally, by examining dependencies between a dative lexical noun and a dative clitic doubling the noun (double clitic dependencies) in constructions in which a dative clitic is either present or absent from the matrix clause with raising type verbs, such as *seem*. Generally, these are raising verbs in Romanian, and they are characterized by the fact that they can have a dative experiencer as a quirky subject as discussed in Chapter III.

I will now provide some general psycholinguistic background on raising, a topic for which a formal analysis was provided in Chapters II and III, with the aim of presenting psycholinguistic studies related to raising and/or control, phenomena which are considered equivalent in the recent literature of the Minimalist Program<sup>45</sup>.

Recall that constructions involving raising are generally characterized by the movement of the subject of the embedded clause to the subject of the main clause. In (35), *John* is the subject of the clause [*to play the piano*]. A traditional analysis in generative grammar is that such a constituent moves to the main clause, leaving a trace or an unpronounced copy behind, which is an empty category.

(35) *John<sub>i</sub> seems t<sub>i</sub> to play the piano.*

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<sup>45</sup>Recall that Government and Binding Theory portrays these empty categories as distinct. As such, in raising constructions, there is only one thematic role, and movement involved, whereas in control constructions there are two thematic roles and no movement. Within the Minimalist Theory, however, there is no unanimity with respect to whether the control mechanisms are or are not similar to raising constructions (Hornstein, 1999; Boeckx and Hornstein, 2004; vs. Landau, 2000; 2003; 2004, among others).

Empty categories are defined as elements that have a syntactic role in a clause, and get their content and meaning on the basis of other elements in the sentence. Although generative grammar postulates several types of empty categories, the ones that are relevant for the experimental purposes of this chapter are the ones proposed for raising (and control) constructions. In raising constructions, the empty category is an NP trace (or an unpronounced copy of the NP) (see (35)), while in control constructions the empty category traditionally is PRO (see (36)).

(36) *John<sub>i</sub> tried PRO<sub>i</sub> to play the piano.*

Based on the Government and Binding approach, previous experimental studies involving raising constructions (e.g., with verbs such as *seem*) have focused on the comparison between two empty categories (such as NP-trace and PRO). Featherston et al. (2000), for instance, used Event-Related Potentials (ERPs) to investigate their role in on-line sentence processing. They examined raising and subject control constructions in German to determine the electrophysiological effects of the distinction between an NP trace vs. PRO. They found that the raising construction elicited a significantly stronger effect than the subject control construction at the critical object position of the infinitival complement. The contrast in the thematic role assignment motivates no experimental differences between control and raising constructions at the position of the subject in the infinitival embedded clause. Therefore, they concluded that the ERP effect cannot be directly linked to lexical properties of raising and control verbs. The two constructions are syntactically different, with respect to the types of empty categories involved.

They concluded furthermore that raising constructions require an extra computational operation, which is not required in control constructions.

An overview of earlier studies, conducted by Nicol and Swinney (1989) summarized the temporal course of the assignment of antecedents to explicit and implicit anaphoric elements during sentence comprehension<sup>46</sup>. The main questions concerning coreference assignment are when and how such relations are established between referentially dependent elements.

A consistent finding is that reference-dependent sentential elements cause reactivation of the antecedent NPs to which they refer. These findings are compatible with three different hypotheses regarding the grammatical dependencies activation processes:

- a) a referentially dependent NP may cause reactivation of all previously mentioned NPs;
- b) a referentially dependent NP may give rise to reactivation of all and only the NPs that bear the appropriate structural relations to the dependent item; and
- c) a dependent NP causes only the best fitting preceding NP to be activated.

In general, experimental evidence speaks to whether or not syntactic constraints restrict the reactivation of prior NPs, and the general findings are in support of the hypothesis that reactivation is restricted by grammatical constraints. The initial set of possible antecedents contain all and only referents that bear the appropriate syntactic relation to the referentially dependent NP<sup>47</sup>. The experiments reviewed in their paper (Swinney, Ford, Frauenfelder and

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<sup>46</sup> Implicit anaphoric elements are trace-related gaps or PRO gaps, whereas explicit anaphoric elements are pronouns and reflexives.

<sup>47</sup> The authors reviewed a series of on-line studies examining sentences containing *Wh*-trace, NP-trace, overt anaphors vs. pronouns, and PRO. The results of online studies show that, overall, the referents of such structures are re-accessed during sentence processing. *Wh*-traces and overt anaphors trigger reactivation of only the referent that

Bresnan, 1988; Tannenhaus, Carlson and Seidenberg, 1985; Nicol and Osterhout, 1988; Bever and McElree, 1988; Nicol, 1988; among others) strongly support the view that reactivation of prior referents is restricted by grammatical constraints, as only grammatically consistent or potential antecedents are reactivated. In cases where the information does not sufficiently constrain the potential antecedents, pragmatic factors and other sentence processing procedures occur, but only later. In conditions where multiple antecedents are activated, initial processing activates all viable candidates conforming to grammatical constraints.

This section provided a summary of psycholinguistics models, phenomena and concepts, such as serial vs. parallel accounts, modular vs. non-modular accounts, and Gibson's syntactic prediction locality theory. Also, previous studies in language processing research, reporting antecedent-gap dependencies relevant for the present study were presented.

#### **4. Experimental Studies**

This chapter presents two on-line experiments, aiming to study the processing of clitic doubling dependencies in constructions involving matrix verbs of the raising family such as *seem* (which allow a dative experiencer NP) and constructions with or without a CLLD-ed element moved to the matrix from the embedded clause.

Romanian dative experiencers must be clitic-doubled and dative lexical elements in CLLD constructions are also obligatorily doubled by clitics, as shown in Chapter III and in a previous section, respectively. Thus the materials in this chapter differ from some of the studies reported above, that are generally based on filler-gap dependencies. The area of grammar

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must bind the antecedent. Pronouns and PRO behave in the same way with respect to reactivation patterns, both causing reactivation of multiple referents. For PRO, both potential antecedents are reactivated.

selected for study in the experiments reported in this chapter allows us to concentrate on dependencies, where both the dative NP (e.g., antecedent) and the element doubling it are overt, and there is no gap. The combination of dative clitic dependencies is used for the first time (to my knowledge) in a language processing study.

The constructions used in the experiments reported in this chapter as stimuli for the study are characterized by fronting of a CLLD-ed dative NP out of a subjunctive or indicative embedded clause to the matrix clause with a verb of the raising type (e.g., *seem*). The experimental control sentences involve a matrix clause with the verb *seem* that takes a dative experiencer and an embedded clause with a ditransitive verb, and where the overt dative indirect object stays in situ and is not fronted, nor CLLD-ed. Sentences such as (37) and (38) illustrate in a simplified way the kind of constructions used in the experiments.

(37) *Lui Ion pare să îi dea Maria cărți.*  
 John.Dat seem.3Sg Subj Cl.Dat.3Sg give.3Sg Mary.Nom books.Acc  
 ‘Mary seems to give John books.’

(38) *Lui Ion îi pare să îi dea Maria  
 elevi cărți.*  
 John.Dat Cl.Dat.3Sg seem.3Sg Subj Cl.Dat.3Sg give.3Sg Mary.Nom  
 student.Dat books.Acc  
 ‘Mary seems to John to give the student books.’

The reason for choosing constructions that contain a raising verb in the matrix clause for this experimental study is that verbs such as *a părea* ‘seem’ allow an optional dative experiencer. Therefore, there is a potential conflict in constructions such as (37) with just one dative NP as to whether the dative is a semantic constituent of the embedded clause or of the main clause (needed for the consistency of the two sentences).

As shown in Chapter II, the verb *seem* in Romanian can take various complements, such as subjunctive clauses, infinitive clauses, and indicative clauses. These embedded clauses may be transitive, intransitive, quirky constructions (with a dative logical subject and a nominative logical object), or ditransitive sentences<sup>48</sup>.

Additionally, one phenomenon is noteworthy about Romanian morphology for the purposes of the experiments reported in this chapter. Dative and genitive nouns share the same morphology, and so in certain contexts (such as the ones in (39)), the genitive NP may be wrongly perceived as a dative NP. In (39a), the NP *Mariei* is ambiguous between dative and genitive, whereas in (39b) the NP *Mariei* is clearly genitive, being the possessor of the flowers given to mother, and the overt dative occurs after it in the sentence.

- (39) a.    *Ion*            *i-*        *a*    *dat*        *florile*        *Mariei*.  
           John.Nom      Dat.Cl has give.Part    flowers.the.Acc Mary.Dat  
           ‘John gave the flowers to Mary.’

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<sup>48</sup> Also investigated in the original experimental studies was the verb *a trebui* ‘must’. According to traditional grammar, *must* is a modal verb, and could be considered a raising verb, but it seems to be undergoing historical change losing its raising properties. In literary/standard Romanian, it can only appear in the third person (or non-person). For the purpose of this chapter, I will not mention the experiments with the verb *must*, as this verb is not discussed in this dissertation.

- b. *Ion i- a dat florile Mariei mamei.*  
 John.Nom Dat.Cl has give.Part flowers.the.Acc Mary.Gen mother  
 ‘John gave Mary’s flowers to mother.’

The goal of the experimental studies presented in this chapter is to demonstrate that by the presence vs. absence of the dative clitic in the matrix clause, the native speakers of Romanian will be aware of the originating location of the dative noun phrase. If the matrix clause contains a clitic which is doubling a dative phrase, then the dative is the experiencer of the matrix verb. On the other hand, if the clitic is absent from the matrix clause yet present in the embedded clause, then it means that the dative lexical NP is coming from the embedded clause and was fronted to the matrix clause level.

The goal of these experiments was to investigate the following research questions: “How do Romanian speakers process the dative clitic doubling dependencies in Romanian constructions? Based on the place of the dative clitics are Romanian speakers aware of the difference between the two constructions, those involving fronting of a dative from the embedded clause to the matrix and those with a dative matrix experiencer?”

As shown in this dissertation, dative clitics are a fundamental component in the syntactic structure. They head functional projections, namely Applicative Phrases. Dative clitic experiencers are quirky subjects, heading a High Applicative phrase whereas dative clitics that occur in ditransitive sentences head a Low Applicative phrase, as underlined in Chapter III.

## **Experiment 1**

Experiment 1 was conducted in order to research Romanian speakers' ability to process double clitic dative dependencies, and their knowledge of Romanian grammar in contexts involving a CLLD-ed dative NP fronted in sentences with the verb of the raising type *seem*, based on a linguistic element present in the sentence (i.e., the dative clitic).

This experiment consisted of an on-line self-paced reading task using Romanian constructions of the raising kind.

### ***Predictions***

The general hypothesis of this study is that by the presence vs. the absence of the dative clitic in the matrix clause, the parser will know where the dative NP originates. If the dative NP is fronted from the embedded clause to the matrix clause level, then there will be no clitic in the matrix clause. On the other hand, if the dative clitic is present in the matrix clause, then the dative NP is the experiencer of the matrix verb *seem*.

### ***Stimuli***

The experimental stimuli and the four conditions for Experiment 1 are presented below:

### Condition A: Matrix No Clitic / Subjunctive Embedded

In this condition, the matrix clause does not contain a dative clitic. The dative NP in the matrix clause is the CLLD-ed element, which was generated in the topic position of the embedded clause and subsequently moved to the matrix clause. The embedded clause is subjunctive.

(40) *De luna viitoare lui Alexandru<sub>i</sub> pare să îi<sub>i</sub> ofere*

From month next Det Alexandru.Dat seem.3sg Subj Dat.Cl.3 give.3sg

*stăpînul casei de lângă facultate o cameră de închiriat.*

owner.Nom house.Gen from near university a room.Acc for rent

‘From the next month the owner of the house near the university seems to offer to Alexander a room for rent.’

(41) *Luna aceasta lui Bogdan<sub>i</sub> pare să îi<sub>i</sub> trimită redactorul*

Month this Det Bogdan.Dat seem.3sg Subj Dat.Cl.3 send.3sg editor.Nom

*revistei de sport exemplarul gratuit promis.*

magazine.Gen of sport the issue free promised

‘This month the editor of the sport magazine seems to send to Bogdan the free promised issue.’

### Condition B: Matrix Clitic / Subjunctive Embedded

In this condition, there is a dative clitic experiencer in the matrix clause, which doubles the dative experiencer subject. The embedded clause is subjunctive.

(42) *De luna viitoare lui Alexandru<sub>i</sub> îi<sub>i</sub> pare să îi<sub>j</sub> ofere*

From month next Det Alexandru.Dat Dat.Cl.3 seem.3sg Subj Dat.Cl.3 give.3s

*stăpînul casei de lângă facultate studentei<sub>j</sub> o cameră de închiriat.*

owner.Nom house.Gen from near university student.Dat a room.Acc for rent

‘From the next month, the owner of the house from besides the university seems to Alexander to offer to the student a room for rent.’

(43) *Luna aceasta lui Bogdan<sub>i</sub> îi<sub>i</sub> pare să îi<sub>j</sub> trimită*

Month this Det Bogdan.Dat Dat.Cl.3 seem.3Sg Subj Dat.Cl.3 send.3sg

*redactorul revistei de sport cititorului<sub>j</sub> exemplarul gratuit promis.*

editor.Nom magazine.Gen of sport reader.Dat issue.Acc free promised

‘This month, the editor of the sport magazine seems to Bogdan to send to the reader the free promised issue.’

### Condition C: Matrix No Clitic / Indicative Embedded

Similar to Condition A, there is no matrix clitic in Condition C. The dative NP surfaces in the matrix clause and is a displaced CLLD-ed element which originates in a Topic position in the embedded clause. The embedded clause is indicative, in this case, complement of the impersonal matrix verb *se pare* ‘Refl seem’.

(44) *De luna viitoare lui Alexandru<sub>i</sub> se pare că îi<sub>i</sub> oferă*

From month next Det Alexandru.Dat Refl seem that Dat.Cl.3 give.3s

*stăpînul casei de lângă facultate o cameră de închiriat.*

owner.Nom house.Gen from near university a room.Acc for rent

‘From next month it seems to Alexander that the owner of the house from besides the university offers him a room for rent.’

(45) *Luna aceasta lui Bogdan<sub>i</sub> se pare că îi<sub>i</sub> trimite redactorul*

Month this Det Bogdan.Dat se seem.Imp that Dat.Cl.3 send.3sg editor.Nom

*revistei de sport exemplarul gratuit promis.*

magazine.Gen of sport the issue.Acc free promised

‘This month it seems to Bogdan that the editor of the sport magazine sends him the free promised issue.’

### Condition D: Matrix Clitic / Indicative Embedded

In Condition D, there is a dative clitic present in the matrix clause which accompanies the dative experiencer NP. The embedded clause is a ditransitive indicative sentence with an overt dative indirect object accompanied by the dative clitic.

- (46) *De luna viitoare lui Alexandru<sub>i</sub> i<sub>i</sub> se pare că îi<sub>j</sub> oferă*  
From month next Det Alexandru Dat.Cl Refl seem that Dat.Cl.3 give.3Sg  
*stăpînul casei de lângă facultate studentei<sub>j</sub> o cameră de închiriat.*  
owner.Nom house.Gen from near university student.Dat a room.Acc for rent

‘From the next month, it seems to Alexander that the owner of the house from besides the university offers to the student a house for rent.’

