

# Romance Languages and Linguistic Theory 2005

EDITED BY

Sergio Baauw

Frank Drijkoningen

Manuela Pinto

ROMANCE LANGUAGES AND LINGUISTIC THEORY 2005

AMSTERDAM STUDIES IN THE THEORY AND  
HISTORY OF LINGUISTIC SCIENCE

General Editor

E.F.K. KOERNER

(Zentrum für Allgemeine Sprachwissenschaft, Typologie  
und Universalienforschung, Berlin)

Series IV – CURRENT ISSUES IN LINGUISTIC THEORY

*Advisory Editorial Board*

Lyle Campbell (Salt Lake City); Sheila Embleton (Toronto)  
Brian D. Joseph (Columbus, Ohio); John E. Joseph (Edinburgh)  
Manfred Krifka (Berlin); E. Wyn Roberts (Vancouver, B.C.)  
Joseph C. Salmons (Madison, Wis.); Hans-Jürgen Sasse (Köln)

Volume 291

Sergio Baauw, Frank Drijkoningen and Manuela Pinto (eds.)

*Romance Languages and Linguistic Theory 2005.*

*Selected papers from 'Going Romance', Utrecht, 8–10 December 2005*

# ROMANCE LANGUAGES AND LINGUISTIC THEORY 2005

SELECTED PAPERS FROM 'GOING ROMANCE',  
UTRECHT, 8-10 DECEMBER 2005

Edited by

SERGIO BAAUW  
FRANK DRIJKONINGEN  
MANUELA PINTO  
*Utrecht University*

JOHN BENJAMINS PUBLISHING COMPANY  
AMSTERDAM/PHILADELPHIA



The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences — Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

#### Library of Congress Cataloging-in-Publication Data

Romance languages and linguistic theory 2005 : selected papers from 'Going Romance', Utrecht, 8-10 December 2005 / edited by Sergio Baauw, Frank Drijkoningen and Manuela Pinto.

p. cm. -- (Amsterdam studies in the theory and history of linguistic science. Series IV, Current issues in linguistic theory, ISSN 0304-0763 ; v. 291)

Includes bibliographical references and index.

1. Romance languages -- Congresses.

PC11 .R635 2007

440--dc22

2007038182

ISBN 978 90 272 4806 0 (Hb; alk. paper)

© 2007 – John Benjamins B.V.

No part of this book may be reproduced in any form, by print, photoprint, microfilm, or any other means, without written permission from the publisher.

John Benjamins Publishing Co. • P.O.Box 36224 • 1020 ME Amsterdam • The Netherlands

John Benjamins North America • P.O.Box 27519 • Philadelphia PA 19118-0519 • USA

## FOREWORD

The annual conference series *Going Romance* is an international initiative of the universities in the Netherlands that engage in linguistic research on Romance languages. Since its inception in the eighties of the past century, the conference has developed into a major European discussion forum where ideas about language and linguistics and about Romance languages are put in an interactive perspective, giving space to both universality and Romance-internal variation.

Since just before the new millennium, the organization publishes a proceedings-like volume, entitled *Romance Languages and Linguistic Theory*. An invitation to address a key-note lecture includes the possibility to publish the corresponding paper in the volume. For publications by selected speakers a separate review procedure has been agreed upon.

The current volume, *Romance Languages and Linguistic Theory 2005*, contains a selection of the papers that have been presented at the nineteenth Going Romance conference, which was held at Utrecht University from December 8-9. The conference was followed by a workshop on Acquisition on December 10, the program of which included for the first time a poster session.

We would like to thank all those who contributed to the success of the XIXth edition of *Going Romance*. First of all, our thanks go to the invited speakers, selected speakers, presenters of a poster, presidents of sessions, participants and discussants, for creating that lively atmosphere during the couple of days that we were together.

Our thanks also go to a rather large set of colleagues for scoring the abstracts, helping with the organisation, and for -- last but not least -- formulating comments and/or reviews on the papers that were submitted. We feel that the quality of the current volume is largely dependent on their positively critical attitude.

Finally, our thanks go to the institutions that supported us financially: the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organization for Scientific Research (NWO), the second one especially for their support of the workshop. We also wish to thank the local research institute (Utrecht institute of Linguistics OTS) for their financial and organisational help.

The editors feel that the present volume reflects very well the actual content of the XIXth edition. We thank Pelin Onar for her work in editing and preparing the final manuscript.

Utrecht, September 2007

Sergio Baauw  
Frank Drijkoningen  
Manuela Pinto

## TABLE OF CONTENTS

The quirky case of participial clauses <i>Asier Alcázar &amp; Mario Saltarelli</i>	1
Answering strategies. A view from acquisition <i>Adriana Belletti</i>	19
Transfer in periphrastic causatives in L2 English and L2 Spanish <i>Mónica Cabrera &amp; María Luisa Zubizarreta</i>	39
Clitic omission, null objects or both in the acquisition of European Portuguese? <i>João Costa &amp; Maria Lobo</i>	59
Metrical structure, tonal association and focus in French <i>Elisabeth Delais-Roussarie &amp; Annie Rialland</i>	73
On affixal scope and affix-root ordering in Italian <i>Anna Maria Di Sciullo</i>	99
Scope economy in positive polarity: extreme degree quantification <i>Raquel González-Rodríguez</i>	115
The acquisition of aspect in L2 Portuguese and Spanish. Exploring native / non-native performance differences <i>C. Elizabeth Goodin-Mayeda &amp; Jason Rothman</i>	131
Mechanisms of scope resolution in child Italian <i>Andrea Gualmini</i>	149
When scope meets modality: the scope of indefinites in subjunctive environments <i>Javier Gutiérrez-Rexach</i>	165



Listen to the sound of salience; Multichannel syntax of Q particles <i>Mélanie Jouisseau</i>	185
Instability and age effects at the lexicon-syntax interface <i>Tihana Kraš</i>	201
On the ambiguity of N-words in French <i>Masakazu Kuno</i>	213
Cross-linguistic influence in bilingual children: the case of dislocation <i>Anna Notley, Elisabeth van der Linden &amp; Aafke Hulk</i>	229
Cartography of postverbal subjects in Spanish and Catalan <i>Francisco Ordóñez</i>	259
Mismatches between phonology and syntax in French DP acquisition <i>Maren Pannemann &amp; Fred Weerman</i>	281
Pragmatic solutions for syntactic problems. Understanding some L2 syntactic errors in terms of discourse-pragmatic deficits <i>Jason Rothman</i>	299
A poverty-of-the-stimulus argument for the innateness of the identification conditions on VP ellipsis <i>Ana Lúcia Santos</i>	321
Index	335

## THE QUIRKY CASE OF PARTICIPIAL CLAUSES

ASIER ALCÁZAR AND MARIO SALTARELLI

*University of Missouri-Columbia and University of Southern California*

Adverbial participial clauses exhibit quirky case properties. The internal argument of a transitive verb may bear accusative or nominative morphological case in Romance. Unlike gerundivals, these clauses lack T and  $v^*$ , among other heads, undermining a standard case licensing approach. We propose that absolutes are VPs that value the case of their internal argument. Other alternatives like a morphological default/inherent case fail to capture the paradigm in Romance. Our approach finds independent support in data from Medieval and Renaissance Italian, an accusative system, as well as the ergative system of Basque.

### 1. *The Relevance of Participial Clauses for Case Theory in Minimalism*

The absolute construction is a reduced clause consisting of a participle and an object/adjunct (see 1c for Spanish; absolutes in bold). Typically, absolutes will precede the main clause, often denoting an accompanying circumstance that occurs prior to the main clause event (as in gerundivals—1b). Unlike root clauses (first conjunct in 1a) or gerundivals (1b), absolutes cannot realize a subject argument in transitives directly (note the by-phrase in 1c). This is the first quirk of absolutes in a long list of seemingly exceptional properties.

- (1) a. *El juez absolvió al imputado y la familia apeló*  
the judge.NOM absolved ACC.the defendant and the family  
appealed  
“The judge absolved the defendant and the family appealed.”
- b. *Habiendo absuelto el juez al imputado, ...*  
having absolved the judge.NOM ACC.the defendant  
“The judge having absolved the defendant, ...”
- c. ***Absuelto el imputado por el juez, ...***  
absolved the defendant.NOM by the judge  
“The judge [having] absolved the defendant, ...”

The absolute construction in Romance presents characteristics that resist our current view of case as a Probe-Goal relation in Minimalism. Briefly stated,



## 2. *Two challenging paradigms in Italian and Romance*

Morphological case in absolutes is one of the puzzling characteristics that motivate this study. Assuming that morphological case is ultimately the reflex of abstract Case—a licensing condition on the realization of arguments (Chomsky 1980: 25(70), Vergnaud & Rouveret 1980: 102(13)), patterns of defiance (quirky case: Sigurðsson 1991, Maling 1993; absolutes: Kayne 1989, Belletti 1990, 1992) need to be understood. We introduce Italian first, which presents a unique situation in Romance, and then continue with Spanish, illustrative of the pattern that is usually found.

In Italian, an accusative language, the internal argument of a transitive verb is nominative in absolutes (3a), contrary to the expected case (accusative). In contrast, if the absolute is referentially construed with the subject of the main clause, then accusative replaces nominative (4a). In this regard, note that clitics are possible with an accusative argument (4b), but not with a nominative argument (3b; Alcázar & Saltarelli 2006a).

- (3) a. *Assassinato il padre, il figlio ascese al trono*  
 assassinated the father-NOM, the son ascended to.the throne  
 “Father [having been] <sub>i<sub>j</sub></sub>killed, the son<sub>i</sub> ascended to the throne.”  
 b. *Assassinato\*lo*  
 assassinated.him
- (4) a. *Assassinato il padre, il figlio ascese al trono.*  
 Assassinated the father-ACC, the son ascended to the throne.  
 “[Having] <sub>i/\*j</sub>killed (his own) father, the son<sub>i</sub> ascended to the throne”  
 b. *Assassinatolo*  
 Assassinated.him

The contrast between (3) and (4) is an extension of the empirical ground needed to be covered by a formalization of case in absolutes that was not present in the landmark work of Belletti (1990, 1992)<sup>1</sup> and has been apparently overlooked since. Belletti correctly treats transitive absolutes with accusative objects as a control structure (=4; 1992: 35-6 exs. 27-8). She also notes that the subject need not be controlled (1990:120-21; 1992:43, endnote 19). Indeed, matters of interpretation have led to revisions of the Italian paradigm (López 1994, Egerland 1996). Still, much subsequent research has worked directly off Belletti’s paradigm. For example, De Miguel (1992) articulates an analysis of absolutes as passive in Spanish vs. active in Italian, assuming Italian only has control (4).

---

<sup>1</sup> “nominative case never becomes available in transitive ASCs [Absolute Small Clauses]” (Belletti 1990: 111).

In Spanish, on the other hand, the argument of transitives is always nominative, both in a *passive* (5ai) or *active* (5aia) interpretation (for the equivalent of Italian (3a) and (4a), respectively). The absence of accusative is evidenced by the fact that neither clitics **lo/le** (5b), nor the personal accusative marker **a** (5c), are possible (Alcázar & Saltarelli 2006a). In spite of the case syncretism, an active interpretation is also possible (contra De Miguel 1992:65; see the active interpretation for Spanish in her own data: e.g., p. 81; exs. 20a-d).

- (5) a. **Asesinado el padre, el hijo subió al trono.**  
 assassinated the father-NOM, the son ascended to.the throne  
 (i) “Father [having been] <sub>i</sub><sub>j</sub>killed, the son<sub>i</sub> ascended to the throne.”  
 (ii) “[Having] <sub>i</sub><sub>j</sub>killed (his own) father, the son<sub>i</sub> ascended to the throne.”  
 b. **Asesinado \*lo/\*le**  
 assassinated.him  
 c. **Asesinado \*al padre**  
 assassinated to.ACC the father

The divergent case system of absolutes is ergative (Dixon 1979, 1994; Levin 1983): in the sense that the subject of intransitives has the same morphological case as the object of transitives (3, 5). This pattern is itself embedded into an accusative system, an anomaly shared by all neo-Latin languages, including Italian; which also displays an accusative type (4).