- (47) *Luna aceasta lui Bogdan<sub>i</sub> i<sub>i</sub> se pare că îi<sub>j</sub> trimite redactorul*  
Month this Det Bogdan Dat.Cl.3 se seem.Imp that Dat.Cl.3 send.3sg editor.Nom  
*revistei de sport cititorului<sub>i</sub> exemplarul gratuit promis.*  
magazine.Gen of sport reader.Dat issue.Acc free promised

‘This month it seems to Bogdan that the editor of the sport magazine sends to the reader the free promised issue.’

The region numbers for all stimuli are presented below in (48):

(48)

A. Matrix no clitic / subjunctive embedded

De<sub>1</sub>/luna<sub>2</sub>/viitoare<sub>2+</sub>/lui<sub>3</sub>/Alexandru<sub>4</sub>/pare<sub>7</sub>/să<sub>8</sub>/îi<sub>9</sub>/ofere<sub>10</sub>/stăpînul<sub>11</sub>/casei<sub>12</sub>/de<sub>13</sub>/lîngă<sub>14</sub>/facultate<sub>14+</sub>  
/o<sub>16+</sub>/cameră<sub>17</sub>/de<sub>18</sub>/îchiriat<sub>19</sub>.

‘From the next month the owner of the house near the university seems to offer to Alexander a room for rent.’

Luna<sub>1</sub>/aceasta<sub>2</sub>/lui<sub>3</sub>/Bogdan<sub>4</sub>/pare<sub>7</sub>/să<sub>8</sub>/îi<sub>9</sub>/trimită<sub>10</sub>/redactorul<sub>11</sub>/revistei<sub>12</sub>/de<sub>13</sub>/sport<sub>14</sub>/exemplarul<sub>17</sub>  
/gratuit<sub>18</sub>/promis<sub>19</sub>.

‘This month the editor of the sport magazine seems to send to Bogdan the free promised issue.’

B. Matrix clitic/ Subjunctive embedded

De<sub>1</sub>/luna<sub>2</sub>/viitoare<sub>2+</sub>/lui<sub>3</sub>/Alexandru<sub>4</sub>/îi<sub>5</sub>/pare<sub>7</sub>/să<sub>8</sub>/îi<sub>9</sub>/ofere<sub>10</sub>/stăpînul<sub>11</sub>/casei<sub>12</sub>/de<sub>13</sub>/lîngă<sub>14</sub>/facultate<sub>14+</sub>  
/studentei<sub>15</sub>/o<sub>16</sub>/cameră<sub>17</sub>/de<sub>18</sub>/îchiriat<sub>19</sub>.

‘From the next month, the owner of the house from besides the university seems to Alexander to offer to the student a room for rent.’

Luna<sub>1</sub>/aceasta<sub>2</sub>/lui<sub>3</sub>/Bogdan<sub>4</sub>/îi<sub>5</sub>/pare<sub>7</sub>/să<sub>8</sub>/îi<sub>9</sub>/trimită<sub>10</sub>/redactorul<sub>11</sub>/revistei<sub>12</sub>/de<sub>13</sub>/sport<sub>14</sub>/citorului<sub>15</sub>/exemplarul<sub>17</sub>/gratuit<sub>18</sub>/promis<sub>19</sub>.

‘This month, the editor of the sport magazine seems to Bogdan to send to the reader the free promised issue.’

C. Matrix No Clitic / Indicative Embedded

De<sub>1</sub>/luna<sub>2</sub>/viitoare<sub>2+</sub>/lui<sub>3</sub>/Alexandru<sub>4</sub>/se<sub>6</sub>/pare<sub>7</sub>/că<sub>8</sub>/îi<sub>9</sub>/oferă<sub>10</sub>/stăpînul<sub>11</sub>/casei<sub>12</sub>/de<sub>13</sub>/lîngă<sub>14</sub>/facultate<sub>14+</sub>/o<sub>16</sub>/ cameră<sub>17</sub>/de<sub>18</sub>/îchiriat<sub>19</sub>.

‘From next month it seems to Alexander that the owner of the house from besides the university offers him a room for rent.’

Luna<sub>1</sub>/aceasta<sub>2</sub>/lui<sub>3</sub>/Bogdan<sub>4</sub>/se<sub>6</sub>/pare<sub>7</sub>/că<sub>8</sub>/ îi<sub>9</sub> /trimit<sub>10</sub>/redactorul<sub>11</sub>/ revistei<sub>12</sub>/ de<sub>13</sub>/ sport<sub>14</sub>/ exemplarul<sub>17</sub>/gratuit<sub>18</sub>/promis<sub>19</sub>.

‘This month it seems to Bogdan that the editor of the sport magazine sends him the free promised issue.’

D. Matrix Clitic / Indicative Embedded

De<sub>1</sub>/luna<sub>2</sub>/viitoare<sub>2+</sub>/lui<sub>3</sub>/Alexandru<sub>4</sub>/i<sub>5</sub>/se<sub>6</sub>/pare<sub>7</sub>/că<sub>8</sub>/îi<sub>9</sub>/oferă<sub>10</sub>/stăpînul<sub>11</sub>/casei<sub>12</sub>/de<sub>13</sub>/lîngă<sub>14</sub>/facultate<sub>14+</sub>/studentei<sub>15</sub>/o<sub>16</sub>/ cameră<sub>17</sub>/de<sub>18</sub>/îchiriat<sub>19</sub>.

‘From the next month, it seems to Alexander that the owner of the house from besides the university offers to the student a house for rent.’

Luna<sub>1</sub>/aceasta<sub>2</sub>/lui<sub>3</sub>/Bogdan<sub>4</sub>/i<sub>5</sub>/se<sub>6</sub>/pare<sub>7</sub>/că<sub>8</sub>/ îi<sub>9</sub> /trimit<sub>10</sub>/redactorul<sub>11</sub>/ revistei<sub>12</sub>/ de<sub>13</sub>/ sport<sub>14</sub>/  
citorului<sub>15</sub>/exemplarul<sub>17</sub>/gratuit<sub>18</sub>/promis<sub>19</sub>.

‘This month it seems to Bogdan that the editor of the sport magazine sends to the reader the free promised issue.’

The schemas corresponding to all stimuli are presented below in (49):

(49)

- A. **Adjunct + Dative NP** (CLLD element moved from embedded clause) + **seem** (3<sup>rd</sup> person singular) + **Subjunctive marker** + **Dative clitic** (doubling the CLLD-ed element) + **Ditransitive verb** + **Nominative subject** + **Genitive NP** (modifying the subject) + **PP** (modifying the genitive) + **Accusative Noun** + **PP** (modifying the Accusative)
- B. **Adjunct + Dative NP** (experiencer) + **dative clitic** (doubling the dative experiencer) + **seem** (3Sg) + **Subjunctive marker** + **dative clitic** (doubling the indirect object) + **ditransitive verb** + **Nominative subject** + **genitive NP** (modifying the subject) + **PP** (modifying the genitive noun) + **Dative NP** (indirect object) + **Accusative NP** (direct object) + **PP** (modifying the accusative)
- C. **Adjunct + Dative NP** (CLLD-ed element moved from embedded clause) + **se seem** + indicative complementizer + **Dative clitic** (doubling the CLLD-ed element) + ditransitive verb + **Nominative subject** + **Genitive NP** (modifying the subject) + **PP** (modifying the genitive) + **Accusative Noun** + **PP** (modifying the Accusative)

D. **Adjunct** + **Dative NP** (experiencer) + **Dative clitic** (doubling the dative experiencer) + **se seem** + indicative complementizer + **dative clitic** (doubling the indirect object) + ditransitive verb + **Nominative** subject + genitive NP (modifying the subject) + PP (modifying the genitive noun) + **dative NP** (indirect object) + **Accusative NP** (direct object) + PP modifying the accusative

### *Expectations*

Longer reaction times (RTs) are expected at regions 16/17 accusative determiner/accusative NP (e.g., *o cameră* ‘a room’) in the conditions where the matrix clause contains the dative clitic and dative experiencer subject (B and D), as a spill-over effect from region 15 dative NP indirect object (e.g., *studentei* ‘student.Dat’). The dative NP is there and the parser would be surprised to see another dative, in a sentence where a dative clitic already occurred as the indirect object.

Considering the plausibility effects, another difference in RTs could be expected at region 9 (dative clitic in the embedded clause). In conditions A and C, where the matrix clause has no clitic and the CLLD-ed dative NP is fronted, the dative clitic in region 9 doubles this Dative NP. In conditions with the dative experiencer and dative clitic in the matrix clause (B and D), the dative clitic in the embedded clause is supposed to double the dative NP that occurs in region 15 (e.g., *studentei* ‘student.Dat’). However, this constitutes a problem, because the dative clitic in region 9 in these conditions could be ambiguous, and could be wrongly perceived as doubling each of the datives. This would generate a longer RT at region 9 and, when the parser sees the ditransitive verb, he or she may realize that this element (i.e., the dative clitic) is the indirect object of the ditransitive construction.

Faster RTs at region 7 (the verb *seem*), as a spill-over from region 5 (dative clitic in the matrix clause, different between conditions with respect to the clitic present vs. absent), could potentially show that the parser has the grammatical knowledge of the fact that the fronted element comes from the embedded clause if the clitic is not present in the matrix clause, and respectively, that the dative is the experiencer of the matrix clause if the dative clitic appears in the matrix clause.

Finally, if the parser sees the dative NP, then he or she may expect a dative clitic, as in Romanian dative NPs are generally clitic-doubled. If that dative clitic is present in the matrix clause as in Conditions B and D, then the parser is aware of the fact that the dative is the experiencer of the matrix verb. If the dative NP is fronted from the embedded clause as in Conditions A and C, the parser is expected to keep “looking” for the dative clitic doubling the dative NP.

Significant differences at other regions of interest may be observed, and could potentially reveal important linguistic facts. For example, we expect differences at region 8 (indicative vs. subjunctive complementizer) in A vs. C and B vs. D, which potentially confirm the intuitive idea that the indicative constructions are more frequently used by Romanian speakers than subjunctive ones, especially in contexts in which verbs of the raising type are used.

### ***Participants***

Twenty-seven Romanian native speakers between the ages of 18-35 living in Bucharest, Romania participated in this experiment. Participants had normal or corrected-to-normal vision. All participants were right handed and they had no history of language disorders. All participants provided an informed consent and were paid the equivalent of \$4 for participation. Reporting of

these two experiments is based on data collection approved by the Ethics Committee of the University of Ottawa.

### ***Design***

The experiment consisted of twenty-four sets of *seem* sentences (4 sentences per set; for a total of 96 sentences). Seventy-two filler sentences were added. Each subject saw 24 sentences with *seem* and all fillers. Thus each participant saw 96 sentences for the *seem* condition. Fillers resembled the test conditions, in that they were biclausal sentences, containing a matrix and an embedded clause. The embedded clauses of the fillers were both subjunctives and indicatives (approximately 50% of each). The fillers never used verbs such as *seem* in the matrix clause, nor ditransitive constructions in embedded clauses. Each sentence was followed by a *yes* or *no* comprehension question<sup>49</sup>.

Four different sentences types were used. Two of the sentences (conditions A and B) had subjunctive embedded clauses and two (conditions C and D) had indicative embedded clauses. The subjunctive vs. indicative subconditions differed in that the inflected verb *seem* was used in the A and B conditions (taking a subjunctive complement) while in conditions C and D the impersonal *Refl seem* was used (with an indicative complement).

The conditions are labelled as follows:

- A     Matrix No Clitic / Subjunctive Embedded;
- B     Matrix Clitic / Subjunctive Embedded;

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<sup>49</sup> Although given the sentences involved, there were some difficulties in the formulation of the questions (see discussion for further explanations).

- C Matrix No Clitic / Indicative Embedded;
- D Matrix Clitic / Indicative Embedded.

In conditions A and C, the dative NP is a CLLD-ed element fronted from the embedded clause to the matrix clause, and there is no clitic in the matrix. In conditions B and D, on the other hand, the dative indirect object is overt in the embedded clause together with a dative clitic, and a dative matrix experiencer, doubled by its clitic surfaces in the matrix clause.

All of the target datives across all stimuli (either fronted CLLD-ed datives or experiencers quirky subjects) were masculine proper nouns (preceded by the dative determiner *lui*). The dative indirect object in the embedded clauses (in conditions B and D) was sometimes masculine and sometimes feminine (the ratio was approximately 50%). In Romanian, the third person singular dative clitic doubling the dative NP has the same morphology for masculine nouns and for feminine nouns (e.g., *îi* or *i*). All sentences started with a temporal, causal or locative adjunct.

The verbs used in the embedded clauses across all conditions were ditransitive verbs that take a dative indirect object and an accusative direct object (e.g., *a trimite* ‘to send’ *a oferi*, ‘to offer’, *a împrumuta* ‘to lend’, etc.). The verbs were not repeated in any of the conditions.

The nominative subject of the embedded clause was always followed by a genitive noun (e.g., *stăpânul casei* ‘owner of the house’, *redactorul revistei* ‘the magazine’s editor’). In Romanian, the genitive and dative share the same morphology. Thus, the genitive could be (incorrectly) understood as a dative by the parser, and vice-versa. In this experiment, such misunderstanding was avoided by selecting only inanimate genitives (implausible under a dative reading, where one would generally find an animate noun). Moreover, in choosing the genitive, consideration

was taken such that it could not be interpreted as a collective noun (e.g. *premiile școlii* ‘the school’s prizes’ could also be interpreted as ‘the children from the school’s prizes’). Therefore, the modifier of the nominative NP is only plausible as a non-collective genitive noun. According to modular sentence processing, plausibility information is ignored during initial stages of sentence processing, whereas interactive theories claim that it is used immediately during processing. However, in this particular case, the genitive NP is implausible under a dative reading and it has the interpretation of the possessed element of the nominative noun. As such, if we take into consideration modular accounts, the genitive could be wrongly understood as a dative and, in this scenario, we would expect longer reading times at the genitive regions; because of the surprise effect – the parser would expect a dative, the genitive noun has the same morphology, but it is an implausible dative indirect object in this situation. If we consider interactive accounts on the other hand, the parser would process the genitive as such without any problems, considering also non-syntactic information thus not generating longer RTs at the genitive region.

A sample set of the stimuli with *seem* is repeated below in (50-53):

**Condition A: Matrix No Clitic / Subjunctive Embedded**

- (50) *De luna viitoare lui Alexandru<sub>i</sub> pare să îi<sub>i</sub> ofere*  
 From month next Det Alexandru.Dat seem.3sg Subj Dat.Cl.3 give.3s  
*stăpînul casei de lângă facultate o cameră de închiriat.*  
 owner.Nom house.Gen from near university a room.Acc for rent

‘From the next month the owner of the house near the university seems to offer to Alexander a room for rent.’

**Condition B: Matrix Clitic / Subjunctive Embedded**

- (51) *De luna viitoare lui Alexandru<sub>i</sub> îi<sub>i</sub> pare să îi<sub>j</sub> ofere*  
From month next Det Alexandru.Dat Dat.Cl.3 seem.3sg Subj Dat.Cl.3 give.3s  
*stăpînul casei de lângă facultate studentei<sub>j</sub> o cameră de închiriat.*  
owner.Nom house.Gen from near university student.Dat a room.Acc for rent

‘From the next month, the owner of the house from besides the university seems to Alexander to offer to the student a room for rent.’

**Condition C: Matrix No Clitic / Indicative Embedded**

- (52) *De luna viitoare lui Alexandru<sub>i</sub> se pare că îi<sub>i</sub> oferă*  
From month next Det Alexandru.Dat Refl seem that Dat.Cl.3 give.3s  
*stăpînul casei de lângă facultate o cameră de închiriat.*  
owner.Nom house.Gen from near university a room.Acc for rent

‘From next month it seems to Alexander that the owner of the house from besides the university offers him a room for rent.’

### Condition D: Matrix Clitic / Indicative Embedded

(53) *De luna viitoare lui Alexandru<sub>i</sub> i<sub>i</sub> se pare că îi<sub>j</sub> oferă*

From month next Det Alexandru Dat.Cl Refl seem that Dat.Cl.3 give.3s

*stăpînul casei de lângă facultate studentei<sub>j</sub> o cameră de închiriat.*

owner.Nom house.Gen from near university student.Dat a room.Acc for rent

‘From the next month, it seems to Alexander that the owner of the house from  
besides the university offers to the student a house for rent.’

In condition A (Matrix No Clitic / Subjunctive Embedded) (50), the dative NP was topicalized from the CLLD position of the embedded clause. In condition B (Matrix Clitic / Subjunctive Embedded) (51), the dative NP is the experiencer of the main verb *seem* (it is a quirky subject).

In A, the dative NP precedes the matrix verb *seem*. The clitic doubling the dative NP is in the embedded clause, in preverbal position. In B however, the clitic which is doubling the dative NP follows it and precedes the matrix verb *seem*. Condition B has an overt dative NP indirect object belonging to the embedded clause, which is a ditransitive construction. This lexical dative is sometimes feminine, sometimes masculine, in approximately 50% ratio. The two conditions A and B differ minimally in the following way: the dative clitic doubling the dative experiencer is present in the matrix clause in condition B, but not in A. In the embedded clause, in condition B, the dative indirect object is overt; it is a dative NP in situ, different from the one in the matrix clause. To summarize, in A, the dative from the embedded clause is preposed to the matrix clause, whereas in B the dative indirect object stays in situ, and at the

matrix clause level the dative NP is the experiencer of the matrix verb *seem*. This is why in structure A there is only one dative clitic, in the embedded clause, doubling the dative NP, which is CLLD-ed element moved to the matrix, whereas in condition B there are two clitics. Here, the clitic in the matrix clause doubles the experiencer and the clitic in the embedded clause doubles<sup>50</sup> the indirect object.

In conditions C (Matrix No Clitic / Indicative Embedded) (52) and D (Matrix Clitic / Indicative Embedded) (53) the embedded clause is indicative, being introduced by the indicative complementizer *că*. The verb used is the impersonal *se pare* ‘Refl seem’ and, as mentioned above, this can have a dative experiencer. All sentences were written in the third person singular.

### ***Procedure***

A self-paced-reading experiment was run on a Viewsonic laptop computer with a 13 inch<sup>51</sup> screen, using Linger software (Doug Rohde, MIT). Participants read each sentence that appeared word by word on the screen, in a self-paced reading paradigm. Each trial started with a blank screen. As the subject pressed the space bar, a sentence masked by dashes appeared on the screen. As subjects pressed the space key, a new word appeared on the screen, and the word just read was immediately masked by dashes. The participants were instructed to read in a natural rhythm and to respond to the following comprehension questions as accurately as possible. After each sentence, a comprehension question appeared, for which they had to answer *yes/no*. To

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<sup>50</sup> There is a problem, because this clitic could be perceived as ambiguous between doubling the dative NP experiencer in the matrix clause and the dative NP indirect object of the embedded clause. See the discussion for a more detailed analysis of this issue.

<sup>51</sup> Although the computer screen was small, the font was big enough to be comfortably read by each subject.

answer, subjects were instructed to press the *f*-key for *yes*, and the *j*-key for *no*, marked on the computer's keyboard with coloured stickers. The answers were half *yes* and half *no*, both for the stimuli and for the fillers. The questions appeared complete on the screen, and not word by word. The order of stimuli within the presentation list was randomized by the Linger program, as well as the order of the lists. The duration of the experimental session varied (depending on the timing of each reader) but was on average approximately 35 minutes<sup>52</sup>.

### ***Results and Discussion***

For the purpose of this experiment, raw reading time averages were calculated. Scores which were under or over 2.5 standard deviations above or below the mean were excluded. No participants were excluded on the basis of accuracy. In general, the regions used for data analysis corresponded to single words, but in some cases, words were combined due to variations in phrase length, in modifiers and/or absence vs. presence of determiners. The regions with combined words were not analyzed, as they were not important for the current study and did not affect the final outcome. Most of the regions with combined words were at the end of the sentences.

Also, due to specific characteristics of each type of examples the four conditions contained somewhat different numbers of regions, because some regions were present in some conditions, but not in others. In this situation, the comparison between regions was realized at the next region, based on the so-called spill-over effect, where it is likely that the effects of processing can still be seen.

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<sup>52</sup> Recall that this experiment included the *must* condition that is not reported for the purposes of this dissertation.

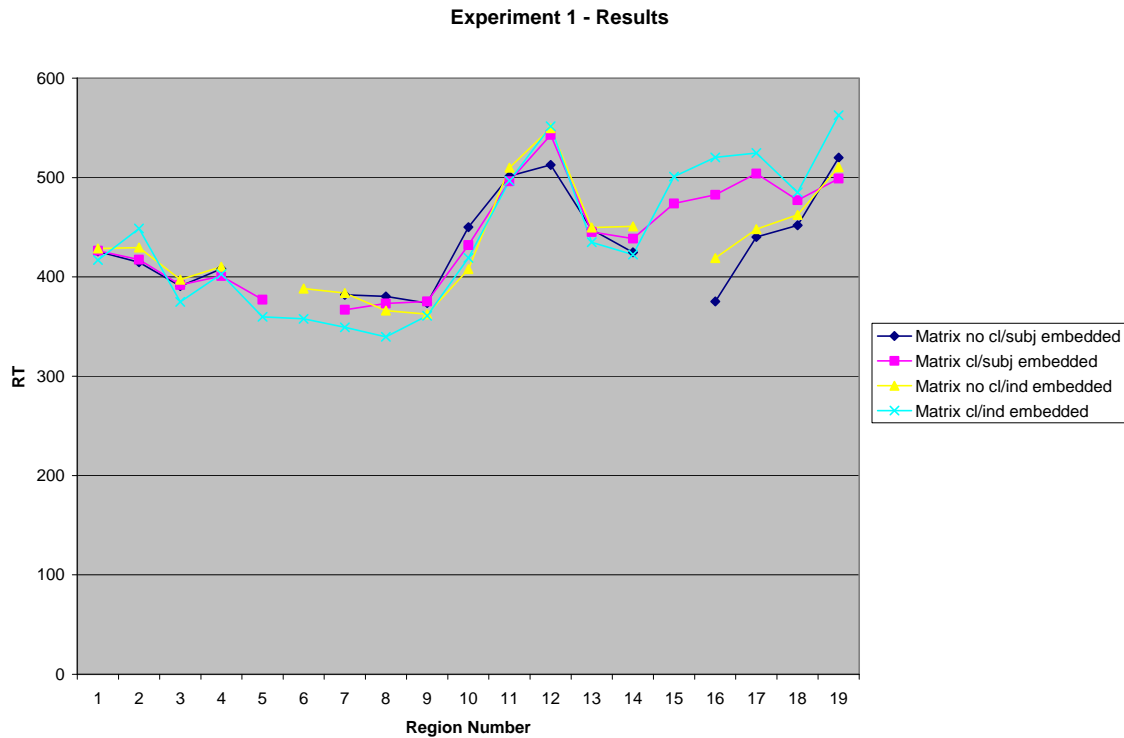
For example, region 15 (dative NP), a critical region in conditions B and D, was missing in conditions A and C. Therefore, the results were considered at the next two regions (16 – accusative determiner and 17 – accusative noun), taking into consideration the spill-over effect from the previous region.<sup>53</sup>

The critical regions were the regions with the dative clitics (region 5 and 9), the region with the genitive NP (region 12), and the region represented by the dative NP in the embedded clause (region 15). Other critical regions were the ones that followed these regions (region 7 – the verb *seem*, region 16 – accusative determiner and region 17 – accusative NP), due to the spill-over effects. Other regions were analyzed, because of the potential linguistic information they conveyed, for example, region 8 (subjunctive vs. indicative complementizer, could potentially indicate frequency information about indicative vs. subjunctive constructions in Romanian).

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<sup>53</sup> A problem encountered here, which was fixed in the second experiment, was that the number of tokens in region 16 that the subjects saw was smaller than in the other regions, because the accusative determiner was not present in all sentences.

**Table 1.** Results for the seem condition – Experiment 1



A three-way repeated measures analysis of variance (ANOVA) looking either at two or four conditions was conducted on the mean reading times for the different regions of interest. Mean reading times were collected at various regions, although important critical regions were region 5 (dative clitic), region 9 (dative clitic), region 12 (genitive NP), region 15 (dative NP) and the immediately following regions in some cases as spill-over (7 – the verb *seem*, 16 – accusative determiner and 17 – accusative NP). Statistical differences were analyzed at other regions, which potentially conveyed important information about the structure of Romanian.

Statistically significant differences ( $F(1,26) = 8.018, p = .009$ ) were found at region 6 (reflexive *se*). This significant effect reflects the fact that condition C (Matrix No Clitic / Indicative Embedded) takes significantly longer to read than D (Matrix Clitic / Indicative

Embedded) (mean difference = 30.509,  $p=.009$ ). This region appears only in conditions C and D, as in these two regions the impersonal verb *se pare* ‘Refl seem’ was used. A potential explanation could be that the parser may have been surprised that the reflexive *se* occurs after the dative NP. In this situation, normally, the parser would expect a dative clitic, which was present in D, but not in C.

A significant trend ( $F(3, 78) = 2.264, p = .088$ ) was found at region 7 (the verb *seem*). This effect was due to the differences between conditions A and C which were read faster than B and D, respectively. A potential explanation is that if the dative is a quirky subject, as the experiencer of the verb *seem*, then it is doubled by the dative clitic, as quirky subjects in Romanian are obligatorily doubled by dative clitics. In conditions A and C, there are higher RTs because the participants saw the verb *seem*. There was no dative clitic, therefore the parser had to ‘realize’ that the dative in the matrix clause was fronted from the embedded clause, which may have caused a delay in interpretation (potentially during the integration phase, explained in a previous sub-section). This follows the predictions stated above and may represent spill-over effects from region 5 (matrix dative clitic).

*Table 2: Pairwise comparison at region 7*

	Condition A	Condition B	Condition C	Condition D
Condition A		Mean diff = 13.860 $p = .419$	Mean diff = - 2.360 $p = .875$	Mean diff = 31.890 $p = .048^*$
Condition B	Mean diff = - 13.860 $p = .419$		Mean diff. = - 16.221 $p = .208$	Mean diff = 18.030 $p = .175$
Condition C	Mean diff = 2.360 $p = .875$	Mean diff. = 16.221 $p = .208$		Mean diff = 34.251 $p = .039^*$
Condition D	Mean diff = - 31.890 $p = .048^*$	Mean diff = - 18.030 $p = .175$	Mean diff = - 34.251 $p = .039^*$	

\*  $p < .05$

An interesting result was encountered at region 8, the region with the subjunctive vs. indicative complementizer ( $F(3, 78)$ ,  $p = .134$ ). This effect appears because it took longer to read sentences in conditions A, B than in C, D. This could be explained by the fact that the parser read indicative clauses more easily than subjunctive ones. The notion of frequency may be in effect here, as indicative clauses intuitively appear to be used more frequently than the subjunctive clauses, and are most likely acquired earlier in the language development than

subjunctive constructions. At a first glance, indicative clauses were also preferred in constructions involving the verb *seem*. Further testing is necessary to confirm this hypothesis, as the result in this experiment was not significant. An obvious possibility is that the choice of analysis is affected by frequency. Various findings suggested that the processor initially favors frequent analyses over infrequent ones (Clifton, Frazier, and Connine, 1984; Fodor, 1978; amongst others). In this case, the processor adopts the most frequent construction.

One of the predictions was that we may find a difference at region 12 (the Genitive NP). However, no such differences were encountered ( $F(3, 78) = 1.242, p = .300$ ). At this region, the parser recognizes the difference between genitive and dative in the context, especially when the genitive is an implausible dative, even though the morphology is the same (recall the discussion of plausibility). The initial prediction, if we were to consider an interactive account, would be higher RTs in B (Matrix Clitic / Subjunctive Embedded) and D (Matrix Clitic / Indicative Embedded) than in conditions A (Matrix No Clitic / Subjunctive Embedded) and C (Matrix No Clitic / Indicative Embedded), because this would be the place where the parser expects a dative NP.

We also encounter significant differences at regions 16 (accusative determiner) ( $F(3, 75) = 5.974, p = .001$ ) and 17 (accusative NP) ( $F(3, 78) = 11.255, p < .001$ ). At region 16 (accusative determiner), the differences between conditions B and D and A and C respectively, are significant, with longer RTs encountered in B and D. The differences in this region are a spill-over effect of region 15 (which is a critical region). However, given the problems described above, the spill-over effect will be considered at the next region. Although we found significant differences, these may not be relevant, because there are not enough occurrences of the accusative determiner. The accusative determiner occurs only in some utterances and not in

others, this giving an inconsistency to the data.<sup>54</sup> Therefore, a more reliable solution is to consider the results at the next region, 17 (accusative NP).

The difference at this region confirms the prediction that the parser would be surprised at seeing the dative NP in the embedded clause in conditions B and D. This difference can be explained in two ways. First, one could consider the dative clitic in the embedded clause as ambiguous between doubling the dative experiencer in the main clause and being an indirect object in the embedded clause. The parser is surprised seeing the dative NP in the embedded clause. The dative in the matrix clause is ambiguous between the experiencer of the verb *seem* and the indirect object of the ditransitive verb in the embedded clause. Nothing excludes the possibility of a dative chain (coindexation between the dative noun phrase, the dative clitic in the matrix clause (region 5) and the dative clitic in the embedded clause (region 9)). The parser was surprised at the moment of seeing the dative, potentially interpreting the dative clitic in the embedded clause as being part of the above mentioned dative chain.

Another possible explanation is that the parser solved the ambiguity at region 9 (if we consider an interactive model where more than strict syntactic information is taken into account) and proceeded to further regions. In the scenario that it correctly considered the dative clitic in region 9 as the indirect object of the ditransitive verb, the processor would still be surprised when seeing the overt dative NP, as the clitic on its own could be the indirect object in this context, without an accompanying NP. Therefore, the dative is somewhat redundant here. This potential ambiguity will be resolved in the second experiment.

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<sup>54</sup> This problem was fixed in Experiment 2.