### 2.1 *The classic paradigm of Belletti (1990, 1992)*

Belletti focuses on Italian data. Regarding case, unaccusative absolutes have a nominative internal argument (6a), while this same argument is accusative in transitives (6b). Unergatives are not possible (6c) and, Belletti claims, neither are ‘passives’ when the internal argument is overt (6d; 1992: 21-2, ex. 1).

- (6) a. **Arrivata Maria, Gianni tirò in sospiro di sollievo**  
 arrived(FEM-SG) Maria Gianni was relieved  
 “Maria [having] arrived, Gianni was relieved.”  
 b. **Conosciuta Maria, Gianni ha subito cambiato il suo stile di vita**  
 known(FEM-SG) Maria, Gianni has changed his lifestyle  
 “[Having] known Maria, Gianni has changed his lifestyle.”  
 c. **\*Telefona-t-o Gianni, Maria andò all’appuntamento**  
 telephoned(MASC-SG) Gianni, Maria went to the appointment  
 d. **\*Salutata Maria da Gianni, tutti uscirono dalla sala**  
 Greeted(FEM-SG) Maria by Gianni everyone went out of the room

2.1.1 *On transitive absolutes as control structures.* The above paradigm (6) misses an important case pattern, namely the nominative absolute where the subject does not have to be controlled by the subject of the main clause (3). Indeed, Belletti mentions two domains where an arbitrary interpretation is to be preferred. The first concerns weather verbs (7) and the second contextually salient discourse referents (8; 1990:120-121).

- (7) a. ***Finito di nevicare, partiremo***  
stopped snowing, we will go
- (8) a. ***Scesa dal treno, Maria prese subito un taxi***  
gotten down the train, Maria immediately took a cab  
b. (*Maria è venuta in treno e ...* ‘Maria came by train and ...’)  
***scesa dal treno, è cominciato uno sciopero di due giorni***  
gotten down the train, started a two-day long strike

Having said that, Belletti stars examples like (9; 1992:35; ex. 27), which she deems ungrammatical in the absence of a controller in the root clause.

- (9) a. ***\*Salutata Maria, cominciò un terribile temporale***  
greeted Maria started a terrible storm  
b. ***\*Chiamato il taxi, smise di piovere***  
called the taxi, it stopped raining

In a related note, Belletti writes (1992:43; endnote 19): “The arbitrary reading of PRO is not easily available, as is generally the case in adverbial clauses. It is not excluded, though, as shown by the possibility of sentences like (i), which perhaps involve control from an arbitrary implicit Experiencer of *piacevole*<sup>2</sup> “

- (i) ***Finito un lavoro, è piacevole prendersi una vacanza***  
finished a task it is nice to take a vacation

Sentences as those in (9) may be ungrammatical if presented out of the blue, yet they are fine sentences if there is a discourse salient subject to the absolute. Utterances like (10) do not require contextualization, but *prime* a control interpretation, which is not the only one (1992: 35-6; ex. 28).

- (10) a. ***Salutata Maria, Gianni se ne andò***  
Greeted Maria Gianni left  
“[Having] greeted Maria, Gianni left”

---

<sup>2</sup> We agree with an anonymous reviewer that the reflexive clitic could be the controller in (11).

- b. ***Chiamato il taxi, Maria uscì***  
called the taxi Maria went out  
“[Having] called the taxi, Maria went out”

In this line, Rosen (1988) defines absolutes as either *true absolutes* (subject is free: 11b) or *related absolutes* (subject is controlled: 11a), noting that “the two types are distinct in respect to the constraint on their form” (1988: 59). Only the related absolute can be replaced with a clitic pronoun, as the following contrast shows (11 vs. 12 cf. 1988: 59-60; exs. 42-3)<sup>3</sup>.

- (11) a. ***Assolto l'imputato, il giudice se ne andò a pranzo***  
acquitted the-defendant, the judge went away to lunch  
“Having acquitted the defendant, the judge went away to lunch.”  
b. ***Assolto l'imputato, scopiarono gli applausi***  
acquitted the-defendant exploded the applause  
“The defendant having been acquitted, applause broke out.”
- (12) a. ***Assolto, il giudice se ne andò a pranzo***  
“Having acquitted him, the judge went away to lunch.”  
b. ***\*Assolto, scopiarono gli applausi***  
“Having acquitted him, applause broke out.”

2.1.2 *Passives revisited*. In this subsection we question that *passive absolutes* (=V O by S) are ungrammatical if the internal argument is expressed (6d). Standard descriptions of the language endorse this use (e.g., *Grande Grammatica Italiana di Consultazione*). Later work on Italian (e.g., Manzini class notes 1993-1994 cf. Egerland 1996: 186) has revisited this claim. Italian allows for transitive absolutes to express their external argument as a by phrase even when the internal argument is also overt, as the following examples from Renzi and Salvi demonstrate (13 cf. 1991 cf. 595; exs. 12-3).

- (13) a. ***Terminati i ringraziamenti e pronunciatodal presidente***  
finished the thanking and delivered by.the president  
“Acknowledgments [having being] made and the official speech  
***dell'associazione il discorso ufficiale, ebbe inizio la cerimonia...***  
of.the.society the speech official had beginning the event  
delivered by the president of the society, the event began.”

---

<sup>3</sup> We thank an anonymous reviewer for pointing us to Rosen's work.

- b. *Dichiaratasi aperta l'udienza e chiamata dall'ufficiale*  
 declared open the.hearing and called by.the.officer  
 “The hearing [having being] opened and the trial called by the  
 court  
*giudiziaro di servizio la causa, si sono presentati gli imputati*  
 court on duty the trial refl are presented the accused  
 officer on duty, the accused entered.”

This amendment to the general paradigm is a restorative move, to be assimilated in the standard description of absolutes. The change is welcome. Prior to this correction, absolutes challenged an integral part of verb typology:

Another aspect of the APPP [absolutes] is equally puzzling: the participial verb cannot be passive if there is an overt postverbal NP. This is a big surprise, since unaccusatives are grouped together with passives in most theoretical typologies of verb classes, not only in RG and classical Government and Binding, but also in LFG in its current form (Bresnan and Zaenen, 1990). It is unexpected, therefore, for any construction to treat unaccusatives and active transitives as a natural class that excludes passives. (Stowell 1992: 47)

### 3. *Validation by T, v\* not a tenable approach in absolutes*

Faced with this puzzling paradigm (3-5), one would wonder how morphological case was syntactically attained. To this end, and in light of substantive empirical and theoretical gains in the Minimalist enterprise (see Horstein, Nunes and Grohmann 2005), let us entertain an analysis where the relevant Ks are T for nominative case and v\* for accusative case.

We begin with T, given the prevalence of nominative in Romance absolutes. The morphological evidence required to postulate T (and many other heads, see Belletti 1990, 1992, De Miguel 1992, López 1994) is wanting in absolutes. Compare (4a) with a close equivalent: gerundivals (5). Unlike gerundivals, absolutes have neither auxiliary *be* nor *have*, which preempts positing T. Moreover, we cannot think of gerundivals as absolutes preceded by auxiliaries. Regarding voice, absolutes and gerundivals differ greatly. While gerundivals present an opposition in voice, with accusative objects (14a) in the active voice and nominative in the passive (14b), absolutes have no voice distinction and only nominative objects (15).

- (14) a. *Habiendo asesinado el hijo al padre, ...*  
 having assassinated the son.NOM to.ACC.the father  
 “The son having killed his own father, ...”  
 b. *Habiendo sido asesinado el padre, ...*  
 having been assassinated the father.NOM  
 “Father having been killed, ...”



The formalization of how nominative is valued without T in Romance absolutes<sup>4</sup> is thus a research question (see López 2001: 710-12).

We now proceed with  $v^*$ . Absolutes are a consolidated diagnostic for unaccusativity, since they accept unaccusatives and reject unergatives (Perlmutter 1978, Burzio 1981, 1986, Rosen 1983; but see § 5); vs. gerundivals, which accept unergatives. Given that the difference between the two types of intransitive predicates is that unaccusatives are VPs with an internal argument, and unergatives  $v^*$ P s with an external argument (Levin and Rappaport-Hovav 1995), an analysis where Romance absolutes have no  $v^*$  suggests itself. Furthermore, while transitive absolutes may realize a subject argument, this is only possible as a by-phrase (15), again pointing to the absence of a  $v^*$  node (compare with *active* gerundivals (14a) above, where the subject is an external argument).

- (15) *Asesinado el padre\*(por) el hijo, ...*  
 assassinated the father.NOM by the son  
 ‘The son [having] killed the father, ...’

Naturally, the absence of  $v^*$  begs the question of how Modern Italian absolutes value accusative formally in (4). In the next section we propose that the control absolute is a  $v^*$ P, reminiscent of earlier stages of Italian and contemporary elevated registers that we discuss in section 5.

Although T and  $v^*$  are missing in absolutes, the inheritance model offers an alternative where C is K and T inherits this capability. Entailing that, even if T were not present, C could still check nominative case. Incidentally, gerundivals give rise to the question of how nominative was valued for *el hijo* (the son) if T is not phi-complete in (14a). In GB, C was proposed as an exceptional case assigner in Romance to assist T in this task (Rizzi 1982 on Italian gerundivals, Raposo 1987 on inflected infinitives in Portuguese cf. Belletti 1992: 27, ex. 21); an idea that perhaps foreshadows inheritance. Unfortunately, much like T and  $v^*$  cannot be posited as heads in absolutes, there is no evidence for C either (De Miguel 1992:66, ex. 7). Data from concessive sentences makes a case similar to the gerundival-absolute opposition (14-5), where otherwise necessary C heads like ‘that’ in Spanish (Alcázar & Saltarelli 2006a) and ‘if’ in Basque (Alcázar & Saltarelli 2006b) cannot be retained in the absolute. However, we will need to spare this data in the interest of brevity.

---

<sup>4</sup> We agree with an anonymous reviewer that non-verbal absolutes (i.e., adjectival, nominal, prepositional) provide an additional argument against the syntactic presence of T. The absence of sentential negation too can be taken as an argument (Zanuttini’s Hypothesis, 1996: 181).

#### 4. *A VP analysis of Romance Absolutes*

This section attempts to explain the quirks of absolutes in Romance by the absence of otherwise necessary functional heads. The following table (16) summarizes schematically the properties of Romance absolutes that we saw in section 3 and contrasts them with gerundivals. Gerundivals are the control group, so to speak, since they would appear to be less defective; thus closer to the properties exhibited by tensed clauses.

(16) *Table 1. Gerundivals vs. Absolutes comparative table*

	<b>Gerundivals</b>	<b>Absolutes</b>
<b>Auxiliaries</b>	<i>be, have</i>	----
<b>Agreement</b>	----	with internal argument
<b>Object case</b>	accusative	nominative
<b>Restrictions</b>	----	unergatives, external arguments

If one assumes structural uniformity across clauses, tackling the gerundival vs. absolute opposition seen in the above table stands out as a daunting task. Dispensing with it facilitates an account of some of these quirks under Minimalist assumptions.

Should absolutes lack a  $v^*$  and gerundivals had one, it would not surprise us if the former banned unergatives. Furthermore, this would predict that transitives could not realize a subject in an external argument position, killing two differences with a single stone. The absence of a T node would suit absolutes too, which cannot be preceded by auxiliaries. Lacking a C node would also explain the ungrammaticality of connectives.

We would like to compare our analysis to that of Belletti's at this time in order to show the advantages of this new approach. It will be seen that Belletti's account was rather minimal for its time, and was pointing in this direction. Let us briefly introduce her analysis in her own words:

I will assume that they [absolutes] are (at least) AGRP, with the past participial morphology sitting under the AGR head and the VP a complement of AGR [...] For Case theoretic reasons which will be discussed in detail in section 2, I will admit that at least with unaccusative verbs, they [absolutes] must be CPs taking AGRP as a complement. (Belletti 1990: 93)

The following table (17) provides an initial comparison of both analyses. Ours departs from Belletti's in eliminating all functional projections. In fairness to this pioneering and influential study, we note that while the analysis is strictly developed under GB assumptions, the reader can perceive in the author's observations (Belletti 1992: 22) an attempt to account for both case properties and word order distribution under an AGREement hypothesis: a research effort that reveals the conceptual tension of early minimalism.

- (17) Table 2. Absence of all functional heads compared to Belletti (1990, 1992). Part I.

<b>APC quirks</b>	<b>VP analysis</b>	<b>Belletti (1990, 1992)</b>
<i>No auxiliaries</i>	No T	No T
<i>No negation</i>	No Neg	No Neg
<i>No unergatives</i>	No v*	Case Filter (no C in unergatives)
<i>No external arguments</i>	No v*	Case Filter (no C in transitives)
<i>No connectives</i>	No C	unaccusatives (V in C)/transitives (No C)

It is noteworthy that some of these quirks may follow from an implicational hierarchy (e.g., if T, then Neg cf. Zanuttini 1996: 181).

Concerning agreement, we could entertain that absolutes have an Agr node, since the verb agrees with its internal argument for gender and number. But this projection has become redundant. Following Minimalist assumptions (Chomsky 2001), we favor AGREE over agreement projections (18).

- (18) **Agreement in Romance absolutes:**

V agrees with its complement for phi-features by AGREE.

The word order in absolutes<sup>5</sup> is a strict VO, for both transitives (19a=7a with OV order) and unaccusatives; 19b = Belletti 1992: 25; ex. 6).

- (19) a. \**Maria arrivata, Gianni tirò in sospiro di sollievo*  
 b. \**Maria Conosciuta, Gianni ha cambiato vita*

The elimination of agreement projections simplifies our account (20)<sup>6</sup>.

- (20) Table 3. Absence of all functional heads compared to Belletti (1990, 1992). Part II.

<b>APC quirks</b>	<b>VP analysis</b>	<b>Belletti (1990, 1992)</b>
<i>Agreement</i>	AGREE	unaccusative (spec-head) /transitive (long distance)
<i>Word order</i>	[ <sub>VP</sub> V O]	unaccusative (V-to-Agr-to-C)/transitive (V-to-Agr)

<sup>5</sup> In the absence of evidence to the contrary, word order is taken to be typological between head initial and final in a phase. In fully transitive (v\*P) absolutes, word order is fixed and mirrors the canonical word order in the language: verb initial (VSO: consolidated in Renaissance Italian) or verb final (SOV: Basque). In contrast, monadic absolutes vary greatly: (i) exclusively verb initial for Spanish, Italian; (ii) VO-OV in Romanian and Latin (iii); or exclusively verb final in French. Here we would appeal to a word order parameter that linearizes dyadic absolutes.

<sup>6</sup> As for Aspect, it is not obvious whether it is represented syntactically in absolutes. The sequence of tense interpretation that would result from it seems more the result of a pragmatic inference rather than a systematic interpretation. In effect, Aktionsart plays a more predictive role than aspect (see De Miguel (1992: 63-131) for a corpus study of which unaccusatives are felicitous in absolutes and which are not).

In sum, a GB Agr/CP projectionist hypothesis struggles with an inclusive account of Italian absolutes, while, we claim, a phase-theoretic derivational hypothesis fully accounts for the clausal VP nature of absolutes. In general, we agree with the basic observations on the clausal properties of absolutes expressed in the influential GB study (Belletti 1992: 22). Nevertheless, one can argue, with the advantage of hindsight, that the intuitive clausal properties of Italian absolutes could not be optimally characterized under the mainstream representational syntactic framework of that time. We attempt to demonstrate that a derivational computational system under minimalist assumptions improves our understanding of absolutes and, by extension, a neglected aspect of non-finite participial syntax. Nevertheless, Belletti's study stands as an exemplary work on a crucial area of non-finite syntax.

#### 4.1 *Validation of case in Romance absolutes*

If the above is true, and indeed there is no K in Romance absolutes to speak of, then VP must take on the responsibility to both project and license the internal argument. In view of their syntactic constituency, we propose that Romance absolutes are VP phases. The Computational System licenses nominative in the absence of  $v^*$ —the functional projection that introduces an external argument. The alternative in Belletti (1990, 1992) is to have the participle move to C and have C exceptionally assign nominative in unaccusatives. However, there is no positive evidence of C.

There seems to be no other alternative, considering that Old Italian and Basque have positive evidence of  $v^*$  (unergatives, external arguments; see § 5). In fact, we will see that these absolutes are regular for case (see Alcázar and Saltarelli 2006b for a proposal concerning licensing in  $v^*P$  type absolutes).

What about the accusative + subject control absolute (4)? We take accusative case as positive evidence of  $v^*$  and control as positive evidence of PRO in Spec- $v^*P$ . Thus, we believe (4) is a  $v^*P$  absolute reminiscent, or a remnant of  $v^*P$  absolutes in Old Italian. This part of the analysis may be considered an update on Belletti's assignment of accusative case by V via sisterhood.

#### 4.2 *Comparison with an 'inherent case' VP approach.*

An alternative to our VP proposal is that of López (2001: 710-12), who also embraces a minimalist (null hypothesis) view of absolutes as VP structures. In contrast with our proposal, López follows mainstream case theory, whereby the realized argument in absolutes under a VP hypothesis must be assigned/checked/valued as a property of the head, namely V.

Under standard case assumptions, however, morphological case is typologically undecidable in transitive control absolutes, where Italian requires

ACC (**conosciuta \*io/me-ACC**) and Spanish NOM (**conocida yo-NOM/\*a mí** cf. section 2 for this parametric challenge). In this typological conundrum, case theory (from GB to most recent minimalism) offers no alternative but an appeal to ‘inherent’ case. That is, the theory is forced to instruct the general CS that, for some VPs (i.e. APCs), V assigns ACC in Italian and NOM in Spanish. The option made available by the mainstream head-driven case theory amounts to a restatement of the facts, without a rationale for the contrast between Italian and Romance or a prediction of the quirky case pattern in absolutes. Under this view, the inherent case theory strays away from minimalist assumptions in that it is structure/clause specific (absolutes). In addition, it adds to the seemingly unnatural list of heads with properties for ACC (AgrO, V(inherent), or  $v^*$ ) and for NOM (AgrS, T, C and now V(inherent)).

The typological Romance challenge just observed between Spanish and Italian, persists, nevertheless, as a descriptive issue in the grammar of modern Italian. In this language, transitive absolutes must assign ACC to its realized argument when referentially interpreted with the subject of the finite clause (**assassinato il padre/assassinatolo**, cf. (4)), and NOM when its argument may have disjoint reference (**assassinato il padre/assassinato\*lo**, cf. (3)). Neither an inherent, lexical, nor structural option affords a feasible head-driven VP case theoretic solution. We have argued that, in contrast, (17, 20) meets the challenge for a VP hypothesis of absolutes under minimalist assumptions.

It seems fair to conjecture in hindsight that, since López inherits the restrictive paradigm (7; but see López 1994 who refers to Rosen 1988), his analysis fails to address (a) the control/disjoint interpretation and their syntactic correlation in Italian transitive absolutes (cf. 3-4), (b) their ergative realization (NOM) in the rest of Romance (5), and (iii) the empirical issue of passive absolutes (2.1.2). From the vantage point of the extended paradigm (3-5), minimalist assumptions lead to a re-examination of the role and computation of case that more generally accounts for an otherwise quirky distribution of case in absolutes.

## 5. *Other absolutes: Old Italian, Basque.*

### 5.1 *Old Italian absolutes and the presence of $v^*$*

Medieval Italian absolutes depart from late Latin absolutes (Bauer 2000), and contrast with present-day Romance, in accepting external arguments (21). So does Renaissance Italian (22). All the examples in this section are taken from Verner Egerland’s dissertation (1996). Corpus citations are provided for cross-reference<sup>7</sup>.

<sup>7</sup> References to corpus for examples 21-25: 21a (Fatti LVII; 187, ex. 3d), 21b (Dec I: 1; 187, ex. 3g), 22a (Princ. III; 188, ex. 3l), 22b (Vita VI; 188, ex. 3m), 23 (Lucchesi, *Decameron*, 261; cf. 195, fn. 4, ex. (ii)), 24a (Vizi XVI; 200, ex. 31b), 24b (Cron V:18; 200, ex. 31d), 24c (Trec III;

- (21) a. *ed Enea presa la lancia, ...*  
and Enea taken the lance, ...  
“and Enea [having] taken the lance, ...”
- b. *ricevuta ser Ciappelletto procura*  
received ser Ciappelletto the proxy  
“ser Ciappelletto [having] received the proxy”
- e le lettere favorevoli del re ...*  
and the letters favorable of the king  
and the endorsement of the king...”
- (22) a. *Acquistata adunque el re la Lombardia, ...*  
Conquered thus the king the Lombardy  
“The king [having] thus conquered Lombardy, ...”
- b. *saputo il Soderini il meraviglioso ingegno di mio padre...*  
known the Soderini the marvelous talent of mine father  
“Soderini [having] known about the marvelous talent of my father...”

The case of the external argument and internal argument in Old Italian is regular. Example (23) shows an absolute with a nominative subject pronoun and an accusative clitic. Modern Italian, with either accusative or nominative objects, would seem to be at odds between Modern Romance (NOM) and Old Italian (ACC).

- (23) *... e io messo-gli in una mia cassa...*  
and I.NOM put[-Agr]-them.ACC[cl] in a mine box  
“... and I [having] put them in a box...”

On the other hand, Old Italian absolutes do not serve as a diagnostic for unaccusativity, for they readily accept unergative predicates (standing as a solid counterexample to the proven validity of this construction as a syntactic test). Both the medieval period (24: (a) *dine*, (b) *govern*, (c) *think*, (d) *eat*) and the Renaissance (25: (a) *dine*, (b) *sing*, (c) *jump*) attest to the use of unergatives from a wide variety of literary sources.

- (24) a. *Cenato ogni gente, e rassettate a sedere, disse laFede ...*  
dined every body and had a seat said the Faith  
“Everybody [having] dined, and [having] taken a seat, Faith said...”

---

200, ex. 31g), 24d (Nov.re. IIII; 201, ex. 31i), 25a (Cene I:1; 201, ex. 31i), 25b (Cene II:2; 201, ex. 31m), 25c (Zucca: II, ‘Grillo Primo’; 201, ex. 31n).

- b. ... *e lui regnatonello imperio ott'anni, morí ...*  
and he governed in.the empire eight.years, died  
“...and he [having] governed over the empire for eight years,  
died...”
- c. *E cosí pensato, una mattina si misse in cammino ...*  
and thus thought one morning refl lost in path  
“And [having] thought in this way, one morning he went away..”
- d. *Mangiato, prima che da taula si partisseno, Calidonia ...*  
Eaten before that from table refl left Calidonia  
“[Having] eaten, before they left the table, Calidonia ...”
- (25) a. ...*e Salvestro, tornato a casa e cenato, ...*  
and Salvestro, returned to home and dined  
“... and Salvestro, [having] returned home and dined, ...”
- b. *becchini, messo che t'aranno nella bara, ... ,e cantato, ...*  
the gravedig, laid as cl.have in.the coffin and sung  
“The gravediggers, laid as they have you in the coffin,..., and  
[h.] sung”
- c. *Pur saltato inanzi e lanciandosi su per le scale, ...*  
then jumped forward and throwing.refl up for the stairs  
“[Having] then jumped forward and throwing himself up the  
stairs, ...”

Modern Italian still uses old style absolutes in higher/legal registers (Manzini class notes 1994, Egerland 1996, Anna Cardinaletti, Adriana Belletti, Roberta D'Alessandro, Nicola Munaro, Anna Maria di Sciullo p.c.).

Next we show that Old Italian absolutes are not one of a kind. Basque absolutes reproduce the same properties in an ergative case marking system.