**Table 4:** Pairwise comparison at region 17.

	Condition A	Condition B	Condition C	Condition D
Condition A		Mean diff = - 57.193 $p = .003^*$	Mean diff = - 2.715 $p = .882$	Mean diff = - 83.179 $p < .001^{**}$
Condition B	Mean diff = 57.193 $p = .003^*$		Mean diff. = 54.478 $p = .005^*$	Mean diff = - 25.986 $p = .190$
Condition C	Mean diff = 2.715 $p = .882$	Mean diff. = - 54.478 $p = .005^*$		Mean diff = - 80.464 $p < .001^{**}$
Condition D	Mean diff = 83.179 $p < .001^{**}$	Mean diff = 25.986 $p = .190$	Mean diff = 80.464 $p < .001^{**}$	

\* $p < .01$

\*\* $p < .001$

### **Summary**

The aim of this experiment was to find out whether Romanian speakers recognize double-clitic dependencies, distinguishing between constructions involving dative fronting of a CLLD-ed element from the embedded clause to the matrix, on the one hand, and constructions where the dative is present in the matrix clause, as the experiencer of the matrix verb on the other. The results of this experiment show that yes, Romanian speakers build actively and incrementally the upcoming sentence structure. Also, the parser is aware of the grammar of the constructions

described above. This is motivated by the results at region 9 (dative clitic) and at the regions immediately following region 15 (the dative indirect object) (i.e., regions 16 – accusative determiner and 17 – accusative NP).

However, the results of this experiment are not completely conclusive, because of the shortcomings described above, namely, the ambiguity of the potential interpretation of the dative clitic in region 9 in conditions B (Matrix No Clitic / Subjunctive Embedded) and D (Matrix No Clitic / Indicative Embedded), between doubling the dative NP which is in the matrix clause, or doubling the dative indirect object within the embedded clause. The parser may form a dative chain (coindexation between the dative noun phrase, the dative clitic in the matrix clause (region 5) and the dative clitic in the embedded clause (region 9). The high RTs at region 15 (dative indirect object) and the significant difference of RTs between conditions A and C vs. B and D, respectively, in regions 16 – 17 (accusative determiner-accusative NP) support the idea that the parser was surprised at the moment of seeing the dative NP and may have considered the dative clitic in the embedded clause as being part of the above mentioned dative chain, and reanalysis occurs. There is no reason to believe that such a difference would occur by reading the determiner or the accusative noun. The fact that the parser was surprised upon coming across the dative NP and that this element was not expected after seeing the dative clitic in the embedded clause is a clear indicator that the parser incorrectly considered the dative clitic in region 9 as belonging to the dative experiencer chain, namely, the possibility that the dative clitic in the embedded clause in condition B could be coindexed with the dative NP in the matrix clause. This potentially comes with storage costs, as discussed by Gibson (1998), in that dependencies between two syntactic elements in the sentence, in our case the dative clitic and the dative lexical NP, the first element is stored in memory before being integrated with the latter.

Up to the region containing the dative clitic (9), if a dative chain may be formed, then the dative NP in the matrix (in B and D) would also be fronted from the indirect object position of the embedded clause to the matrix, in a way similar to condition A, leaving a pronounced copy of the dative clitic in the embedded clause. Thus, it results in ambiguity of the dative clitic in the embedded clause, between being a copy of the dative NP moved from the embedded clause to the matrix and the dative clitic doubling the dative NP indirect object of the ditransitive embedded clause. This ambiguity is solved in Experiment 2, where, in condition B the dative clitic and subsequently the dative NP indirect object in the ditransitive sentences are plural.

Based on the preferred association with ‘known’ elements in the sentence and given the nature of the parser (adhering to locality/recency constraints as well as diminishing storage and integration costs), it is more plausible that this would construct a chain composed of three datives (matrix dative NP (region 4) – matrix dative clitic (region 5) – embedded dative clitic (region 9)), instead of reading the dative clitic in the embedded clause as a different (‘new’) dative.

Another shortcoming of this experiment, which was rectified in the second experiment, is the number of subjects. The first experiment was conducted with only 26 subjects, therefore the differences may shift towards more or less significant as a result of testing more subjects.

At region 12 (the genitive NP), the results do not confirm the prediction that it could potentially be a difference in RTs between conditions. Given the argument structure of a ditransitive verb and the Romanian genitive morphology, which is the same as the dative, the explanation for these findings is potentially twofold. On the one hand, at this point, the only element missing from the argument structure of the ditransitive verb is the accusative. Thus, the parser would expect the accusative here, in order to complete the argument structure of the ditransitive verb. Another possibility is that a dative NP could yield faster RTs than genitives

(conditions B and D), as we have the clitic dative and not yet a dative lexical noun. Higher RTs would then be due to the parser being surprised upon seeing the genitive, an element that looks structurally like a dative, has the same morphology, but is unexpected as this location in the sentence is more appropriate for a dative. But this genitive noun is implausible under a dative reading in the current position, as it is inanimate and it modifies the nominative noun. A problem occurs here with this possibility: because the genitive NP occurs in all four conditions, it is difficult to compare the plausibility information between the respective conditions. This remains a problem for further research.

The following section describes Experiment 2, which was a follow-up from the first experiment, studying double clitic dependencies in the same types of constructions involving fronting of the dative CLLD-ed element and a dative experiencer in the matrix clause, as well as an indirect object in situ in a ditransitive embedded clause.

## **Experiment 2**

The goal of Experiment 2 was to further test the double-clitic dependencies in the Romanian constructions described above, and constitutes a follow-up of the first experiment. The necessity for the second experiment was due to the aforementioned shortcomings with the design of the first experiment, also reflected in the results of Experiment 1. The stimuli were redesigned to avoid the potential ambiguity at region 9 (the dative clitic in the embedded clause) and eliminate the parser's possible consideration of the dative clitic in the embedded clause in condition B (matrix no clitic/subjunctive embedded) as part of the dative chain. The number mismatch introduced in this experiment between the dative experiencer of the matrix clause and the dative clitic/dative noun in the embedded clause avoids the ambiguity in Experiment 1. This new

design should help make the results clearer and easier to interpret. The predictions of Experiment 2 are the same as the ones in the Experiment 1.

### ***Participants***

Participants were 44 native Romanian speakers between the ages of 18-40 living in Ottawa, Canada. All participants had normal or corrected-to-normal vision, were all right handed, and had no history of language impairment. The participants provided an informed consent and were paid \$5 for their participation. Conducting of this experiment was approved by the Ethics Committee of the University of Ottawa.

One disadvantage of testing participants in Ottawa was that they were more heterogeneous than the group tested in Romania (i.e., although they were all Romanian speakers, they came from various regions in Romania, and were therefore subject to dialectal variation).

A second possible influence upon the result was various levels of exposure to a second language (mainly English). To control for this effect, only subjects that were in Canada for 10 years or less were tested.

### ***Materials and Design***

Experiment 2 had four conditions, similar to those in Experiment 1. The experiment consisted of twenty-four sets of *seem* sentences (4 sentences per set; for a total of 96 sentences). Seventy-two filler sentences were also added. Each subject saw twenty four sentences with *seem* and all fillers.

In the present experiment, plural was used for the dative clitic in the embedded clause, as well as the CLLD-ed dative NP/dative indirect object in conditions B (Matrix Clitic / Subjunctive Embedded) and D (Matrix Clitic / Indicative Embedded). This number mismatch between the dative clitic in the matrix clause and the dative clitic in the embedded clause was expected to ensure that the participants would not consider these two elements as part of the same chain. It should be clear that the second dative clitic is a ‘new’ dative and is unambiguously the indirect object or doubling the dative NP. Subsequently, all the genitive nouns across all conditions appeared in plural form.

As in Experiment 1, the *seem* condition contained four sentences per set: two of the sentences had subjunctive embedded clauses and two had indicative embedded clauses, with the indicative sentences being the control conditions. The subjunctive vs. indicative subconditions differed in that the main verb *seem* was used in the A and B conditions (taking a subjunctive complement) while in C and D the impersonal *se pare* ‘Refl seem’ was used (which takes an indicative complement). The conditions are labelled as follows:

- A     Matrix No Clitic / Subjunctive Embedded;
- B     Matrix Clitic / Subjunctive Embedded;
- C     Matrix No Clitic / Indicative Embedded;
- D     Matrix Clitic / Indicative Embedded.

All target datives across all stimuli (either fronted or experiencer quirky subjects) were masculine proper nouns (preceded by the dative determiner *lui*). The CLLD-ed element and the dative clitics in the embedded clauses (in conditions B and D) were always plural, sometimes

masculine and sometimes feminine (the ratio was approximately 50%). The third person plural dative clitic doubling the dative NP has the same morphology for masculine nouns and for feminine nouns (e.g., *le*). All sentences started with a temporal, causal or locative adjunct. The verbs used in the embedded clauses across all conditions were ditransitive verbs that take an accusative direct object and a dative indirect object (e.g., *a trimite* ‘to send’ *a oferi*, ‘to offer’, *a împrumuta* ‘to lend’, etc.). The verbs were not repeated twice in any of the experimental conditions. The nominative subject of the embedded clause was always followed by a genitive noun, which in this case was plural across all conditions, as a consequence of the dative clitics and the dative nouns in conditions B and D being plural. The implausibility of the genitive under a dative reading (even though they share the same morphology) was kept in Experiment 2. Condition A (Matrix No Clitic / Subjunctive Embedded) and C (Matrix No Clitic / Indicative Embedded) still kept the dative clitic in region 9 singular, as it doubled the singular dative experiencer of the verb *seem*. This could be a potential problem, as at region 9, comparisons were between a singular dative clitic in conditions A and C and a plural dative clitic in conditions B and D. The stimuli were very similar to the ones in the first experiment, except for the changes mentioned above. Other minor changes were made to some sentences.

A sample set of the stimuli from Experiment 2 is presented below:

### **Condition A: Matrix No Clitic / Subjunctive Embedded**

In this condition, the matrix clause does not contain a dative clitic. The dative NP in the matrix clause is the CLLD-ed element, which was generated in the topic position of the embedded clause and subsequently moved to the matrix clause. The embedded clause is subjunctive.

(54) *De luna viitoare lui Alexandru<sub>i</sub> pare să îi<sub>i</sub> ofere*

From month next Det Alexandru.Dat seem.3sg Subj Dat.Cl.3 give.3s

*stăpînul caselor de lângă facultate cameră de închiriat.*

owner.Nom houses.Gen from near university room.Acc for rent

‘From the next month the owner of the houses near the university seems to offer to Alexander a room for rent.’

(55) *Luna aceasta lui Bogdan<sub>i</sub> pare să îi<sub>i</sub> trimită redactorul*

Month this Det Bogdan.Dat seem.3sg Subj Dat.Cl.3 send.3sg editor.Nom

*revistelor de sport exemplarul gratuit promis.*

magazines.Gen of sport the issue free promised

‘This month the editor of the sport magazines seems to send to Bogdan the free promised issue.’

### **Condition B: Matrix Clitic / Subjunctive Embedded**

In this condition, there is a dative clitic experiencer in the matrix clause, which doubles the dative experiencer subject. The embedded clause is subjunctive.

(56) *De luna viitoare lui Alexandru<sub>i</sub> îi<sub>i</sub> pare să le<sub>j</sub> ofere*

From month next Det Alexandru.Dat Dat.Cl.3 seem.3sg Subj Dat.Cl.3 give.3s

*stăpînul caselor de lângă facultate studentelor<sub>j</sub> o cameră de închiriat.*

owner.Nom houses.Gen from near university students.Dat a room.Acc for rent

‘From the next month, the owner of the houses from besides the university seems to Alexander to offer to the students a room for rent.’

(57) *Luna aceasta lui Bogdan<sub>i</sub> îi<sub>i</sub> pare să le<sub>j</sub> trimită*

Month this Det Bogdan.Dat Dat.Cl.3 seem.3Sg Subj Dat.Cl.3 send.3sg

*redactorul revistelor de sport cititorilor<sub>j</sub> exemplarul gratuit promis.*

editor.Nom magazine.Gen of sport reader.Dat issue.Acc free promised

‘This month, the editor of the sport magazines seems to Bogdan to send to the readers the free promised issue.’

### **Condition C: Matrix No Clitic / Indicative Embedded**

Similar to Condition A, in Condition C there is no matrix clitic. The dative NP surfaces in the matrix clause and is a displaced CLLD-ed element, which originates in a Topic position in the embedded clause. The embedded clause is indicative, in this case, complement of the impersonal matrix verb *se pare* ‘Refl seem’.

(58) *De luna viitoare lui Alexandru<sub>i</sub> se pare că îi<sub>i</sub> oferă*

From month next Det Alexandru.Dat Refl seem that Dat.Cl.3 give.3s

*stăpînul caselor de lângă facultate cameră de închiriat.*

owner.Nom houses.Gen from near university room.Acc for rent

‘From next month it seems to Alexander that the owner of the houses from besides the university offers him a room for rent.’

(59) *Luna aceasta lui Bogdan<sub>i</sub> se pare că îi<sub>i</sub> trimite redactorul*

Month this Det Bogdan.Dat se seem.Imp that Dat.Cl.3 send.3sg editor.Nom

*revistelor de sport exemplarul gratuit promis.*

magazines.Gen of sport the issue.Acc free promised

‘This month it seems to Bogdan that the editor of the sport magazines sends him the free promised issue.’

#### **Condition D: Matrix Clitic / Indicative Embedded**

In Condition D, there is a dative clitic present in the matrix clause which accompanies the dative experiencer NP. The embedded clause is a ditransitive indicative sentence with an overt dative indirect object accompanied by the dative clitic.

(60) *De luna viitoare lui Alexandru<sub>i</sub> i<sub>i</sub> se pare că le<sub>j</sub> oferă*

From month next Det Alexandru Dat.Cl Refl seem that Dat.Cl.3 give.3s

*stăpînul caselor de lângă facultate studentelor<sub>j</sub> cameră de închiriat.*

owner.Nom houses.Gen from near university student.Dat room.Acc for rent

‘From the next month, it seems to Alexander that the owner of the houses from besides the university offers to the students a house for rent.’

- (61) *Luna aceasta lui Bogdan<sub>i</sub> se pare că le<sub>i</sub> trimite redactorul*  
Month this Det Bogdan Dat.Cl.3 se seem.Imp that Dat.Cl.3 send.3sg editor.Nom  
*revistelor de sport cititorilor<sub>i</sub> exemplarul gratuit promis.*  
magazine.Gen of sport reader.Dat issue.Acc free promised

‘This month it seems to Bogdan that the editor of the sport magazines sends to the readers the free promised issue.’

Another improvement in this experiment worth mentioning was the indefinite determiner of the accusative NP in region 16, which was sometimes present and sometimes absent in Experiment 1. This was excluded in Experiment 2. Therefore, all the accusative NPs were definite.

In condition A, the dative which is a CLLD-ed element originating in the embedded clause is fronted to the matrix clause, whereas in B the dative indirect object stays in situ, and at the matrix clause level the dative NP is the experiencer of the matrix verb *seem*. The singular clitic in the matrix clause doubles the experiencer and the plural clitic in the embedded clause doubles the dative indirect object.