## 5.2 Ergativity in Basque absolutes: further evidence of $v^*$ from light verbs

The isolate Basque, despite not being an Indo-European language (Saltarelli 1988), displays the absolute construction (Alcázar and Saltarelli 2006a). The sentences in (26) are Basque translations of the Italian examples in (3). Notice that the unergative example (26c) is grammatical, contrary to expectations (key: ABSolutive, ERGative, PERFective, CONjunction, PLural; SG = singular, CAUSE = causative).

- (26) a. *Mariahel-du-ta, Gianni lasai-tu zen*  
Maria.ABS.SG arrive-PER-CON, Gianni.ABS.SG relax-PER be.3SG  
“Maria [having] arrived, Gianni was relieved.”

- b. ***Maria ezagu-tu-ta, Gianni asko alda-tu zen***  
 Maria.ABS.SG know-PER-CON Gianni.ABS.SG much change-PER  
 be.3SG  
 “[Having] known Maria, Gianni immediately changed his  
 lifestyle.”
- c. ***Gianni-k dei-tu-ta, Maria joa-n zen***  
 Gianni-ERG.SG call-PER-CON Maria.ABS.SG go-PER be.3SG  
 “Gianni [having] called, Maria left”

Like Old Italian, Basque absolutes are mute as a test for unaccusativity. Furthermore, Basque absolutes accept external arguments too. The subject can be shifted from the main sentence to the absolute in the transitive example (26b=26b’). In either position, the case of the external argument is ergative.

- (26) b’. ***Gianni-k Mariaezagu-tu-ta, asko alda-tu zen***  
 Gianni-ERG.SG Maria.ABS.SG know-PER-CON much change-PER  
 be.3SG  
 “Gianni [having] known Maria, he immediately changed his  
 lifestyle.”

In addition, Basque presents interesting confirmatory evidence of the presence of *v\** in the form of light verb unergatives (27: Levin 1983, Laka 1995, Hale & Keyser 1993) and causatives (28<sup>8</sup>: Hualde & Ortiz de Urbina 2003)<sup>9</sup>.

- (27) ***Gianni-k dei egi-n-da, Maria joa-n-zen***  
 Gianni-ERG.SG call do-PER-CON Maria.ABS.SG go-PER be.3SG  
 “Gianni [having] called, Maria left”
- (28) ***Egunkari-a itx-i-araz-i-ta, ...*** [Lit: newspaper closed-had-and]  
 newspaper-ABS.SG close-PER-CAUSE-PER-CON  
 “[Having] had (the newspaper) *Egunkaria* closed, ...”

Example (28) contrasts with Romance absolutes, which sternly reject causative structures (29). But not so Romance gerundivals (30), which accept them. The

<sup>8</sup> From <http://blog.gmane.org/gmane.culture.language.basque.eibartarrak/day=20030306>.

<sup>9</sup> It might be argued that the Basque examples (26-28) are not absolutes on a number of idiosyncrasies, such as (i) being verb final (but so is French: Belletti 1992; Romanian), (ii) having a conjunction (also Ancient Greek, Hittite: Bauer 2000; at any rate, partitive case -(r)ik can replace conjunctive -ta), and (iii) accepting unergatives/external arguments (like Old Italian: Egerland 1996). In view of multiple parallels in Indo-European, these examples cannot be easily dismissed. Moreover, Spanish absolutes typically translate to this construction in Basque (Consumer Eroski Parallel Corpus cf. Alcázar 2006b).



examples are from Spanish. This contrast is again resolved assuming a VP/v\*P typology in absolutes.

- (29) \**Hecho cerrar el periódico (por el juez), ...*  
 Done close the newspaper by the judge  
 “The judge [having] had the newspaper closed, ...”
- (30) *Habiendo hecho cerrar el periódico el juez, ...*  
 having done close the newspaper the judge  
 “The judge having had the newspaper closed, ...”

## 6. Conclusion

We have claimed that the case system of Romance absolutes is not predicted by a Probe-Goal theory. It is proposed, instead, that case is determined by the argument constituency of the Phase. Such a seemingly radical reassessment of its role as a Markedness or Visibility condition is actually in keeping with traditional wisdom on the role of abstract Case. As such, the concept offers an unsuspected prediction on previously unexplained facts about absolutes, such as why unergative predicates are excluded from absolutes, the empirical centerpiece of the Unaccusative Hypothesis. The VP hypothesis can be extended to include v\*P to account for Basque and Old Italian absolutes, and their failure to serve as a test for unaccusativity.

## References

- Alcázar, Asier. 2006a. “Transitive Intransitives: Basque Unergatives Revisited”. *Proceedings of the 4<sup>th</sup> Cambridge Postgraduate Conference in Language Research*. Cambridge: Cambridge University Press (to appear)
- 2006b. “Consumer Eroski Parallel Corpus”. *Proceedings of BIDE 2005. International Journal of Basque Linguistics* (to appear).
- Alcázar, Asier and Mario Saltarelli. 2006a. “The case of participial clauses: Italian vs. Romance”. Paper presented at LSA 2006 New Mexico.
- 2006b. “The typology of absolute constructions”. Ms. USC.
- Belletti, Adriana. 1990. *Generalized Verb Movement. Aspects of Verb Syntax*. Torino: Rosenberg & Sellier.
- 1992. “Agreement and Case in Past Participle Clauses”. *Syntax and Semantics Vol. 26*, ed. by Tim Stowell & Eric Wehlri, 21-44. New York: Academic Press.
- Burzio, Luigi. 1981. *Intransitive verbs and Italian auxiliaries*. Ph.D. Diss. MIT.
- 1986. *Italian Syntax: A Government-Binding Approach*. Boston & Dordrecht: Reidel.
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.
- 1995. *The Minimalist Program*. Cambridge (Mass.): MIT Press.

- 2001. "Derivation by Phase". *Ken Hale: A Life in Language* ed. by Michael Kenstowicz, 1-52. Cambridge (Mass.): MIT Press.
- 2005. "On Phases". Ms. MIT.
- De Miguel Aparicio, Elena. 1992. *El aspecto en la sintaxis del español: Perfectividad e impersonalidad*. Madrid: Ediciones de la Universidad Autónoma de Madrid.
- Dixon, Robert M. W. 1979. "Ergativity". *Language* 55:1. 59-138.
- 1994. *Ergativity*. Cambridge: Cambridge University Press.
- Egerland, Verner. 1996. *The Syntax of Past Participles. A Generative Study of Nonfinite Constructions in Ancient and Modern Italian*. Lund: University Press.
- Hale, Ken & Jay Keyser. 1993. "On Argument Structure and the lexical expression of syntactic relations" *The View from Building 20*. ed. by K. Hale & J. Keyser. 53-110. Cambridge (Mass.): MIT Press.
- Hornstein, Norbert, Jairo Nunes & Kleantes K. Grohmann 2005. *Understanding Minimalism*. Cambridge (Mass.): Cambridge University Press.
- Hualde, José Ignacio & Jon Ortiz de Urbina. 2003. ed. *A Grammar of Basque*. Berlin: Mouton de Gruyter.
- Kayne, Richard. 1989. "Facets of Romance Past Participle Agreement". *Dialect Variation and the Theory of Grammar*, ed. by Paola Benincà, 85-103. Dordrecht: Foris.
- Laka, Itziar. 1995. "Thetablind case: Burzio's generalization and its image in the mirror". *Arguments and Case: Explaining Burzio's Generalization* ed. by Eric Reuland, 103-129. Amsterdam & Philadelphia: John Benjamins.
- Legate, Julie Anne. 2003. "Some Interface Properties of the Phase". *Linguistic Inquiry* 34:3. 506-515.
- 2006. "Phases and Cyclic Agreement." MITWPL (to appear).
- Levin, Beth. 1983. "Unaccusative verbs in Basque". *Proceedings of the 13<sup>th</sup> Annual Meeting of the North-Eastern Linguistics Society*. 129-145. Massachusetts: GLSA publications.
- Levin, Beth & Malka Rapaport-Hovav. 1995. *Unaccusativity: At the syntax semantics interface*. Cambridge (Mass.): MIT Press.
- López, Luis. 1994. "The internal structure of absolute small clauses". *Catalan working papers in linguistics* 4.1. 45-92.
- 2001. "On the Non-complementarity of Case Theory and Theta-Theory". *Linguistic Inquiry* 32:4. 694-716.
- Maling, Joan 1993. "Of nominative and accusative: The hierarchical assignment of grammatical case in Finnish". *Case and other functional categories in Finnish syntax*, ed. by Anders Holmberg & Urpo Nikanne, 51-76. Berlin: Mouton de Gruyter.

- Perlmutter, David M. 1978. "Impersonal Passives and the Unaccusative Hypothesis". *Proceedings of the Fourth Annual Meeting of the Berkeley Linguistics Society*, 157-189. Berkeley: Berkeley Linguistics Society.
- Raposo, E. 1987. "Case Theory and Infl-to-Comp: Inflected infinitives in European Portuguese." *Linguistic Inquiry* 18. 85-109.
- Reuland, Eric. 2002. ed. *Arguments and Case: Explaining Burzio's Generalization*. Amsterdam & Philadelphia: Benjamins.
- Renzi, Lorenzo & Giampaolo Salvi, eds. 1991. *Grande Grammatica Italiana di Consultazione*. Bologna: Il Mulino.
- Rizzi, Luigi. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.
- Rosen, Carol G. 1983. "The Interface between Semantic Roles and Initial Grammatical Relations." *Studies in Relational Grammar Vol 2*, ed. by David M. Perlmutter and Carol G. Rosen 38-77. Chicago: The University of Chicago Press.
- 1988. *The relational structure of reflexive clauses: Evidence from Italian*. New York: Garland.
- Saltarelli, Mario. 1988. *Basque*. London: Croom Helm.
- Sigurðsson, Halldór A. 1991. "Icelandic Case-marked PRO and the Licensing of Lexical Arguments". *Natural Language and Linguistic Theory* 9:2. 327-363.
- Stowell. Tim. 1992. "Passives and the Lexicon: Comments on Belletti". *Syntax and Semantics Vol. 26*, ed. by Tim Stowell & Eric Wehlri, 45-52. New York: Academic Press.
- Vergnaud, Jean-Roger & Alain Rouveret. 1980. "Specifying reference to the subject: French causatives and conditions on representation". *Linguistic Inquiry* 11:1. 97-202.
- Zanuttini, Raffaella 1996. "On the Relevance of Tense for Sentential Negation". *Parameters and Functional Heads. Essays in Comparative Syntax*, ed. by Adriana Belletti & Luigi Rizzi, 181-207. New York & Oxford: Oxford University Press.

## ANSWERING STRATEGIES A VIEW FROM ACQUISITION\*

ADRIANA BELLETTI  
*University of Siena*

Different languages adopt different grammatical options - SV, VS orders, (reduced) clefts - to answer the same question on the identification of the subject. The answering strategies are detected through speakers' grammaticality judgements and through acquisition data, specially adult L2 acquisition. The direct relevance of acquisition data in raising and help clarifying theoretical issues is meant to be among the contributions of the article. The different answering strategies, analyzed in cartographic terms as involving either the VP-peripheral internal focus position or focalization in situ, are all in principle available in different languages, provided that no formal condition is violated in the interaction with other properties, the crucial one being the null-subject vs non null-subject nature of the language. The different answering strategies are in place early on in first language monolingual acquisition. Speculative hypotheses on economy and the characterization of development, are put forth on the reason(s) why a strategy should prevail over the others, in compliance with formal conditions.

### 1. *Answering strategies: Introduction*

When we look at question-answer pairs concerning the subject of the clause, a striking fact emerges. Different languages adopt different ways to answer the very same question concerning the identification of the subject. The following pairs in Italian, French, English and German illustrate this fact:

- A. a. *Chi è partito / ha parlato?* Italian: VS ("Free inversion")  
who has left / has spoken  
b. *E' partito / ha parlato Gianni*  
is left / has spoken Gianni
- B. a. *Qui est parti / a parlé?* French: (reduced) Cleft  
Who has left / has spoken  
b. *C'est Jean (qui est parti / a parlé)*  
It is Jean (who is left / has spoken)

---

\* I wish to thank Frank Drijkoningen and the audience at the Going Romance 2005 workshop on acquisition for stimulating comments and suggestions on the work presented here.

- |    |    |  |   |
|----|----|--|---|
| C. | a. | <i>Who came/spoke?</i>                                       | English: focalization <i>in situ</i>    |
|    | b. | <i>John came/spoke</i>                                       |   |
|    | c. | <i>John did</i>  |   |
| D. | a. | <i>Wer ist gestern abgereist?</i><br>who left yesterday?     | German: focalization in V2<br>structure |
|    | b. | <i>Mary ist gestern abgereist.</i><br>Mary is yesterday left |   |

It appears that seemingly unrelated and different languages essentially follow the patterns identified above which thus constitute a fairly exhaustive sample<sup>1</sup>. At least the following questions naturally arise concerning the identified strategies:

- How can they be analyzed?
- What can acquisition data reveal about the existence and (some) properties of the different strategies?
- Are (exclusively) grammatical reasons at the source of the existence and prevalence of the different strategies in the different languages?

The following sections address these questions and related issues in detail.

### 1.2 Assumptions and outline of the analysis

Let us begin by making explicit the central general analytic proposal assumed in this article. As discussed in detail in previous work, following the guidelines of the cartographic projects (Belletti (2004a, 2004b; Cinque (2002); Rizzi (2004)) the low part of the clause is assumed to contain a VP periphery including discourse related dedicated positions (of Focus and Topic) along the lines in (1):

- (1) [CP .. [TP .. [TopP Top [FocP Foc [TopP Top ... VP]]]]]

The VP periphery is characteristically activated in so called “subject inversion” structures of the kind illustrated in (2)b for Italian, where the postverbal subject constitutes the focus of new information and it is thereby taken to fill the specifier of the low focus position in (1)<sup>2</sup>:

<sup>1</sup> Sometimes a special particle is added on the new information focus subject, depending on the morphological properties of the language in question. Beside Italian, French, English and German, the survey I have undertaken in this domain includes the following languages: Basque, Bellunese, Brazilian Portuguese, Chinese, European Portuguese, Greek, Gungbe, Hindi, Hungarian, Japanese, Malayalam, Norwegian, Paduan, Slovak, Spanish, Turkish. I want to take the opportunity to thank here all the linguists who have helped me in this recollection by acting as most reliable and careful informants.

<sup>2</sup> As discussed in detail in Belletti (2004), the postverbal subject, when associated with a downgrading intonation, can also be interpreted as topic/given information. This is the case in

- (2) a. *Chi è partito / ha parlato ?*  
 who has left/who has spoken  
 b. *E' partito / ha parlato Gianni*  
 is left / has spoken Gianni  
 c. (\*) *Gianni è partito*  
 Gianni is left

In a null subject language like Italian, a sentence containing a postverbal subject, focus of new information as in (2)b, thus corresponds to a (schematic) representation along the lines in (3)<sup>3</sup>, where a silent *pro* fills the (relevant, EPP) subject position of the clause:

- (3) [<sub>CP</sub> [<sub>TP</sub> *pro* ...è... partito/ha parlato ... [<sub>TopP</sub> [<sub>FocP</sub> Gianni <sub>TopP</sub> [<sub>VP</sub> ..]]]]]

Given these assumptions, the VS order of subject inversion structures thus crucially involves two independent factors:

- i. the null subject nature of the language;
- ii. activation of the clause internal VP periphery.

i. is considered a necessary but not a sufficient property conditioning subject inversion/Vs; ii. is also necessary.<sup>4</sup>

## 2. *French and L2 acquisition data*

### 2.1 *Answering with a cleft in French: An Analysis*

Questions like (4)a (typically) admit the answer in (4)b in French (B, above), involving a (generally reduced) cleft:

---

i.b, where the postverbal subject should consequently fill the specifier of a topic phrase in the low VP periphery:

- i. a. *Che cosa ha fatto Gianni?*                      What has Gianni done  
 b. *E' partito / ha parlato, Gianni*                      has left/has spoken, Gianni

<sup>3</sup> As in traditional accounts, (3) assumes that the relevant preverbal subject position (Cardinaletti (2004)) is occupied by a non overt null *pro*. I also assume (differently from traditional accounts, Belletti (2005)) a doubling derivation of inversion structures, with a *referential pro* moved from an original “big DP”, and the lexical subject stranded in the low focus (or topic) position. Nothing crucial hinges on this aspect of the analysis for the present discussion, so this issue will not be taken up any further here. On doubling in similar terms see also Cecchetto (2000) and references cited therein.

<sup>4</sup> The correlation between the positive setting of the null subject parameter and what is often called “free inversion” is thus less direct than traditionally thought (Nicolis (2005) for recent further discussion of this point). In this sense, it can be considered a weak correlation (Belletti (2005b)). See below for further discussion of this point.



- (6) a. *Ma passion, c'est la lecture*  
 My passion, it is reading  
 b. \**Ma passion est la lecture*  
 My passion is reading

The derivation of (6)a would proceed as schematically indicated in (7), with predicate “ce” raising to the subject position of the main clause. Note that also in this derivation the postcopular subject fills the VP peripheral focus position:

- (7) Ma passion, [<sub>TP</sub> ... [ Top [ Foc [Top [vP être [sc la lecture ce ]]]]]]]<sup>7</sup>

Why the need of a disguised inversion in French? Note that an answer like (8)b, the direct equivalent of Italian (2)b in French, is ruled out by the non-null subject nature of French, as no *pro* is licensed in the preverbal high subject position in this language:

- (8) a. *Qui a parlé?*  
 who has spoken  
 b. \**A parlé Jean*  
 has spoken Jean

Furthermore, the option in (9) where an expletive would fill the preverbal high subject position is also ruled out:

- (9) \**Il a parlé la maman*  
 it has spoken mummy

since an expletive cannot be freely inserted/added to the initial numeration.<sup>8</sup> Assume that the insertion of an expletive is essentially lexically constrained: the option is taken when the associate of the expletive is not merged at the edge of the vP-phase. This is a possible consequence of the special status of the edge position of phases (Kayne (2005), Rizzi (2005), (2005)a; Chomsky (2001)), which requires the edge of a phase to remain empty. This in turn typically singles out unaccusatives as the verb class which best tolerates the expletive-associate relation<sup>9</sup>.

<sup>7</sup> Cfr. also Munaro & Pollock (2005) for a comparable analysis of “ce” in the (now *figée*) expression *qu'est-ce (que)* (i.e.: est [ que ce] ...).

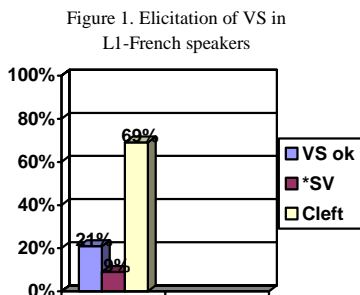
<sup>8</sup> Nor could a doubling derivation along the lines referred to in footnote 3 involving a (overt) pronominal expletive be available, as expletives cannot be present in the original “big DP”.

<sup>9</sup> In Belletti (2005) other (partly impossible and partly possible) options involving pronoun doubling are presented in some detail. The reader is referred to that work for closer discussion.



## 2.2 *L2 acquisition data*

2.2.1 *Clefts in L2 Italian, L1 French.* The idea of assimilating the “(reduced) cleft” answer to the Italian-style inversion answer is also directly suggested by adult L2 acquisition experimental results, where the pragmatics of the conversational exchange is controlled for, and it is kept constant. In an elicitation task of VS structures of the type in (2)b presented in Belletti & Leonini (2004), (non advanced) French L2 speakers of Italian have produced a very high percentage of cleft sentences in places where VS was elicited. The verbs utilized in the experimental task belonged to different classes (transitives, intransitive, unaccusatives): this property does not appear to have conditioned the kind of answer preferably produced by the L1-French speakers. As shown in Figure 1, 69% of the answers corresponded to a (reduced) cleft:



It is natural to conclude that the L2 speakers appear to have adopted an answering strategy which essentially extends to the L2 Italian the strategy of their L1, thus yielding Transfer from French. Interestingly, given the analysis of cleft sentences discussed in (5), the two strategies, VS and (reduced) cleft, can be considered much closer to each other than meets the eye<sup>10</sup>.

### 2.2.2 *More on L2 acquisition data: SV in L2 Italian, L1 English and German.*

In the same experimental conditions, German (non advanced) L2 speakers of Italian, in place of VS, have typically adopted the order SV (Belletti & Leonini (2004)). SV is the order appropriate in the L1 of these speakers, as indicated in D. above. Figure 2 below reports the results of the elicitation test in Belletti & Leonini (2004), for a group of L1 German speakers, and Figure 3 has the results from a native control group. Table 1 compares the salient aspects of the results for the three groups, French, German and Italian. The different strategies emerge in a particularly clear way from this table.

<sup>10</sup> It is interesting to point out that use of (reduced) clefts is also taught in the reversed situation of L2 French, in exactly the same conditions as those set in the experiment above (cfr. Sleeman (2004)).

Figure 2. VS - SV in the L1-German speakers

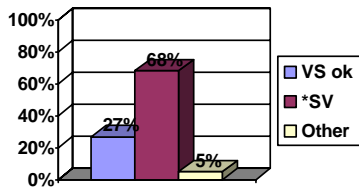


Figure3. VS - SV in the Control group

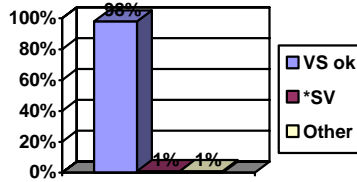


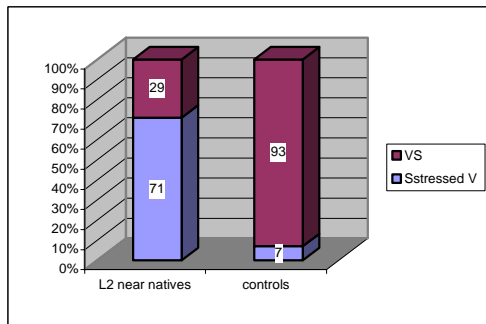
Table 1. Summary

L1	VS	SV	Cleft
Italian (control)	98%	1%	--
French	21%	9%	69%
German	27%	68%	--

Comparable experimental results have been obtained for L1-English speakers of L2 Italian and in attrition situations (Bennati (2003); (Tsimpli et al. (2004)). L1-English L2 speakers of Italian also at the near native level (Belletti, Bennati, Sorace (2006)) continue to prefer the order SV in Italian in the same experimental setting. Figure 4, from Belletti, Bennati & Sorace (2006) illustrates this point:

Figure 4. SV (S stressed) vs. VS across verb classes in L1-English “near native” speakers

VS: 29% near natives vs 93% controls (across verb classes)



As noted in Belletti, Bennati & Sorace (2006), the intonation of the produced SV sentences in L2 Italian is peculiar as S carries a special stress reproducing the parallel intonation of the answers in the L1 English (C):

*Who came?*

*John came / John did*

2.2.3 *Dissociation with availability of referential pronominal null subjects.* While, as seen above, VS is available only to a very limited extent, referential null subjects are much more widely available for L2 speakers of Italian. Spontaneous production data clearly show this point, for the same L2 speakers of Italian at the same time, both at the non-advanced and at the very advanced/near native level. This fact indicates a dissociation between the two grammatical options, as is assumed in the analysis outlined in section 2, where the possibility of VS is interpreted in terms of a weak correlation with the null subject property: a necessary, but not a sufficient property. Table 2 illustrates the point for the group of L1 French speakers:

Table 2. VS/Null subjects (French)

	VS	Null subjects
Control group	<b>98%</b>	<b>95%</b>
L1 Italian	381/390	333/352
L1 French	<b>21%</b>	<b>70%</b>
	25/117	73/104

(adapted from Belletti & Leonini (2004))

While the null subject property of Italian has been acquired by the L2 speakers, the Italian style use of the VP periphery is not acquired as a comparable level.