The experiment consisted of twenty-four sets of sentences. Seventy-two fillers were added. Each subject saw twenty-four test sentences and all fillers. The fillers never used the

verb *seem* nor ditransitive sentences. Fillers resembled the test conditions, in that they were biclausal sentences, containing a matrix and an embedded clause. The embedded clauses of the fillers were both subjunctives and indicatives. No constructions with verbs such as *seem* in the matrix clause were present in the fillers. Each sentence was followed by a comprehension question with *Yes / No* possible answers. Compared to Experiment 1, the questions in Experiment 2 were more consistent. To this end, all questions started with '*Is it true that...*'. Correct responses to these questions consisted of equal "yes" and "no"s, both for the filler and for the test sentences.

### ***Procedure***

A self-paced-reading experiment was run on a laptop computer using Linger software (Doug Rohde, MIT). The procedure was similar to the first experiment. The instructions for the participants were the same as in Experiment 1. The duration of the experiment was slightly shorter, due to the removal of the *must* condition. Therefore, the experiment lasted on average, approximately 20 minutes, depending on the reading rhythm of the participants.

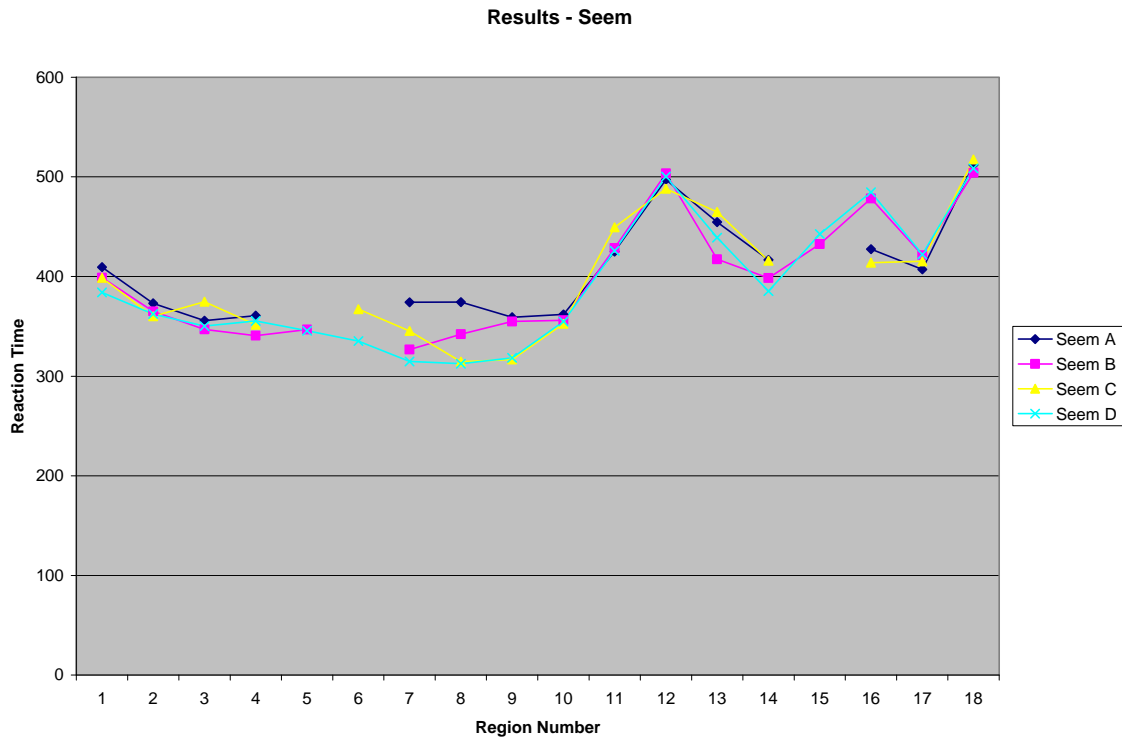
### ***Analysis***

A total of 42 subjects participated in this experiment. Data from 40 participants was computed and analyzed. One participant had to be eliminated due to outlyingly high RTs. A second participant had to be eliminated because the program stopped in the middle of running the experiment. All scores that were 2.5 standard deviations above or below the mean were excluded from the analysis.

## Results and Discussion

The overall results of Experiment 2 are presented in the table below:

*Table 5. Results for Experiment 2*



A three-way repeated measures analysis of variance (ANOVA) comparing four conditions was conducted on the mean reading times for the different regions of interest and scores of tests within subjects were considered. RT data were collected at the critical regions, which were region 9 (dative clitic), region 12 (genitive NP), region 15 (dative NP) and the immediate following region as spill-over (region 16 – accusative NP). Other regions displayed statistically different scores, indicating some interesting facts about Romanian.

A significant difference ( $F(1, 39) = 11.220, p = .002$ ), similar to the first experiment, was encountered at region 6 (reflexive pronoun), with the reflexive pronoun in condition C taking significantly longer to read than the one in D. This region only occurred in conditions C and D, with indicative embedded clause. The same explanation as in Experiment 1 is available here.

At region 7, the verb *seem*, there was a significant difference ( $F(3, 117) = 13.617, p < .001$ ) between conditions A and C vs. B and D, respectively. The potential explanation is the same as in Experiment 1, that if the dative is a quirky subject, experiencer of the verb *seem*, then this is doubled by the dative clitic, as quirky subjects in Romanian are obligatorily doubled by dative clitics. In conditions A and C, there were higher RTs because the parser saw the raising verb *seem*. There is no dative clitic, and therefore the parser had to ‘realize’ that the dative in the matrix clause was fronted from the embedded clause, which may have caused a delay in interpretation (potentially during the integration phase). However, in Experiment 1, this was only a significant trend. The results here prove that indeed, for Romanian speakers, constructions involving dative fronting are more difficult to process than quirky constructions in which all elements of the dative chain are present and that Romanian speakers distinguish between the two. Therefore, this region may prove to be significant due to the spill-over effect from region 5 (the dative clitic in the matrix clause), which indicates whether the constructions involve some form of movement or not.

**Table 6.** Pairwise comparison at region 7

	Condition A	Condition B	Condition C	Condition D
Condition A		Mean diff = 47.920 $p = .000^*$	Mean diff = 29.233 $p = .019^{**}$	Mean diff = 59.879 $p < .001^*$
Condition B	Mean diff = - 47.920 $p < .001^*$		Mean diff. = - 18.688 $p = .046^{**}$	Mean diff = 11.958 $p = .091$
Condition C	Mean diff = - 29.233 $p = .019^{**}$	Mean diff. = 18.688 $p = .046^{**}$		Mean diff = 30.646 $p = .001^{***}$
Condition D	Mean diff = - 59.879 $p < .001^*$	Mean diff = - 11.958 $p = .091$	Mean diff = 30.646 $p = .001^{***}$	

\*  $p < .001$     \*\*  $p < .05$     \*\*\*  $p < .01$

Another statistically significant difference ( $F(3, 117) = 15.006, p < .001$ ) that confirms the results in Experiment 1 was found at region 8 (complementizer), the region containing the subjunctive vs. indicative complementizer. This effect was found because the subjunctive complementizer in conditions A and B, with subjunctive embedded clauses were processed significantly more slowly than their indicative counterparts, in conditions C and D, with indicative embedded clauses. Recall that in Experiment 1, there was only a significant trend. By means of testing more subjects, this difference is now significant and could be explained in the

same way as in the first experiment, namely by the fact that the parser reads indicative clauses more easily than subjunctive ones. The notion of frequency is in effect here, as indicative clauses appear to be used more frequently than the subjunctive clauses. At a first glance, indicative clauses are also preferred in constructions involving the verb *seem*. Further testing is necessary to confirm this hypothesis. An obvious possibility is that the choice of analysis is affected by frequency. Various studies have suggested that the processor initially favors frequent analyses over infrequent ones (Clifton, Frazier, and Connine, 1984; Fodor, 1978; amongst others). In this case, the processor adopts the most frequent construction.

**Table 7.** Pairwise comparison at region 8.

	Condition A	Condition B	Condition C	Condition D
Condition A		Mean diff = 32.151 $p = .006^*$	Mean diff = 59.865 $p < .001^{**}$	Mean diff = 60.019 $p < .001^{**}$
Condition B	Mean diff = - 32.151 $p = .006^*$		Mean diff. = 27.714 $p = .007^*$	Mean diff = 27.868 $p = .004^*$
Condition C	Mean diff = - 59.865 $p < .001^{**}$	Mean diff. = - 27.714 $p = .007^*$		Mean diff = .154 $p = .986$
Condition D	Mean diff = - 60.019 $p < .001^{**}$	Mean diff = - 27.868 $p = .004^*$	Mean diff =- .154 $p = .986$	

\* $p < .01$

\*\* $p < .001$

In this experiment, contrary to Experiment 1, there are significant differences ( $F(3, 117) = 9.419$ ,  $p < .001$ ) at region 9, the dative clitic. At this region, in conditions A and C the dative clitic is singular and in B and D it is plural. The curious fact is that there are longer RTs in A and B vs. C and D respectively. A potential explanation could be the spill-over effect from the previous region. If this is not the case, then, apparently, the parser prefers a dative clitic, singular or plural in an indicative context, following the indicative complementizer, than in a subjunctive context. In conditions A and C, the dative clitic has different functions than in B and D.

**Table 8.** Pairwise comparisons at region 9.

	Condition A	Condition B	Condition C	Condition D
Condition A		Mean diff = 4.367 $p = .727$	Mean diff = 42.472 $p < .001^*$	Mean diff = 40.648 $p = .001^{**}$
Condition B	Mean diff = - 4.367 $p = .727$		Mean diff. = 38.105 $p = .002^{**}$	Mean diff = 36.282 $p = .002^{**}$
Condition C	Mean diff = - 42.472 $p < .001^*$	Mean diff. = - 38.105 $p = .002^{**}$		Mean diff = - 1.823 $p = .820$
Condition D	Mean diff = - 40.648 $p = .001^{**}$	Mean diff = - 36.282 $p = .002^{**}$	Mean diff = 1.823 $p = .820$	

\*  $p < .001$       \*\*  $p < .01$

At region 16 (accusative NP), we also encounter significant differences ( $F(3, 117) = 13.338, p < .001$ ). This is the similar to the previous experiment, and this difference is caused by a spill-over effect from region 15, dative clitic. In this region, as expected, conditions B and D (with no clitic) are taking longer to read than A and C, respectively.

**Table 9.** Pairwise comparisons at region 16.

	Condition A	Condition B	Condition C	Condition D
Condition A		Mean diff = - 51.764 $p = .001^*$	Mean diff = 10.567 $p = .348$	Mean diff = - 60.313 $p < .001^{**}$
Condition B	Mean diff = 51.764 $p = .001^*$		Mean diff. = 62.330 $p = .000^{**}$	Mean diff = - 8.550 $p = .566$
Condition C	Mean diff = - 10.567 $p = .348$	Mean diff. = - 62.330 $p < .001^{**}$		Mean diff = - 70.880 $p < .001^{**}$
Condition D	Mean diff = 60.313 $p < .001^{**}$	Mean diff = 8.550 $p = .566$	Mean diff = - 70.880 $p < .001^{**}$	

\*  $p < .01$

\*\*  $p < .001$

This confirms the prediction that the parser would be surprised at seeing the dative NP in the embedded clause in conditions B and D. There is already a dative that can be identified as the

indirect object in the embedded clause (plural dative clitic in region 9), so the dative NP is potentially considered redundant. Also, there could be some explanation residing in the parser's memory load capacity (Gibson, 1998). Storage costs intervene in that in the dependency between two syntactic elements in the sentence, in our case the dative clitic and the dative NP, the first element is stored in memory before integrated with the latter. The integration cost comes with a delay in processing, and this could potentially explain the differences at the region following the dative NP. Seeing the dative NP indirect object plural, the parser has to 'match' it eventually with the doubling dative clitic in region 9.

At Region 17, there are no significant differences, the parser is recovered.

### ***Summary***

This second experiment was a follow-up of the first experiment. It was an improved version, as many of the shortcomings were repaired in Experiment 2. The aim of this experiment was, as in Experiment 1, to test whether or not the parser is aware of the double clitic dependencies in Romanian in constructions with verbs of the raising type, involving fronting of a CLLD-ed dative NP from the embedded clause to matrix clause and in constructions where there is a matrix dative experiencer quirky subject. The same predictions as in Experiment 1 were expected. The results are in accordance with other findings in language processing studies, bringing more evidence to the fact that the parser builds the sentence structure actively and incrementally.

## 5. General Discussion

The purpose of the experiments described in this chapter was to further investigate the parser's capacity and knowledge of the grammar, by examining dependencies between a dative lexical noun and a dative clitic doubling the noun (double clitic dependencies).

The current work studied double clitic-dependencies (of dative nouns) and dative fronting/movement out of ditransitive embedded clauses in the context of raising verbs that are able to take dative experiencers. The reason for choosing these constructions, as opposed to any other verbs (e.g., attitude or believe verbs) is that in the *seem* constructions the verb in the matrix clause is able to take a dative experiencer subject. The fronted constituent is a dative NP which originates as CLLD-ed element in the embedded ditransitive construction.

Double clitic dependencies (a dative noun doubled by a dative clitic) occurring in the structures tested differ from the filler-gap dependencies with respect to the ordering of elements (even though in Romanian the word-order is flexible). Also, in double clitic dependencies experimentally tested in this study (quirky subject dative clitic dependency and dative clitic dependencies in CLLD constructions), both elements (the NP and the clitic doubling it) are overt and clitic doubling is obligatory.

The results of the two experiments are comparable. Similarities and differences in RTs were found in the two experiments. Experiment 2 was better designed because it corrected all or most of the shortcomings of the first experiment.

The two experiments presented in this chapter were conducted with Romanian native speakers, using a self-paced reading paradigm. The findings of the experiments show that Romanian speakers are aware of and recognize double clitic dependencies and contexts in which these appear, based on a linguistic clue, the dative clitic. This is suggested by the experimental results,

which show significant differences at the region following the dative clitic in the matrix clause (e.g., region 7 – the verb *seem*). Related to this in both experiments, a preference was displayed for the constructions in which the dative clitic was present in the matrix clause, than for their clitic-missing counterpart.

The findings are in accordance with an interactive model of sentence processing, as the parser builds actively and incrementally the sentence structure and all relevant information is used immediately. The semantic information is also processed in parallel, word by word. The frequency element enters into discussion, as illustrated by the parser's preference for the indicative vs. subjunctive clauses as the parser prefers frequent constructions in a given language than less frequent ones.

Another interesting finding was at region 8, where the parser has a clear preference for indicative clauses vs. subjunctive clauses. Indicative clauses are complete clauses, with a complete T according to Chomsky's (2001, 2004, 2006) terms. They are used more frequently by Romanian speakers than subjunctive clauses. In general, subjunctive constructions are more difficult to use, are more restricted in grammar, are used less and less frequently and their eventual total loss in the grammar is a possibility<sup>55</sup>. According to MacDonald et al. (1994), frequency is a very important notion in language processing studies, and parsers generally favour frequent information rather than infrequent information. However, it is important to note here that this study has the disadvantage that the sentential stimuli being used are, in general, infrequent Romanian constructions, although they are grammatical. A question for further research would be to test more frequent constructions, such as control constructions or quirky subject constructions. Also, in further studies, contextual information may possibly ease the

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<sup>55</sup> In control constructions, this is not the case, as Romanian speakers use subjunctive embedded clause more frequently after control verbs.

reading of these ‘difficult’ Romanian sentences (MacDonald et al, 1994; Traxler and van Gompel, 2006).