Similar considerations apply for the other groups of L2 speakers of Italian. The L2ers with L1 German, in the same testing situation, show a comparable ratio VS-null subjects (27% // 55%). The advanced/near native speakers of Italian with L1 English show a native like use of null subjects in a spontaneous production task. The results are reported in Table 3:

Table 3. Types of subjects

	Preverbal subjects		
	Null	Pronominal	Lexical
L2 near natives	<b>52%</b>	<b>14%</b>	<b>18%</b>
Total	(375/714)	(97/714)	(127/714)
Controls	<b>59%</b>	<b>4%</b>	<b>22%</b>
Total	(209/351)	(14/351)	(76/351)

(adapted from Belletti, Bennati & Sorace (2006))

This sharply contrasts with the results in Figure 4 from the same group of L2 near native speakers.

### 3. *Lines of interpretation: The different strategies*

Given the experimental results just reviewed, the following lines of interpretation can be proposed:

- The extension to the L2 of the L1 answering strategy is not to be interpreted as the reflex of a grammatical property, but rather as the manifestation of a, typically persistent, discourse “prominent” strategy.
- Since the L2 speakers, both non advanced and near native, do properly utilize VS to some, although relatively limited, extent, this indicates that more options are available to L2 speakers in the relevant discourse exchanges than to native speakers.
- It appears that the L2 speakers of Italian have more readily access to a different subject focalization strategy: the strategy active in their native L1 (e.g. English, French, German...). Crucially, however, no grammatical principle is violated in the extension of this strategy to the L2 in all cases. Adoption of the L1 strategy thus qualifies as a matter of preference. Using a term familiar from the psycholinguistic literature, we could say that the L1 strategy remains *primed* for the L2 speakers.

If this reasoning is on the right track, several questions need to be raised at this point. Let us consider the following four questions, which will be taken up and developed in some detail in the remaining of this article:

- i. How early in (first language) acquisition does a strategy take priority over the other(s)?
- ii. Are the different strategies active in (early) bilinguals, in the same way as they appear to be active in monolinguals in the different languages?
- iii. How can the prominence - leading to “priming” in L2 - of one strategy over the other(s) be characterized?
- iv. Why does a strategy take priority over the other(s) in different languages?

i. and ii. are mainly factual questions; one can speculate on iii. and iv. The following sections are devoted to develop some speculative answers to these questions.

#### 3.1 *The emergence of the strategy*

While results on question ii. are not available yet in a systematic way, a preliminary, although fairly clear answer to question i. can be formulated, based on a search of spontaneous production data from the CHILDES database. The following spontaneous productions indicate that the different strategies are in place early on, as soon as the first felicitous conversational exchanges can be documented. Note the quasi identical *wh* questions on the subject and the different answers provided by the child in the different languages considered,

French, Italian and English, whenever the answer is a whole sentence containing the verb<sup>11</sup>.

- French: \*MOT: qui est ce qui dodo dedans ?  
 \*CHI: *c'est Kiki* . (Gregoire, 2;3.01)
- \*MOT: qui t' a donné le collier, Philippe ?  
 \*CHI: Ginette .  
 \*MOT: non, non, c' est pas Ginette .  
 \*FAT: Ginette lui avait donné xxx .  
 \*CHI: *c' est Josiane* (Philippe, 2;1,26)
- \*CHI: la tortue va à , va pas à l'école .  
 \*FAT: non, qu' est-ce qui va pas à l'école ?  
 \*CHI: *c' est des garçons va à l' école* . (Philippe, 2;2.03)
- \*FAT: qui est Isabelle ?  
 \*CHI: *c' est une petite fille Isabelle* . (Philippe, 2;2.03)
- \*CHI : faire cuire à manger les vaches  
 \*MOT: faire cuire à manger ?  
 \*MOT: qui leur fait cuire à manger ?  
 \*CHI: *c' est le monsieur*. (Philippe, 2;2.03)<sup>12</sup>
- Italian: \*DON: ma chi te l' ha comprato, quel tamburo ?  
 \*CHI: Natale !

<sup>11</sup> It should be pointed out that, typically, children tend not to directly answer questions asked by the adult(s) they are interacting with, thus making the relevant context poorly available in the first productions. In contrast, children at the same time (same files) appear to be able to produce *wh* questions of the relevant type in a seemingly appropriate fashion. Furthermore, much as with adults, one word answers (e.g.: Q. Chi ha parlato? A. Gianni) tend to prevail, thus making the relevant context even less available. Nevertheless, some relevant exchanges can be found and they indicate the early emergence of the different strategies active in the different languages, as discussed in the text.

<sup>12</sup> In a few occasion the child seems to try out the different strategies in the first files. Cfr:

\*MOT: qui est tombé? \*CHI: est tombé moi (Philippe, 2;1.19)

\*MOT: qu' est-ce qui est cassé ? \*CHI: est cassé le xxx dedans . (Philippe, 2;1.19)

This apparent Italian-like strategy can be interpreted as resulting from use of a truncated/reduced structure (in terms of the analysis in Rizzi (1994; 2005). Note lack of subject agreement in the first answer, which crucially contrasts with the Italian closest equivalent where agreement is required.

\*MOT: qui l' avait réparé le tracteur ? \*CHI: papa réparé le tracteur. (Philippe, 2;1.19)

\*FAT: qui est gourmand ? \*FAT: j' ai pas entendu . \*CHI: Philippe est gourmand . (Philippe, 2;1,26)

This is an English-like strategy. Note that this kind of answer is also not totally excluded by some adult French speakers as well. See (18) below.

\*DON: chi ?

\*CHI: *portato Babbo Natale* (Camilla, 2;11.17)

\*CHI: mangia la pastasciutta

(gira una pagina dell' album)

\*CHI: E' Giulia questa , E' Giulia hai visto

(gira una pagina dell' album)

\*MOT: e questo?

\*CHI: *mangia la pastasciutta Diana .*

\*CHI: questo è il cacco .

\*MOT: ah il casco, ma più avanti .

\*CHI: *mangia la pastasciutta Diana .* (Diana, 2;00.17)

\*FAT: eh, chi è quello là ?

\*CHI: *E' Babbo Natali* (Guglielmo, 2;4.12)

\*FAT: ma chi te l' ha detto ?

\*CHI: mamma .

\*FAT: mamma ?

\*CHI: *no , l' ha detto Ow pambino* (Guglielmo, 2;4.12)

\*MOT: raccontalo a lui se vado a prendere, tu intanto raccontalo ad Alessandro chi te l' ha regalata .

\*CHI: *a bici Ow Ow ha regalata nonno Pietro .* (Raffaello, 2;6.13)

English: \*LOI: yeah # who else has a fire

\*CHI: *I do # I'm gonna show you* (Peter, 3;1.20)<sup>13</sup>

### 3.2 Speculations on questions iii. and iv.

As for the question in iii. it can be speculated that the very fact that an answering strategy becomes prominent in a given language suggests that the other possible strategies, which may be grammatically correct and compatible with the set of parametric choices of the language, are in sense “forgotten” by the speakers. The very existence of the different answering strategies can thus be seen as the manifestation of a general characteristic feature of language acquisition, often referred to as “learning by forgetting” (Mehler & Dupoux (1992), Rizzi (2005)). The interesting property of this instance is that this

<sup>13</sup> Note the similar exchange later on, with the same answer from the adult:

\*CHI: who pulled it . (Peter, 3;1.20)\*LOI: *Patsy did*

property seems to also be active in connection with grammatical options at the interface with discourse.

The question in iv. as to why a strategy should take (some) priority over the others is a particularly complex one and can be split in several sub-questions. In particular, those cases where an alternative answer would not involve the violation of any grammatical principle deserve special attention. Thus, if, as discussed above, grammatical reasons related to the negative setting of the null subject parameter rule out adoption of the straight VS strategy in French and similarly in English (and the non V2 character of this word order would also exclude its direct extension to German), still the following questions remain open:

- Why doesn't Italian (typically) choose the French or the English strategy?
- Why does French (typically) adopt the (reduced) cleft strategy, rather than the English focalization *in situ* strategy?
- Why does English (typically) adopt the *focalization in situ* strategy rather than the French (reduced) cleft strategy?

In all these alternatives no grammatical principle would be violated in the relevant language in each case.

Let us sketch out an answer to these three (sub-)questions in turn by considering pairs of languages each time.

3.2.1 *Italian/French*. The following exchange is virtually impossible in Italian:

- (10) a. *Chi ha parlato?* (a' *Qui a parlé?*)  
 b. *?? Sono/è io/Gianni (che ho/ha parlato)* (b' *C'est moi/Jean*)  
 -am-I (It's me)

A (reduced) cleft is not a real option in these contexts in Italian, even if no grammatical principle would rule it out. As pointed out above several times, (2)b is consistently the preferred answer in Italian, whenever V is pronounced. This has been shown very clearly by the results from the control group in the elicitation test, which provided a pragmatically controlled setting. A proposal along the following lines could be formulated. Suppose that the following presumably holds. Since "inversion" along the lines in (3) is directly available in a null subject language like Italian, it is adopted as it involves less structure and less computation, than a (reduced) cleft. It qualifies as a more economical option. This option then becomes a prominent answering strategy in the relevant contexts in Italian, and the (reduced) cleft option is consequently "forgotten".

Note, however, that, as should be expected in principle, the (reduced) cleft is also a possible option in Italian as well. This typically happens in the

particular circumstances where a cleft is contained in the question and it is then prompted, as in the exchanges in (11).

- (11) a. *Chi è che parla/ha parlato(/a parlare)?*  
Who is it who is talking (/to talk)
- b. *E' Gianni*  
It's Gianni (-is Gianni)
- c. *Sono io*  
It's me (- am I)
- d. *Chi è stato che ha rotto(/a rompere) il vaso*  
Who has been who has broken (/to brake) the vase  
"who broke the vase"
- e. *E' stato Gianni/Sono stato io*  
- has been Gianni/ -have been I  
"It's been Gianni/me"

The answers in (11)b/c-e are analyzed along the lines in (12):

- (12) *pro E'(stato)/sono(stato) ..[Foc Gianni/io[ VP [sc - (che ha/ho parlato/a parlare)]]..]*<sup>14</sup>
- ▲ \_\_\_\_\_

3.2.2 *Italian/English.* At first sight, adoption of the English strategy in Italian could not be equally discarded on the basis of economy considerations, as in the previous case concerning the French strategy. Let us first consider how the English strategy, repeated in (13), could be analyzed:

- (13) a. *Who came?*  
b. *John came*  
c. *John did*

Suppose that *focalization in situ* of the subject in its IP internal position is involved in (13)b, c. Note that (13)b should be kept distinct from (14):

- (14) JOHN came (not Bill)

<sup>14</sup> Similarly, in cases of the type in i. following, with different types/degrees of reduction involved in the answer (Cfr. discussion in Belletti (2005); on reduced clauses in similar contexts see also Brunetti (2003)):

- |   |   |
|---|---|
| i. a <i>Chi è (- alla porta)?</i><br>who is (- at the door) | b. <i>Sono/è io/Gianni (alla porta)</i><br>am/is I/Gianni (at the door)     |
| c <i>Chi è (che parla)</i><br>who is talking                | d. <i>Sono/è io/Gianni (che parlo/a)</i><br>am/is I/Gianni (who is talking) |



which displays left peripheral contrastive focalization. *Focalization in situ* in (13)b, c can be analyzed as involving DP-internal focalization, possibly along the lines overtly manifested in (15). The peculiar intonation on the subject could be the reflex of a silent DP internally focalizing “himself”, i.e. an activated DP internal focus position:

(15) *John himself came / did.*

Why isn't this focalization strategy adopted in Italian?<sup>15</sup> A hypothesis along the following lines may provide a promising explanation. Since, according to the proposed cartographic analysis, the new information focus interpretation of the postverbal VP peripheral subject can be directly read off the syntactic configuration in a null subject language like Italian, this option is considered preferable to the English one which necessarily requires both activation of a syntactic position (the DP internal focus position, as a “signal” for prosody) and, crucially, adoption of a special prosody. It is indeed only through the special prosody that the new information focus interpretation of the preverbal subject is signaled and distinguished from the standard “aboutness” interpretation that subjects normally receive in this position. In a language like Italian the English option could again count as ultimately less “economical” than adoption of straight VS, although in a subtler fashion than in the case of the French cleft option. It is then consequently “forgotten”. Note that it is virtually never adopted by Italian speakers, as clearly indicated by the results on the elicitation test in Figures 3,4/Table1 above.

Interestingly, when a new information focus object is involved, also in English the VP peripheral Focus position is directly exploited; in this case no incompatibility arises with other parametric choices of the language:

(16) a. *What have you written yesterday?*  
 b. *I have written a paper*

In the object case English is no different from Italian (cfr. (24)a, c below). This in turns strongly suggests that *focalization in situ* is a peculiar strategy adopted in English, which solely concerns the subject. Indeed, direct use of the VP periphery is not an available option for the subject in a non null subject language like English.<sup>16</sup>

<sup>15</sup> Note that Italian has a DP internal focalization similar to English (15):

Gianni stesso ha parlato di questo                      Gianni himself has spoken of that

<sup>16</sup> An answer like i. to the question in (16):

i. % *A paper* I have written

is not adequate as in English, much as in standard Italian, left peripheral focalization is dedicated to contrastive focalization and not to simple new information focus. This differentiates both English and Italian from the variety of Sicilian analyzed in detail in

In sum, a new information focus direct object in English can directly exploit the clause internal, VP peripheral new information focus position (with no need of a special prosody here). Hence, this option is taken ((16)b). The same cannot be done with a subject of new information for the reasons discussed throughout, ultimately due to the negative setting of the null subject parameter.

It is worth pointing out that German as well appears to display a similar behavior in object questions, thus indicating a direct use of the clause internal VP periphery, the traditional *Mittelfeld*. (17)b is given by German speakers as the most natural answer to (17)a. In contrast, the most natural answer to the subject question in (17)c is considered (17)d, as also indirectly confirmed by the experimental results on the L2 Italian of L1 German speakers.<sup>17</sup>

- (17) a. *Was hat Mary gekauft?*  
 what has Mary bought  
 b. *Mary hat einen Pullover gekauft*  
 Mary has bought a sweater  
 c. *Wer ist nach Rom gefahren?*  
 who went to Rome  
 d. *Mary ist nach Rom gefahren.*  
 Mary went to Rome

3.2.3 *French/English*. On the reason why French should privilege a seemingly uneconomical strategy such as the (reduced) cleft strategy over the English style *focalization in situ*, the following should be observed.

First of all it should be noted that the English strategy is to some extent active in French as well: for some French speakers the following exchange may sound acceptable, with a special stress on the preverbal subject:

- (18) a. *Qui a parlé?*  
 b. *(??) Jean a parlé*

---

Cruschina (2004) where the equivalent to i. given in the comparable exchange in ii. (ii.b) is perfectly acceptable:

- |    |                             |                              |
|----|-----------------------------|------------------------------|
| i. | a Chi scrivisti airi?       | what did you write yesterday |
|    | b <i>N'articulu</i> scrissi | an article I have written    |

See also Belletti (2005) for some discussion of this point.

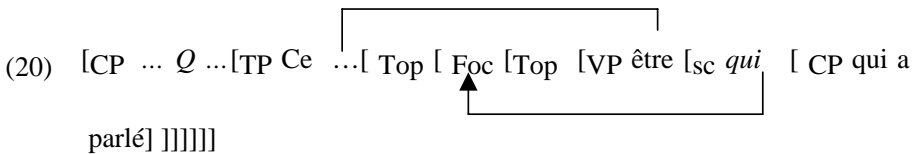
<sup>17</sup> Thanks to G.Grewendorf for providing the relevant data. This indicates that the left peripheral position filled by the subject in (17)d in the V2 construction can be compatible with the new information focus interpretation. Other possible appropriate orders, such as i.b below where the low subject should fill the low *Mittelfeld* focus position and a different constituent satisfies V2, will not be addressed in detail here; see Grewendorf (2004), Haeberli (2002) for relevant closely related discussion:

- |    |                                     |                  |
|----|-------------------------------------|------------------|
| i. | a <i>Wer ist nach Rom gefahren?</i> | who went to Rome |
|    | b <i>Nach Rom ist Mary gefahren</i> |                  |

On the other hand, it can be speculated that the ample use of a (reduced) cleft in answers concerning the subject could somehow be related to the widespread use, in this language, of cleft sentences and *wh in situ* in question formation. Consider in this regard the parallelism holding in (19)a,b: if an analysis of *wh-in situ* along the lines proposed in Kato (2003) is adopted (Belletti (2005)), both the *wh*-phrase in the (colloquial) question (19)a and the subject *Jean/moi* in the answer (19)b fill the same VP peripheral focus position<sup>18</sup>:

- (19) a. *C'est qui qui a parlé?*  
 b. *C'est Jean/moi*

According to the quoted analysis, *wh in situ* exploits the VP periphery, with the *in situ wh*-word being actually moved to the low VP peripheral focus position. Compare (5) above with the representation of the derivation of the question in (19)a given in (20):



It is tempting to propose that the cleft computation can be considered overall less costly in French. Thus, it may qualify as a prominent suitable option to essentially mimic VS in producing an answer with a new information subject. This appears to be the case regardless the particular shape of the preceding question, hence, also when it does not contain a full cleft, as in B/(5)a where the question is “*qui a parlé ?*”. Use of the (reduced) cleft answer in French can thus be considered an “extended” use (as it is also suggested by some of the adult-child exchanges above). Possibly, the extension is also favored by the existence of the now *figée* expression “*est-ce que*” in French<sup>19</sup>.

When an object is concerned in the question, answering with a (reduced) cleft is an available strategy in pairs where a *wh in situ* cleft is also contained in

<sup>18</sup> The reduced cleft answer remains prompted also for questions where the *wh* has further moved to the left periphery, as in i.:

i. a. *Qui est-ce qui a parlé ?* b. *C'est Jean/moi*

<sup>19</sup> It can also be speculated that the (reduced) cleft answer entails a partial (re)interpretation of the question compatible with the peculiar identification entailing “uniqueness” provided by a cleft (Kiss (1998)). This would make sense of some speakers’ intuitions concerning the extent to which the reduced cleft actually appears to be contextually appropriate. Interestingly, the exchanges of the experimental elicitation task, appear to have identified (one) such context (for French speakers).

the (colloquial) question, hence prompted, as in (21) following. In this respect then, French is not different from Italian as illustrated by (22):<sup>20</sup>

- (21) a. *C'est quoi que t'as lu?*  
it is what that you have read  
b. *C'est un roman (que j'ai lu)*  
it is a novel
- (22) a. *Che cos'è che hai letto?*  
what is it that you have read  
b. *E' un romanzo*  
it is a novel

The question in (22)a is the closest analog to the question in (21)a, modulo unavailability of *wh in situ* in Italian.

In the object case, however, the reduced cleft answer is less clearly available in cases where a (real, unambiguous) cleft is not prompted in the question<sup>21</sup>:

- (23) a. *Qu'est ce que t'as lu?*  
what have you read  
b. *\*? C'est un roman*  
it is a novel  
c. *J'ai lu un roman*  
I have read a novel

This is also very clearly the case in Italian; (24) sharply contrasts with (22):

- (24) a. *Che cosa hai letto?*  
b. *\*? E' un romanzo*  
c. *Ho letto un romanzo*

Once again, as discussed in connection with (16) in English above, in the object case direct use of the low focus position in the VP periphery is possible throughout, hence it is preferably adopted. It should be emphasized here that, interestingly, no difference emerges in question-answer pairs concerning the

<sup>20</sup> Nor from English, as also indirectly indicated by (25) below (involving a new information subject).

<sup>21</sup> If one reinterprets the question as involving a cleft, as in “Qu'est-ce que c'est que tu as lu?” (equivalent to Italian (22)a), (23)b may become more appropriate/acceptable. But the crucial insight here is that this reinterpretation is not “grammatically enforced”, nor favored, in the case of the object as it is in the case of the subject (due to the necessity to make the VP periphery available in a way compatible with the non-null subject nature of French).

object in the different languages considered throughout, in sharp contrast with the subject case .

3.2.4 *English/French*. As one would expect by now, the reduced cleft answer on the subject is not completely excluded in English; it becomes available in particular circumstances<sup>22</sup>:

- (25) a. *Who is knocking at the door?*  
 b. It's [Foc me/John ... [ be [ sc - knocking at the door]]..]

As usual with “be”, (25)b is a perfectly natural answer to an (identificational) question like (26):

- (26) *Who is it/this?*

However, similarly to Italian in this respect, the (reduced) cleft does not become prominent in English. This should be ultimately due to reasons of computational, structural economy along the same lines discussed for Italian.

#### 4. *Some general conclusions*

The following main points can be singled out from the previous discussion and taken as general conclusions of this work.

Instances of the detected answering strategies dedicated to new information subjects are found across the languages investigated with one exception. This exception is due to formal grammatical reasons: the pure VS strategy is limited to null subject Italian.

(L2) Acquisition data make the very existence of the different answering strategies all the more visible.

Prevalence of one strategy over the other can be due to economy reasons, e.g. Italian and English vs French; to structural reasons, e.g. Italian vs English, ultimately reducible to economy as well; and to reasons internal to the grammatical system of a given language, French, which make the (reduced) cleft computation, somehow more prominent, hence overall less costly than in other languages, e.g. French vs English/Italian (and German).

Prevalence of one strategy over the other(s) appears to occur relatively early in (first) language acquisition.

“Learning by forgetting” seems to occur in this domain whereby the different, grammatically possible strategies are “forgotten” fairly soon and one strategy becomes prevalent over the others.

---

<sup>22</sup> E.g. “John” has to be somehow present in the immediate context in order for (25)b to sound appropriate (C.Collins, p.c.).

It can be speculated that the latter constitutes (one of) the reason(s) why the different answering strategies seem to resist the kind of “retuning” necessary in L2 acquisition, so that the L1 strategy remains prominent in the relevant discourse conditions and it is characteristically transferred to the L2, also at the very advanced level.

### References

- Belletti, Adriana. 2004a. “Aspects of the low IP area”. L. Rizzi 2004. 16-51.  
 ----- 2004b. ed. *Structures and Beyond. The Cartography of Syntactic Structures, Volume 3*. Oxford & New York: Oxford University Press.  
 ----- 2005. “Answering with a cleft. The role of the null subject parameter and the VP periphery”. *Contributions to the XXX “Incontro di Grammatica Generativa”* ed. by L. Brugé, G. Giusti, N. Munaro, W. Schweikert & G. Turano. Venezia: Cafoscarina.  
 ----- 2005. “Extended Doubling and the VP periphery”. *Probus*, 17:1. 1-35.  
 ----- 2007. “Kinds of Evidence for Linguistic Theory”, *Proceedings of 17<sup>th</sup> Symposium on Theoretical and Applied Linguistics*, Aristotle University of Thessaloniki.  
 ----- & Chiara Leonini. 2004. “Subject inversion in L2 Italian”. *Eurosla Yearbook 4*, ed. by S. Foster-Cohen, M. Sharwood Smith, A. Sorace & M. Ota. 95-118. Amsterdam & Philadelphia: John Benjamins.  
 ----- Elisa Bennati & Antonella Sorace. 2006. “Theoretical and developmental issues in the syntax of subjects: evidence from near-native Italian”, Ms. Univ. of Siena & Univ. of Edinburgh.  
 Bennati, Elisa. 2003. *Soggetti postverbali in italiano L2 di parlanti near-natives con inglese L1. Un esperimento*. “Tesi di Laurea Specialistica”, University of Siena.  
 Brunetti, Lisa. 2003. *A Unification of Focus*. Ph.D. Diss., University of Florence.  
 Cardinaletti, Anna 2004. “Toward a cartography of subject positions”. L. Rizzi 2004. 115-165.  
 Cecchetto, Carlo. 2000. “Doubling Structures and Reconstruction”. *Probus*, 12:1. 93-126.  
 Chomsky, Noam. 2001. “Derivation by Phase”. *Ken Hale: A Life in Language*, ed. by M. Kenstowicz. Cambridge (Mass.): MIT Press.  
 Cinque, Guglielmo. 2002. ed. *Functional structure in DP and IP. The Cartography of Syntactic Structures - Volume*. Oxford & New York: Oxford University Press.  
 Cruschina, Silvio. 2004. *Il Focus di nuova informazione e la periferia sinistra: la struttura informativa della frase in Siciliano*. “Tesi di Laurea Specialistica”, University of Siena.