In contrast to Experiment 1, in Experiment 2 we observed higher RTs at region 9, at the dative clitic in conditions A and B vs. C and D. This could be explained by the parser’s preference for a dative clitic following a subjunctive complementizer over an indicative complementizer. A difficulty encountered here was that the comparison was between a singular dative clitic, in A and C vs. a plural dative clitic in B and D. This was the best possible solution considering that if the clitic number was the same, the potential ambiguity described in Experiment 1 would affect the results. The number mismatch between the clitic doubling the experiencer in the matrix clause and the clitic doubling the indirect object solves the ambiguity.

Another point of interest for this study was at region 12, the genitive noun. As previously mentioned, the genitive and dative in Romanian have the same morphology. At this region, the genitive was implausible under a dative reading. The information on plausibility/implausibility is controversial in language processing research. According to serial parsing models, the parser responds to semantic information such as plausibility at a second stage of analyses. However, there are findings suggesting that sentences with initial implausible analyses produce more difficulty than plausible analyses, and they create a reverse ambiguity effect (Traxler and Pickering, 1996). In the current study, the implausible information is ignored at the initial stage and the parser moves on, actively searching for the plausible element. This can be seen due to the fact that at this region, there were no differences in RTs between the conditions. If we were to consider an account based solely on structure, at this stage the parser should be expecting another element (most likely an accusative NP) to complete the argument structure of the ditransitive verb. Then, there would be differences in RT between conditions at this region. A

potential topic for further study would be to compare a genitive with a dative at this region and observe whether plausibility/implausibility plays an important role in this case. Although there were no differences at this region, this is perhaps not as simple as it appears.

The fact that in Experiment 2 there are RT differences at regions 13 and 14 (modifiers of the genitive NP) for no apparent reason, could be that the parser keeps the (morphological) information active in the memory load, and it is looking for an element to complete the argument structure. It could be the case that the parser is surprised upon seeing the modifier. Perhaps reanalysis occurs and therefore it takes longer to process the information at these regions. However, these differences do not occur in the first experiment and so care must be taken in providing a proper interpretation.

As expected, differences did occur at the accusative NP region. These differences are a spill-over effect from the previous region, where the dative NP occurred only in conditions B and D. This difference was expected, because in all conditions the parser had already seen the dative clitic, an element that could take the role of indirect object in a double object construction, and is surprised to see the overt dative NP. The results at region 7 (*seem*) as a spill-over from region 5, and the information at the accusative NP, as a spill-over from region 15 (dative NP) proves to be useful in this case, as it illustrates the main difference and that the subjects were aware of which were raising constructions (low RTs) vs. non-raising constructions.

Another lesson learned and point to keep in mind for further research is represented by the comprehension questions after each sentence. A problem was discovered as the embedded clause after a verb such as *seem* does not have a truth value, therefore it was difficult to ask a yes/no question in those particular contexts.

## 6. Conclusions

In conclusion, the results of two self-paced reading experiments show that Romanian speakers are aware of the differences between constructions with fronting and those without fronting in their native language. The parser seems to build language structure actively and incrementally; thus, this data supports an interactive model of language processing, where information is used immediately as it becomes available. This research represents a new development in the language processing field, testing the double clitic dependencies in constructions with and without movement of dative NPs.

The results of the two experiments are in concordance with the syntactic analysis of clitic dependencies presented in this dissertation, particularly in Chapters III and IV. The experiments presented confirm the fact that dative clitics are fundamental elements in the grammar of the Romanian speakers. Dative clitics contribute to the processing and understanding of Romanian sentences in a way that is fundamental, a fact that confirms the formal analysis adopted in previous chapters, where clitics are the heads of (High and Low) Applicative Phrases, therefore important functional categories of two relevant Romanian constructions combined in the Experiments presented above, with dative clitics as experiencers of raising verbs and with dative clitics as Goals in ditransitive constructions.

## CHAPTER V

### CONCLUDING REMARKS

The goal of this dissertation was to give an overview of dative clitic dependencies in Romanian mainly in constructions with raising type verbs such as *seem*. Dative clitic experiencers as quirky subjects, as well as dative clitics in clitic left dislocation (CLLD) constructions were analyzed syntactically. Romanian speakers' awareness of constructions involving dative clitic dependencies was tested by means of a psycholinguistics experiment, which demonstrated that they possess the grammatical knowledge of biclausal constructions involving clitic dependencies such as obligatory clitic doubling of dative experiencers and of clitic left dislocated (CLLD-ed) elements.

This dissertation took a fresh look at raising constructions in Romanian with the view that some of its well known and some of its less known characteristics are interesting from a recent perspective in theoretical linguistics. I showed that Romanian displays standard raising out of infinitives (resembling all Romance languages), in addition to raising out of subjunctive embedded clauses and hyper-raising constructions (i.e., raising out of indicative clauses).

Particular attention was paid to the following characteristics, starting from ones that attracted considerable attention in earlier and current work in generative grammar: in raising constructions, all finite verbs in a derivation agree in phi-features with the nominative NP; in all constructions mentioned above, the nominative may surface not only in the matrix clause, but also in the complement clause, in its base-generated position, or in an intermediate position; dative clitics experiencers can occur in the matrix clause or in the embedded clause of a raising construction and this has no effect on the position of the nominative, nor on the agreement

between the nominative NP and the finite verb; raising constructions may contain only one dative (clitic) experiencer, which heads a High Applicative phrase.

To account for constructions in which the nominative NP stays in situ, in the embedded clause, I proposed that Long Distance Agree applies between the matrix verb and the nominative NP. I considered that Long Distance Agree is not subject to the Phase Impenetrability Condition, in contrast to the movement operation, which adheres to the above mentioned condition. Local Agree applies between the embedded verb and the nominative subject.

To account for situations in which the nominative NP is displaced to the subject position of the matrix clause, an A-movement operation was proposed. The subject moves to satisfy the EPP feature of matrix T. Checking of the EPP feature is optional in Romanian.

To account for nominative case valuation, I based my claim on locality conditions. I considered that both verbs are potential case assigners. However, I concluded that in cases where the nominative NP stays in situ, case is valued at the embedded level, whereas in constructions where the nominative raises to the matrix clause, case is valued at the matrix level, after movement has been completed.

In addition to analyzing constructions with raising across subjunctive and infinitive clauses, I showed that Romanian also resembles Brazilian Portuguese, and displays hyper-raising constructions, where the nominative can raise across an indicative complementizer.

The nominative subject in Romanian hyper-raising constructions may occupy the same positions as their subjunctive counterparts. As there are a limited number of verbs that can actually participate in hyper-raising constructions in Romanian, I concluded that it is the choice of the matrix verb that accounts for the availability of such constructions.

I proposed that dative clitic experiencers are quirky subjects that head a High Applicative phrase. The dative NP, if present, occupies the Specifier of the High Applicative Phrase positioned between TP and vP.

To account for intervention effects of dative experiencers upon nominatives, I proposed that matrix or embedded (clitic) experiencers do not block operations such as Move and Agree of nominatives. Matrix and an embedded dative clitic experiencers combined in the same raising sentence, more specifically the co-existence of two High Applicative phrases in the same construction, render ungrammatical results and constitute Experiencer Islands. I then noted exceptions to the rule that dative clitic experiencers must always be present, as with quantifiers, negations or generic dative NPs in post-verbal position, and I proposed that these elements do not contain in their structure High Applicative phrases.

In clitic dependencies such as the so-called CLLD constructions, the clitic heads a Low Applicative phrase and the CLLD-ed element is base-generated in the Topic position of a clause. This element can be displaced to the matrix clause, a phenomenon known as Long Distance CLLD.

The results of the experimental study presented in this thesis are in concordance with the syntactic analysis of clitic dependencies presented in Chapters III and IV and confirm that dative clitics are fundamental elements in the grammar of Romanian speakers. Dative clitics contribute to the processing and understanding of sentences in a way that is fundamental, confirming a formal analysis according to which clitics are the heads of (High and Low) Applicative phrases, therefore important functional categories.

The findings of the two experiments show that Romanian speakers are aware of and recognize the kind of double-clitic dependencies (e.g., quirky dative doubled by a clitic vs.

CLLD construction) and contexts in which these appear, based on a linguistic clue, namely the dative clitic. From a processing perspective, the results of the two experiments support the hypothesis that the Romanian parser seems to build actively and incrementally the language structure, supporting an interactive model of language processing, where the information is used immediately as it becomes available.

This research represents a new development in the language processing field, testing double clitic dependencies in constructions with and without movement of dative NPs.

## REFERENCES

- Alboiu, Gabriela. 2000a. 'Contrastive Focus and Sentence-Initial Operators in Romanian'. In G. van Herk (ed.), *Proceedings from the 1999 Annual Conference of the Canadian Linguistic Association*. 1-12. Ottawa: *Cahiers Linguistiques d'Ottawa*.
- Alboiu, Gabriela. 2000b. *The Features of Movement in Romanian*. Doctoral Dissertation. University of Manitoba.
- Alboiu, Gabriela. 2004. 'Shared Arguments in Control'. *Toronto Working Papers in Linguistics*. 22. 53-74.
- Alboiu, Gabriela. 2006. 'Are We in Agreement?'. In C. Boeckx (ed.), *Agreement Systems*. 13-39. John Benjamins: Amsterdam and Philadelphia.
- Alboiu, Gabriela. 2007. 'Moving Forward with Romanian Backward Control and Raising'. In S. Dubinsky and W. Davies (eds.), *New Horizons in the Analysis of Control and Raising*. Springer, SNLLT Series. 187-211.
- Alboiu, Gabriela. 2009. 'Null Expletives and Case: The View from Romance'. In P. Masullo, E. O'Rourke and C.-H. Huang (eds.), *Romance Linguistics 2007*. 1-19. John Benjamins: Amsterdam.
- Alboiu, Gabriela. 2010. '*A-probes, Case and (In)visibility*'. Ms. York University.
- Alexiadou, Artemis. 2001. *Functional Structure in Nominals: Nominalization, and Ergativity*. Amsterdam, John Benjamins.
- Alexiadou, Artemis and Elena Anagnostopoulou. 1999. 'Raising Without Infinitives and the Nature of Agreement'. *Proceedings of the 18<sup>th</sup> West Coast Conference on Formal Linguistics*. 14-26.

- Alexiadou, Artemis and Elena Anagnostopoulou. 2001. 'The Subject In-Situ Generalization and the role of Case in driving Computations'. *Linguistic Inquiry* 32. 193-231.
- Alexiadou, Artemis, Elena Anagnostopoulou, Gianina Iordachioaia and Mihaela Marchis. To appear. 'In support of Long Distance Agree'. In A. Alexiadou, G. Müller and T. Kiss (eds.), *Local Modeling of Non-local Dependencies*. Niemeyer.
- Alsina, Alex and Sam A. Mchombo. 1993. 'Object Asymmetries and the Chichewa Applicative Construction'. In S. A. Mchombo (ed.) *Theoretical Aspects of Bantu Grammar*. CSLI Publications: Stanford, CA. 17-45.
- Anagnostopoulou, Elena. 1994. 'On the Representation of Clitic Doubling in Modern Greek'. In L. Hellan and H. van Riemsdijk (eds.), *EUROTYP Working Papers, Theme Group Clitics. Clitic Doubling and Clitic Groups*. 1-66.
- Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: evidence from clitics*. Berlin: Mouton De Gruyter.
- Anagnostopoulou, Elena and Artemis Alexiadou. 2001. 'The Subject in Situ Generalization, and the Role of Case in driving Computations'. *Linguistic Inquiry*: 32:2.
- Aoun, Joseph. 1981. *The Formal Nature of Anaphoric Relations*. Doctoral Dissertation. MIT.
- Arnaudova, Olga. 2003. *Focus and Bulgarian Clause Structure*. Doctoral Dissertation. University of Ottawa.
- Ausín, Adolfo and Marcela Depiante. 2000. 'On the Syntax of parecer with and without Experiencer'. In Héctor Campos (ed.), *Hispanic Linguistics at the Turn of the Millennium*. 150-177. Somerville, Mass.: Cascadilla.
- Baker, Mark. 1988. 'Theta Theory and the Syntax of Applicatives in Chichewa'. *Natural Language and Linguistic Theory* 6. 353-389.

- Baker, Mark. 1996. 'On the Structural Position of Themes and Goals'. In J. Rooryck and L. Zaring (eds.), *Phrase Structure and the Lexicon*. 7–34. Dordrecht: Kluwer.
- Baker, Mark. 2008. *The Syntax of Agreement and Concord*. Cambridge University Press.
- Belletti, Adriana. 2005. 'Extended doubling and the VP periphery'. *Probus* 17 (1). 1-35.
- Belletti, Adriana and Luigi Rizzi. 1988. 'Psych-verbs and Theta Theory'. In *Natural Language and Linguistic Theory* 6. 291–352.
- Bever, Thomas. 1970. 'The cognitive basis for linguistic structures'. In J.R. Hayes (ed.), *Cognition and the Development of Language*. 279-352. New York, NY.
- Bever, Thomas and Brian McElree. 1988. 'Empty categories access their antecedent during comprehension'. *Linguistic Inquiry* 19. 35-43.
- Bhatt, Rajesh. 2005. 'Long Distance Agreement in Hindi-Urdu.' *Natural Language and Linguistics Theory* 23. 757-807.
- Bobaljik, Johnatan and Suzi Wurmbrandt. 2005. 'The Domain of Agreement.' *Natural Language and Linguistics Theory* 23. 809-865.
- Boeckx, Cedric. 1999. Conflicting C-command Requirements. *Studia Linguistica* 53. 227-250.
- Boeckx, Cedric. 2000. Quirky Agreement. *Studia Linguistica* 54. 451-480.
- Boeckx, Cedric. 2003. *Islands and Chains*. Amsterdam: John Benjamins.
- Boeckx, Cedric. 2009. 'On Long-Distance Agree.' *Iberia* 1. 1-32.
- Boeckx, Cedric and Norbert Hornstein. 2004. 'Movement Under Control'. *Linguistic Inquiry* 35. 431-452.
- Borer, Hagit. 1981. 'On the definition of variables'. *Journal of Linguistics Research*, 1.3. University of Indiana Linguistics Club, Bloomington.
- Bošković, Željko. 2007a. 'On the locality and motivation of Move and Agree: An even more minimal theory'. *Linguistic Inquiry* 38. 589-644.

- Bošković, Željko. 2007b. 'Agree, Phases, and Intervention Effects'. *Linguistic Analysis* 33. 54-96.
- Bresnan, Joan and Jonni M. Kanerva. 1989. 'Locative Inversion in Chichewa: A Case Study of Factorization in Grammar'. *Linguistic Inquiry* 20(1). 1-50.
- Carstens, Vicki. 2000. 'Concord in Minimalist Syntax'. *Linguistic Inquiry* 31. 319-355.
- Carstens, Vicki. 2001. 'Multiple Agreement and Case Deletion: Against Phi (In)completeness'. *Syntax* 4. 147- 163.
- Cecchetto, Carlo. 1999. 'A Comparative Analysis of Left and Right Dislocation in Romance'. *Studia Linguistica* 53 (1).
- Cecchetto, Carlo. 2001. 'Syntactic or Semantic Reconstruction? Evidence from Pseudoclefts and Clitic Left Dislocation'. In C. Cecchetto, G. Chierchia and M. T. Guasti (eds.), *Semantic Interfaces*. 90-144. CSLI publications: Stanford.
- Chomsky, Noam. 1977. 'On Wh-movement'. In P. Culicover, T. Wasow and A. Akmajian (eds.), *Formal Syntax*. Academic Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000. 'Minimalist Inquiries: The framework'. In R. Martin, D. Michaels and J. Uriagereka (eds.), *Step by Step: Essays on Minimalist Syntax in Honour of Howard Lasnik*. 89-147. Cambridge, MA: The MIT Press.
- Chomsky, Noam. 2001. 'Derivation by Phase'. In M. Kenstowicz (ed.), *Ken Hale: A Life in Language*. 1-52. Cambridge, MA. MIT Press.
- Chomsky, Noam. 2004. 'Beyond Explanatory Adequacy'. In A. Belletti (ed.), *Structures and Beyond: The Cartography of Syntactic Structures*, vol. 3. 104-132. Oxford. Oxford University Press (first published in 2001).

- Chomsky, Noam. 2006. 'On Phases'. In R. Freidin, C. Otero and M.-L. Zubizarreta (eds.), *Foundational Issues in Linguistic Theory*. Cambridge, MA. MIT Press.
- Chomsky, Noam and Howard Lasnik. 1993. 'Principles and Parameters Theory.' In J. Jacobs, A.S. von Stechow, W. Sternefeld and T. Vennemann (eds.), *Syntax: An International Handbook of Contemporary Research*. De Gruyter: Berlin. 506-569.
- Cinque, Guglielmo. 1977. 'The Movement Nature of Left-Dislocation'. *Linguistic Inquiry* 8 (2). 397-412.
- Cinque, Guglielmo. 1990. *Types of A'-Dependencies*. Cambridge, MA: MIT Press.
- Cinque, Guglielmo and Luigi Rizzi. 2008. 'The Cartography of Syntactic Structures'. *StIL* 2.
- Clifton, Charles, Lyn Frazier and C. Connine. 1984. 'Lexical expectations in sentence comprehension'. *Journal of Verbal Learning and Verbal Behavior* 23. 696-708.
- Cornilescu, Alexandra. 1997. 'Some Notes on the Syntax of the Subject'. *Revue roumaine de linguistique* XLII. 101-147. Bucharest: Editura Academiei Române.
- Cornilescu, Alexandra. 2000. 'The Double Subject Construction in Romanian'. In V. Motapanyane (ed.), *Comparative Studies in Romanian Syntax*. Elsevier, North-Holland.
- Cuervo, María Cristina. 1999. 'Quirky but not eccentric: Dative Subjects in Spanish'. *MIT Working Papers in Linguistics* 34. 213-227.
- Cuervo, María Cristina. 2003a. 'Control-vs-Raising Theory of Dative Experiencers'. In A.T. Pérez-Leroux and Y. Roberge (eds.), *Romance Linguistics*. 111-130. Amsterdam: Benjamins.
- Cuervo, María Cristina. 2003b. *Datives at Large*. Doctoral Dissertation. MIT.
- Davies, William D. and Stanley Dubinsky. 2004. *The Grammar of Raising and Control*. Oxford: Blackwell.

- Demonte, Violeta. 1995. 'Dative alternation in Spanish'. *Probus* 7. 5-30.
- Diaconescu, Constanța Rodica. 2004. *Romanian Applicative Constructions*. Doctoral Dissertation. University of Ottawa.
- Diaconescu, Constanța Rodica and María Luisa Rivero. 2007. 'An Applicative analysis of Double Object Constructions in Romanian'. *Probus* 19: 2. 171-195.
- Dobrovie-Sorin, Carmen. 1990. 'Clitic doubling, wh-movement and quantification in Romanian'. *Linguistic Inquiry* 21. 351-397.
- Dobrovie-Sorin, Carmen. 1994. *The Syntax of Romanian: Comparative Studies in Romance*. Berlin: Mouton de Gruyter.
- Dobrovie-Sorin, Carmen. 2001. 'Head-to-Head Merge in Balkan Subjunctives and Locality'. In M. L. Rivero and Angela Ralli (eds.), *Comparative Syntax of Balkan Languages*. 44-73. New York: Oxford University Press.
- Duarte, M. Eugênia. 2004. 'On the embedding of a syntactic change'. *Language Variation in Europe, Papers from ICLaVE 2*. Uppsala: Universitetstryckeriet. 145-155.
- Dumitrescu, Domnița and Pascual Masullo. 1996. 'Romanian and the Non-Nominative Subject Parameter'. In C. Parodi, C. Quicoli, M. Saltarelli and M. L. Zubizarreta (eds.), *Aspects of Romance Linguistics*. 213-226. Georgetown University Press. Washington.
- Eythórsson, Thórhallur and Jóhanna Barðdal. 2005. 'Oblique subjects: a common Germanic inheritance'. *Language* 81 (4). 824-881.
- Farkas, Donka. 1982. *Intensionality and Romance subjunctive relatives*. Indiana University Linguistics Club, Bloomington, Indiana.

- Featherston, Samuel, Matthias Gross, Thomas Münte and Harald Chlasen. 2000. 'Brain Potential in the Processing of Complex Sentences: an ERP study of control and raising constructions'. *Journal of Psycholinguistic Research* 29. 141-154.
- Fernández Soriano, Olga. 1999a. 'Two Types of Impersonal Sentences in Spanish: Locative and Dative Subjects'. *Syntax* 2 (2). 101-140.
- Fernández Soriano, Olga. 1999b. 'Datives in Constructions with Unaccusative SE'. *Catalan Working Papers in Linguistics* 7. 89-105.
- Ferreira, Fernanda and Charles Clifton. 1986. 'The independence of syntactic processing'. *Journal of Memory and Language* 25. 348-368.
- Ferreira, Marcelo. 2004. 'Hyperraising and Null Subjects in Brazilian Portuguese'. *MIT Working Papers in Linguistics 47: Collected Papers on Romance Syntax*. 57-85.
- Ferreira, Marcelo. 2009. 'Null Subjects and Finite Control in Brazilian Portuguese'. In J. Nunes (ed.), *Minimalist Essays on Brazilian Portuguese Syntax*. Amsterdam and Philadelphia: John Benjamins. 93-120.
- Fodor, Janet. 1978. Parsing strategies and constraints on transformations. *Linguistic Inquiry* 9. 427-473.
- Fodor, Janet. 1983. *The modularity of mind*. Cambridge, MA: Cambridge University Press.
- Frazier, Lyn. 1979. *On comprehending sentences: Syntactic parsing strategies*. Ph.D. Dissertation. Indiana University
- Frazier, Lyn. 1987. Sentence processing: A tutorial review. In M. Coltheart (ed.), *Attention and performance XII: The psychology of reading*. 559-586.
- Friederici, Angela. 2004. 'Processing local transitions versus long-distance syntactic hierarchies'. *Trends in Cognitive Sciences*, 8 (6). 245-247.

- Geber, Dana. 2005. Characteristics of Romanian Raising Constructions. *Comprehensive Exam in Syntax*.
- Gibson, Edward. 1998. 'Linguistic complexity: Locality of syntactic dependencies'. *Cognition* 68. 1-76.
- Gibson, Edward and Neil Pearlmutter. 2000. 'Distinguishing serial and parallel parsing'. *Journal of Psycholinguistic Research* 29. 231-240.
- Gilboy, Elizabeth, Josep-Maria Sopena, Charles Clifton and Lyn Frazier. 1995. 'Argument structure and association preferences in Spanish and English complex NPs'. *Cognition*. 54. 131- 167.
- Grodzinsky, Yosef and Angela Friederici. 2006. 'Neuroimaging of syntax and syntactic processing'. *Current Opinion in Neurobiology* 16. 240–246.
- Grohmann, Kleanthes. 1997. 'On Left Dislocation'. In W. Abraham and K. Grohmann (eds.), *Groninger Arbeiten in germanistischer Linguistik* 40. Rijksuniversiteit Groningen: Germanistisch Instituut. 1-33.
- Grosu, Alex and Julia Horvath. 1984. *The GB Theory and Raising in Rumanian*. *Linguistic Inquiry* 15. 348-353.
- Guțu Romalo, Valeria. 2005. *Gramatica Limbii Române*. Editura Academiei Române. Vol. 1: Cuvântul; Vol. 2: Enunțul.
- Hale, Ken and Samuel J. Keyser. 1993. 'On Argument Structure and the Lexical Expression of Syntactic Relations'. In K. Hale and S. J. Keyser (eds.), *The View from Building 20*. Cambridge, MA: MIT Press.

- Hill, Virginia and Liliane Tasmowski. 2008. 'Romanian Clitic Doubling: a view from pragmatics/semantics and diachrony'. In D. Kalluli and L. Tasmowski (eds.), *Clitic Doubling in the Languages of the Balkan*. 133 - 163. Amsterdam: John Benjamins.
- Hiraiwa, Ken. 2001. 'Multiple Agree and the Defective Intervention Constraint in Japanese'. *MIT Working Papers in Linguistics 40*. 67-80.
- Hiraiwa, Ken. 2005. *Dimensions of symmetry in syntax. Agreement and clausal architecture*. Doctoral Dissertation. MIT.
- Hirschbühler, Paul. 1974. 'La dislocation à Gauche comme construction basique en Français.' In C. Rohrer and N. Ruwet (eds.), *Actes du Colloque Franco-Allemand de Grammaire Transformationelle*. Max Niemeyer Verlag: Tübingen.
- Hirschbühler, Paul. 1975. 'On the source of Lefthand NPs in French.' *Linguistic Inquiry 6*. 155-165.
- Holmberg Anders and Thorbjörg Hróarsdóttir. 2004. 'Agreement and Movement in Icelandic Raising Constructions'. *Lingua 114*. 651-673.
- Hornstein, Norbert. 1999. 'Movement and Control'. *Linguistic Inquiry 30*. 69-96.
- Iatridou, Sabine. 1993. 'On Nominative Case Assignment and a Few Related Things'. *MIT Working Papers in Linguistics 19*. 175-198.
- Iatridou, Sabine. 1995. 'Clitics and Islands Effects'. *Penn Working Papers in Linguistics 2*. 11-30.
- Isac, Daniela and Edit Jakab. 2004. Mood and Force Features in the Languages of the Balkans. In O. M. Tomic (ed.), *Balkan Syntax and Semantics*. 315-339. John Benjamins: Amsterdam-Philadelphia.
- Jaeggli, Osvaldo. 1982. *Topics in Romance Syntax*. Dordrecht: Foris.

- Just, Marcel A. and Carpenter, Patricia A. 1992. 'A capacity theory of comprehension: Individual differences in working memory'. *Psychological Review* 99. 122-149.
- Kayne, Richard. 1975. *French syntax: the transformational cycle*. Cambridge, MA. MIT Press.
- Kayne, Richard, 1989. 'Null Subjects and Clitic Climbing'. In O. Jaeggli and K. Safir (eds.), *The Null Subject Parameter*. Reidel: Dordrecht. 239-261.
- Kayne, Richard. 1990. 'Romance Clitics and PRO'. In J. Carter et al. (eds.), *Proceedings of NorthEast Linguistic Society (NELS) 20*. Vol 2. University of Massachusetts, Amherst. 255-302.
- Kayne, Richard. 2000. 'On the Left Edge in UG. A Reply to McCloskey'. *Syntax* 3. 44-51.
- Kempchinsky, Paula. 1987. 'The Subjunctive Disjoint Reference Effect'. In C. Neidle and R. Nuñez-Cedeño (eds.), *Studies in Romance Languages*. 123-140. Dordrecht: Foris.
- Kratzer, Angelika. 1996. 'Severing the External Argument from its Verb'. In J. Rooryck and L. Zaring (eds.), *Phrase Structure and the lexicon*. 109–138. Dordrecht: Kluwer.
- Landau, Idan. 2000. *Elements of Control: Structure and Meaning in Infinitival Constructions*. *Studies in Natural Languages and Linguistic Theory*. Kluwer Academic Publishers. Dordrecht.
- Landau, Idan. 2003. 'Movement Out of Control'. *Linguistic Inquiry*, 34, 471-499.
- Landau, Idan. 2004. 'The Scale of Finiteness and the Calculus of Control'. *Natural Language and Linguistic Theory* 22. 811-877.
- Leonetti, Manuel. 2008. 'Specificity in Clitic Doubling and Differential Object Marking'. *Probus* 20. 35-69.
- Lewis, Richard. 2000. 'Falsifying serial and parallel parsing models: Empirical conundrums and an overlooked paradigm'. *Journal of Psycholinguistic Research* 29. 241-248.

- MacDonald, Maryellen, Neil Pearlmutter and Marc Seidenberg. 1994. 'The lexical nature of syntactic ambiguity resolution'. *Psychological Review* 101. 676-703.
- Manzini, Rita. 2009. 'PRO, pro and NP-trace (raising) are interpretations'. Ms. University of Florence.
- Marantz, Alec. 1993. 'Implications of Asymmetries in Double Object Constructions'. In Sam Mchombo (ed.), *Theoretical Aspects of Bantu Grammar*. 113–150. Stanford, CA: CSLI Publications.
- Martins, Ana Maria and Jairo Nunes. 2005. *Raising Issues in Portuguese*. *Journal of Portuguese Linguistics* 4. 53-77.
- Martins, Ana Maria and Jairo Nunes. 2009. 'Syntactic change as chain reaction: The emergence of hyper-raising in Brazilian Portuguese'. In P. Crisma and G. Longobardi (eds.), *Historical Syntax and Linguistic Theory*. Oxford University Press. 144-158.
- Marušič, Franc and Rok Žaucer. 2004. 'A Reanalysis of the feel-like Dative-Reflexive Construction in Slovenian'. In O. Arnaudova et al. (eds.), *Formal Approaches to Slavic Linguistics (FASL) 12* (The Ottawa Meeting, 2003). Ann Arbor: Michigan Slavic Publications. 293-312.
- Marušič, Franc and Rok Žaucer. 2006. 'On the Intensional FEEL-LIKE Construction in Slovenian: A Case of a phonologically null verb'. *Natural Language and Linguistics Theory* 24. 1093-1159.
- Masullo, Pascual. 1992. *Incorporation and Case Theory in Spanish: A Crosslinguistic perspective*. Doctoral Dissertation. University of Washington.
- Masullo, Pascual. 1993. 'Two types of Quirky Subjects: Spanish versus Icelandic'. *Proceedings of NELS* 23. 303-317.

- Mathieu, Eric. 'Quirky Subjects in Old French'. *Studia Linguistica* 60. 282-312.
- McGinnis, Martha. 2001. 'Variation in the Phase Structure of Applicatives'. In J. Rooryck and P. Pica (eds.), *Linguistic Variation Yearbook*. 105-146. Amsterdam: John Benjamins.
- McGinnis, Martha. 2004. Lethal Ambiguity. *Linguistic Inquiry* 35. 47-95.
- Monachesi, Paola. 1998. 'The Morphosyntax of Romanian Cliticization'. In P. Coppen, H. van Halteren and L. Teunissen (eds.), *Proceedings of Computational Linguistics in The Netherlands 1997*. Rodopi. Amsterdam-Atlanta. 99-118.
- Monachesi, Paola. 2000. 'Clitic Placement in the Romanian Verbal Complex'. In B. Gerlach and J. Grijzenhout (eds.), *Clitics in phonology, morphology, and syntax*. Linguistik Aktuell. John Benjamins: Amsterdam.
- Moore, John and David M. Perlmutter. 2000. 'What does it take to be a dative subject'. *Natural Language and Linguistic Theory* 18. 373-416.
- Motapanyane, Virginia. 1995. *Theoretical Implications of Complementation in Romanian*. Padova: Unipress.
- Nicol, Janet and L. Osterhout. 1988. Reactivating antecedents of empty categories during parsing. Unpublished.
- Nicol, Janet. 1988. *Coreference processing during sentence comprehension*. Doctoral Dissertation MIT.
- Nicol, Janet and David Swinney. 1989. 'The Role of Structure in Coreference Assignment During Sentence Comprehension'. *Journal of Psycholinguistic Research* 18. 5-19.
- Nunes, Jairo. 2007. 'A-over-A, inherent Case, and relativized probing'. Paper presented at the Thirtieth Annual Colloquium of Generative Linguistics in the Old World (GLOW XXX), University of Tromsø

- Nunes, Jairo. 2008. 'Inherent Case as a licensing condition for A-Movement: The case of hyper-raising constructions in Brazilian Portuguese'. *Journal of Portuguese Linguistics* 7. 83-108.
- Ortmann, Alöbert and Alexandra Popescu. 2000. 'Haplology involving morphologically bound and free elements: evidence from Romanian'. In *Yearbook of Morphology* 2000. 43-70.
- Park, Jong-Un and Myung-Kwan Park. 2004. 'Intervention Effects in Experiencer Constructions and Their Implications for the Theory of Move and Agree.' *Studies in Generative Grammar* 14 (2). 199-224.
- Pesetsky, David and Esther Torrego. 2001. 'T-to-C movement: Causes and Consequences'. In M. Kenstowicz (ed.), *Ken Hale: A Life in Language*. 355-426. Cambridge, MA: MIT Press.
- Pesetsky, David and Esther Torrego. 2004. 'Tense, Case, and the Nature of Syntactic Categories'. In J. Gueron and J. Lecarme (eds.), *The Syntax of Time*. Cambridge, MA: MIT Press.
- Pesetsky, David and Esther Torrego. 2007. The Syntax of Valuation and Interpretability of Features. In S. Karimi, V. Samiian and W. Wilkins (eds.), *Phrasal and Clausal Architecture: Syntactic Derivation and Interpretation*. Amsterdam: John Benjamins.
- Philippaki-Warbuton, Irene. 1977. 'Modern Greek clitic pronouns and the 'surface structure constraints' hypothesis.' *Journal of Linguistics* 13. 259-281.
- Philippaki-Warbuton, Irene. 1987. 'The theory of empty categories and the *pro*-drop parameter in Modern Greek'. *Journal of Linguistics* 23. 289-318.

- Philippaki-Warbuton, Irene, Spyridoula Varlokosta, Michalis Georgiafentis and George Kotzoglou. 2004. 'Moving from theta-positions: pronominal clitic doubling in Greek'. *Lingua* 114 (8). 963-989.
- Pickering, Martin and Roger van Gompel. 2006. 'Syntactic Parsing'. In: M.J. Traxler and M.A. Gernsbacher (eds.), *The handbook of psycholinguistics*. 455-503. San Diego CA: Elsevier.
- Pîrvulescu, Mihaela. 2009. 'Agreement Paradigms across Moods and Tenses: the Case of Romanian Subjunctive and Imperative.' *Canadian Journal of Linguistics* 54 (1). 137-156.
- Polinsky, Maria and Eric Potsdam. 2006. *Expanding the Scope of Control and Raising*. *Syntax* 9. 171-192.
- Popescu, Alexandra. 2000. 'The Morphophonology of the Romanian Clitic Sequence'. *Lingua* 110 (10). 773-799.
- Potsdam, Eric and Maria Polinsky. In Press. *Backward Raising*. *Syntax*.
- Preminger, Omer. 2008. '(Im)perfect Domains: Yet another theory of syntactic movement'. In C. B. Chang and H. J. Haynie (eds.), *Proceedings of the 26<sup>th</sup> West Coast Conference on Formal Linguistics (WCCFL 26)*. 402-410. Somerville, MA: Cascadilla Press.
- Preminger, Omer. 2009. 'Long Distance Agreement without Probe-Goal relations'. In M. T. Putnam (ed.), *Towards a purely derivational syntax: Survive-minimalism*. 41-56. John Benjamins: Amsterdam.
- Pylkkänen, Liina. 2002. *Introducing arguments*. Doctoral Dissertation. MIT.
- Pylkkänen, Liina. 2008. *Introducing Arguments*. Cambridge, MA: MIT Press.

- Rayner, Keith, Marcia Carlson and Lyn Frazier. 1983. The interaction of syntax and semantics during sentence processing: Eye movements in the analysis of semantically biased sentences. *Journal of Verbal Learning and Verbal Behavior* 22. 358-374.
- Rivero, María Luisa. 1980. 'On left-dislocation and topicalization in Spanish'. *Linguistic Inquiry* 11. 363-394.
- Rivero, María Luisa. 1986. 'Parameters in the Typology of Clitics in Romance and Old Spanish'. *Language* 62(4). 774-807.
- Rivero, María Luisa. 1989. *Barriers and Rumanian*. In C. Kirschner and J. DeCesaris (eds.), *Studies in Romance Linguistics*. 289-312. Amsterdam: Benjamins.
- Rivero, María Luisa. 1991. *Exceptional Case Marking effects in Rumanian Subjunctive Complements*. In D. Warner and D.A. Kibbee (eds.), *New Analyses in Romance Languages*. 273-298. Amsterdam: Benjamins.
- Rivero, María Luisa. 1994. 'Clause Structure and V-Movement in the Languages of the Balkans'. *Natural Language and Linguistic Theory* 12. 63-120.
- Rivero, María Luisa. 2003. 'Reflexive Clitic Constructions with Datives: Syntax and Semantics'. In *Formal Approaches to Slavic Linguistics (FASL)* 11. *The Amherst Meeting 2002*. 469-494. Michigan Slavic Publications.
- Rivero, María Luisa. 2004a. 'Datives and the Non-Active Voice / Reflexive Clitics in Balkan Languages'. In O. Miseska-Tomic (ed.), *Balkan Syntax and Semantics*. Series *Linguistik Aktuell*. Amsterdam: John Benjamins. 237-267.
- Rivero, María Luisa. 2004b. 'Spanish Quirky Subjects, Person Restrictions and the Person-Case Constraint'. *Linguistic Inquiry* 35 (3). 494-502.

- Rivero, María Luisa. 2009. 'A Look at High Applicatives in Romanian: Dative Experiencers'. *Bucharest Working Papers in Linguistics XI (1)*. 21-34.
- Rivero, María Luisa and Constanta Rodica Diaconescu. 2009. 'A Diachronic View of Psychological Verbs with Dative Experiencers in Spanish and Romanian.' In M. Dufresne et al. (eds.), *Historical Linguistics 2007*. 149-160. Amsterdam:Benjamins.
- Rivero, María Luisa and Dana Geber. 2003. 'Quirky Subjects and Person Restrictions in Romance: Rumanian and Spanish'. *Cahiers Linguistiques d'Ottawa 31*. 20-53.
- Rivero, María Luisa and Dana Geber. 2004. *Raising in Rumanian: Move and Agree*. Paper presented at the Linguistics Symposium of Romance Languages (LSRL) 34. Salt Lake City, Utah. March, 2004.
- Rivero, María Luisa and Dana Geber. 2007. *Experiencer Islands and Raising in Romanian*. Ms, University of Ottawa.
- Rivero, María Luisa and Angela Ralli. 2001. *Comparative Syntax of Balkan Languages*. New York: Oxford University Press.
- Rizzi, Luigi. 1997. 'The Fine Structure of the Left Periphery.' In L. Haegeman (ed.), *Elements of Grammar*. Dordrecht: Kluwer.
- Rizzi, Luigi. 2002. Locality and Left Periphery. In A. Beletti (ed.), *Structures and Beyond. The Cartography of Syntactic Structure Vol 3*. OUP.
- Roberge, Yves. 1990. *The Syntactic Recoverability of Null Arguments*. McGill-Queen's University Press. Montréal.
- Rodrigues, Cilene. 2002. 'Morphology and null subjects in Brazilian Portuguese'. In D. Lightfoot (ed.), *Syntactic Effects of Morphological Change*. Oxford & New York: Oxford University Press. 160-178.

- Rodrigues, Cilene. 2004. *Impoverished Morphology and A-movement out of Case Domains*.  
 Doctoral dissertation. University of Maryland.
- Roussou, Anna. 2001. *Control and Raising in and out of Subjunctive Complements*. In M.L. Rivero and A. Ralli (eds.), *Comparative Syntax of Balkan Languages*. 74-103. New York: Oxford University Press.
- Sauerland, Uli. 2003. 'Intermediate Adjunction with A-movement'. *Linguistic Inquiry* 34. 308-314.
- Sigurðsson, Halldór. 1996. 'Icelandic Finite Verb Agreement'. *Working Papers in Scandinavian Syntax* 57. 1-46.
- Sigurðsson, Halldór. 2002. 'To be an oblique subject: Russian vs. Icelandic'. *Natural Language and Linguistic Theory* 20. 691-724.
- Sigurðsson, Halldór and Anders Holmberg. 2008. 'Icelandic Dative Intervention: Person and Number are Separate Probes'. In R. d'Alessandro, G.H. Hrafnbjargarson, S. Fischer (eds.), *Agreement Restrictions*. Berlin: Mouton de Gruyter. 251-280.
- Sitaridou, Ioanna. 2002. *The Synchrony and Diachrony of Romance Infinitives with Nominative Subjects*. Doctoral Dissertation. University of Manchester, UK.
- Slavkov, Nikolai. 2007. 'Clitics and Argument Position: Evidence for the Double Object Construction in Bulgarian'. In P. Kosta and L. Schürcks (eds.), *Linguistic Investigations into Formal Description of Slavic Languages: Contributions of the Sixth European Conference (FDSL 2005)*. 333-343. Frankfurt am Main: Peter Lang.
- Soames, Scott and David Perlmutter. 1979. *Syntactic Argumentation and the Structure of English*. Berkeley: University of California Press.

- Sportiche, Dominique. 1989. 'Le Mouvement Syntaxique: Contraintes et Parametres'. *Langages* 95. 35-80.
- Sportiche, Dominique. 1993. 'Clitic Constructions'. In J. Rooryck and L. Zaring (eds.), *Phrase Structure and the Lexicon*. Dordrecht: Kluwer.
- Stepanov, Arthur. 2001. *Cyclic Domains in Syntactic Theory*. Doctoral Dissertation. University of Connecticut.
- Suñer, Margarita. 1988. 'The role of agreement in clitic-doubled constructions'. *Natural Language and Linguistic Theory* 6. 391-434.
- Swinney David, M. Ford, U. Frauenfelder and J. Bresnan. 1988. 'On the temporal course of gap-filling and antecedent assignment during sentence comprehension'. Unpublished manuscript.
- Szabolcsi, Anna. 2007. 'Hidden in Plain Sight: Overt Subjects in Infinitival Control and Raising Complements'. *lingBuzz/000445*. May, 2007.
- Szabolcsi, Anna. 2009. 'Overt Nominative Subjects in Infinitival Complements Cross-linguistically: data, diagnostics, and preliminary analyses'. *NYU Working Papers in Linguistics*, Vol. 2, Papers in Syntax.
- Takahashi, Daiko. 1994. *Minimality of Movement*. Doctoral Dissertation. University of Connecticut.
- Takahashi, Daiko. 2000. 'Move-F and Raising of Lexical and Empty DPs'. In R. Martin, D. Michaels and J. Uriagereka (eds.), *Step by Step: Essays on Minimalist Syntax in Honour of Howard Lasnik*. 297-317. Cambridge, MA: The MIT Press.
- Tannenhaus, Michael, G. Carlson and Marc Seidenberg. 1985. 'Do listeners compute linguistic representations?' In D. Dowty, L. Karttunen and A. Zwicky (eds.), *Natural Language*

- Parsing: Psychological, Computational, and Theoretical Perspectives*. 359-408.  
Cambridge: Cambridge University Press.
- Terzi, Arhonto. 1992. *PRO in Finite Clauses: A Study of the Inflectional Heads of Balkan Languages*. Ph.D. Dissertation. CUNY Graduate Center.
- Torrego, Esther. 1996. 'Experiencer and Raising Verbs'. In R. Freidin (ed.), *Current Issues in Comparative Grammar*. Dordrecht: Kluwer. 101-120.
- Torrego, Esther. 1998. *The dependencies of objects*. Cambridge, MA. MIT Press.
- Traxler, Matthew and Martin Pickering. 1996. 'Plausibility and the processing of unbounded dependencies: An eye-tracking study'. *Journal of Memory and Language* 35. 454-475.
- Traxler, Matthew, Martin Pickering and Charles Clifton. 1998. 'Adjunct attachment is not a form of lexical ambiguity resolution'. *Journal of Memory and Language* 39. 558-592.
- Trueswell, John. 1996. 'The role of lexical frequency in syntactic ambiguity resolution'. *Journal of Memory and Language* 35. 566-585.
- Trueswell, John and Michael Tannenhaus. 1994. 'Toward a lexicalist framework for constraint-based syntactic ambiguity resolution'. In C. Clifton, L. Frazier and K. Rayner (eds.), *Perspectives in Sentence Processing*. Lawrence Erlbaum Assoc.: Hillsdale, NJ. 155-179.
- Trueswell, John, Michael Tannenhaus and Susan Garnsey. 1994. 'Semantic influences on parsing: Use of thematic role information in syntactic ambiguity resolution'. *Journal of Memory and Language* 33. 285-318.
- Tsakali, Vina. 2006. *The Syntax and Acquisition of Pronominal Clitics: A Crosslinguistic Study with Special Reference to Modern Greek*. Doctoral Dissertation. UCL.
- Uriagereka, Juan. 1995. 'Determiner Clitic Placement'. In R. Freidin (ed.), *Current Issues in Comparative Grammar*. Dordrecht: Kluwer.

- Van Gompel, Roger and Martin Pickering. In press. 'Syntactic Parsing'. To appear in G. Gaskell (ed.), *The Oxford handbook of psycholinguistics*. Oxford: Oxford University Press.
- Van Gompel, Roger, Martin Pickering, Jaime Pearson and Simon Liversedge. 2005. 'Evidence against competition during syntactic ambiguity resolution'. *Journal of Memory and Language*, 52. 284-307.
- Van Gompel, Roger, Martin Pickering and Matthew Traxler. 2001. 'Reanalysis in sentence processing: Evidence against current constraint-based and two-stage models'. *Journal of Memory and Language* 45. 225-258.