- Grewendorf, Günther. 2004. "The discourse configurability of scrambling". *The Free Word Order Phenomena*, ed. by J.Sabel and M. Saito. Berlin: DeGruyter.
- Haerberli, Eric. 2002. *Features, Categories and the Syntax of A-Positions*. Dordrecht: Kluwer.
- Kato, Mary. 2003. "The interpretation and derivation of *wh*-in-situ constructions in Brazilian Portuguese". Ms. UNICAMP.
- Kiss, Katalin E. 1998. "Identificational Focus versus Information Focus". *Language*, 74::2. 245- 273.
- Kayne, Richard. 2005. "On Parameters and on Principles of Pronunciation". Ms. NYU.
- Mehler, Jacques & Emmanuel Dupoux. 1992 *Naître humain*, Paris: Editions Odile Jacob.
- Moro, Andrea. 1997. *The raising of predicates*. Cambridge: Cambridge University Press.
- Munaro, Nicola & Jean Yves Pollock. 2005. "Qu'est-ce que (*qu*)-est-ce-que? A Case Study in Comparative Romance Interrogative Syntax". *The Oxford Handbook of Comparative Syntax*, ed. by G.Cinque & R.Kayne, 542-606, Oxford & New York: Oxford University Press.
- Nicolis, Marco. 2005. *On pro drop*, Ph.D. Diss., University of Siena.
- Rizzi, Luigi. 1994. "Some notes on linguistic theory and language development: The case of root infinitives". *Language Acquisition*, 3. 371-393
- 2004. ed. *The Structure of CP and IP. The Cartography of Syntactic Structures, Volume 2*, Oxford & New York: Oxford University Press.
- 2005. "On the grammatical basis of language development: a case study". *The Oxford Handbook of Comparative Syntax*, ed. by G. Cinque and R. Kayne. Oxford & New York: Oxford University Press.
- 2005a. "Grammatically Based Target Inconsistencies in Child Language". *Proceedings of the Inaugural Conference on Language Acquisition-North America (GALANA)*, ed. by K.U Deen, J.Nomura, B.Shulz & B. Schwartz. UCONN/MITWPL.
- Sleeman, Petra. 2004. "Guided learners of French and the acquisition of emphatic constructions". *IRAL* 42. 129-151.
- Tsimpli, Ianthi, Antonella Sorace, Caroline Heycock & Francesca Filiaci. 2004. "First language attrition and syntactic subjects: a study of Greek and Italian near-native speakers of English". *International Journal of Bilingualism* 8. 257-277.

## TRANSFER IN PERIPHRASTIC CAUSATIVES IN L2 ENGLISH AND L2 SPANISH

MÓNICA CABRERA AND MARIA LUISA ZUBIZARRETA  
*Loyola Marymount University and University of Southern California*

This paper reports the results of a bidirectional study on the L2 acquisition of English and Spanish periphrastic causatives by adult learners. It is argued that different L1 grammatical properties are transferred at different levels of L2 proficiency. At earlier stages, L2 learners focus on L1 word order properties. However, at the advanced proficiency stage, L1 distinctions between causation types encoded by certain periphrastic causatives seem to be more at play. It is claimed that the L2 data is more consistent with a view of transfer as a developmentally constrained process.

### 1. *English and Spanish periphrastic causatives*

#### 1.1 *Lexical versus periphrastic causatives*

A causation situation is made up of two sub-events: the causing event and the result event. It has been proposed in the literature that, in lexical causatives, a single verb encodes the causing and the result sub-events (Shibatani 1976, Levin & Rappaport-Hovav 1995, Hale & Keyser 2002, Zubizarreta & Oh 2004, among others). For example, in (1), *break/romper* can be paraphrased as ‘to cause to become broken’, where ‘to cause’ expresses the causing sub-event and ‘to become broken’, the result sub-event.

- (1) a. Peter broke the window.  
b. *Pedro rompió la ventana.*

Not all verb classes can appear in lexical causatives. Unergatives and non-alternating unaccusatives need to be in periphrastic causatives, i.e. embedded under *make/hacer*, to express a causative situation, as shown in (2) and (3) below.

- (2) a. \*Peter laughed Mary. / \**Pedro rió a María.*  
“Peter caused Mary to laugh.”  
b. Peter made Mary laugh. / *Pedro hizo reír a María.*



- (3) a. \*Peter arrived Mary at school late. / \**Pedro llegó a María tarde a la escuela.*  
 “Peter caused Mary to arrive at school late.”  
 b. Peter made Mary arrive at school late. / *Pedro hizo llegar tarde a la escuela a María.*

English and Spanish are different with respect to the possibility of having lexical causatives with verbs of manner-of-motion with and without a goal PP. In English, (4a) and (4b) are acceptable and marginally acceptable, respectively, while (5a) and (5b) are unacceptable in Spanish, irrespective of the presence or absence of the goal PP. However, in both languages, verbs of manner-of-motion can appear in periphrastic causatives, as exemplified in (6).

- (4) a. The general marched the soldiers to the camp.  
 b. ??The general marched the soldiers.  
 (5) a. \**El general marchó a los soldados al campamento.*  
 b. \**El general marchó a los soldados.*  
 (6) a. The general made the soldiers march (to the camp).  
 b. *El general hizo marchar a los soldados (al campamento).*

Alternating unaccusatives are allowed in lexical and periphrastic causatives in both languages (cf. 7). However, there are interpretation differences between the lexical and the periphrastic forms. Lexical causatives encode direct causation, while periphrastic causatives can express indirect causation (Shibatani 1973, Comrie 1985, Pinker 1989, Goldberg 1995). Causation is indirect when there is an intervening volitional entity (an agent) between the causer and the causee; for example, in (7c), Mary is an intervening agent between Peter, the causer, and the window, the causee. On the other hand, in a situation of direct causation (also known as ‘manipulative causation’), there is no intervening entity between the causer and the causee (cf. 7a). The periphrastic causatives in (7b) express direct causation in English, but indirect causation in Spanish. We will return to this issue in the next section.

- (7) a. Peter broke the window / *Pedro rompió la ventana.*  
 b. Peter made the window break. / *Pedro hizo romper la ventana.*  
 c. Peter made Mary break the window. / *Pedro hizo romper la ventana a María.*

In summary, periphrastic causatives are structures formed with a causative verb, *make/hacer*. Their distribution is less restricted than the distribution of lexical causatives. They can be derived from all verb classes (unergatives, alternating and non-alternating unaccusatives, manner-of-motion



- (10) a. *Pedro hizo reír a María.*  
 b. *Pedro la<sub>i</sub> hizo reír t<sub>i</sub>.*

However, the verb and the infinitive are still morphologically independent words in Spanish. Guasti (1996) claims that, after incorporation, the causative verb incorporates and raises alone to combine with inflectional morphemes<sup>4</sup>. On the other hand, differently to Spanish, the English causative *make* is syntactically and morphologically an independent verb since it does not trigger incorporation

1.2.2 *The hacer-por construction.* In the literature on Romance causatives, two classes of periphrastic causatives, which are syntactically and semantically different, have been reported to exist (Burzio 1986; Zubizarreta 1985; Guasti 1993, 1996; among others). They are known by their French names: the *faire-object* and the *faire-par* constructions. We will refer to them using their Spanish names: *hacer-object* and *hacer-por*. An example of each of these constructions is provided in (11a) and (11b), respectively<sup>5</sup>.

- (11) a. *Juan hizo romper la ventana a Pedro.*  
 Juan made break the window to Pedro  
 “Juan made Pedro break the window”  
 b. *Juan hizo romper la ventana (por Pedro).*<sup>6</sup>  
 Juan made break the window by Pedro  
 “Juan had the window broken by Pedro”

Burzio (1986) has shown that in (11a) the causee is an argument, but in (11b) it is an adjunct. The causee can function as anaphor antecedent in (12a), but not in

---

<sup>4</sup> In Italian, according to Guasti (1996), evidence for this view comes from the fact that the adjacency between the causative verb and the infinitive can be broken by adverbial elements, as illustrated in (i).

(i) I professori non fanno, più commentare (tutti<sub>i</sub>) lo stesso libro a Lia.  
 the professors not make not comment (all) on the-same book to Lia  
 ‘The professors do not all make Lia comment on the same book anymore’

In Spanish, adverbial elements are marginally acceptable between the causative verb and the infinitive. However, when the causative verb is in the infinitive form, a clitic can appear between *hacer* ‘make’ and the infinitive, as shown in (ii). Notice that this is possible only when the causative verb is in the infinitive form; when it is a fully inflected verb, the clitic is in preverbal position (cf. 10). We thank an anonymous reviewer for pointing this fact to us.

(ii) Pedro pudo hacerla reír. (Pedro could make-her laugh ‘Pedro could made her laugh’)

<sup>5</sup> As it has been reported (Guasti 1996, among others), in Spanish, the use of the *por* ‘by’ phrase in the *hacer-por* construction is more restricted. In (11b), the PP *por Pedro* ‘by Pedro’ is preferably omitted. In the present study, the *hacer-por* causative was tested with the *por* PP omitted.

<sup>6</sup> The relevant interpretation is the one in which Pedro breaks the window; not the one in which the window was broken because of Pedro.

(12b). Sentence (12b) is not interpretable.

- (12) a. *Los policías hicieron acusarse a sí mismos<sub>i</sub> a los ladrones<sub>i</sub>.*  
 The policemen made accuse themselves to the thieves  
 “The policemen made the thieves accused themselves”  
 b. *\*Los policías hicieron acusarse a sí mismos<sub>i</sub> por los ladrones<sub>i</sub>.*  
 The policemen made accuse themselves by the thieves

Since the agentive *por* PP is an adjunct, it can be left phonetically unrealized as in (13).

- (13) *Juan hizo romper la ventana.*  
 Juan made break the window  
 “Juan had the window broken”

Burzio has claimed that (13) is a case of the the *hacer-por* and not of *hacer-object* construction. The reflexive form of the causative is acceptable under *hacer-por* (14a) but not under *hacer-object* (14b). Sentence (14c), where the *por* PP is omitted, is acceptable; therefore, it must be a case of *hacer-por*.

- (14) a. *María<sub>i</sub> se<sub>i</sub> hizo acusar por Juana.*  
 María herself made accuse by Juana.  
 “María had herself accused by Juana”  
 b. *\*María<sub>i</sub> se<sub>i</sub> hizo acusar a Juana.*  
 María herself made accuse to Juana  
 c. *María<sub>i</sub> se<sub>i</sub> hizo acusar.*  
 María herself made accuse  
 “María had herself accused”

The *hacer-por* causative and the passive have been frequently considered to have similar properties. In both an optional *por* PP is allowed. Both share similar restrictions that have been noted in the previously cited works. For example, expressions of inalienable possession (cf. 15) or possessive expressions (cf. 16) cannot be used either in the passive or in *hacer-por*. The examples below, based on Guasti (1996), illustrate this point.

- (15) a. *\*La mano será alzada por Juan.*  
 “The hand will be raised by Juan”  
 b. *\*María hará alzar la mano por Juan.*  
 “María will make raise the hand by Juan”  
 (16) a. *\*Su trabajo será aprendido por Juan.*  
 “His work will be learned by Juan”

- b. \**José hará aprender su trabajo por Juan.*  
 “José will make learn his work by Juan”

Zubizarreta (1985) claims that *hacer* as a syntactic affix can trigger two effects on the external argument of the embedded verb. It can internalize it (the *hacer-object* construction), or it can block its syntactic realization (the *hacer-por* construction). In this sense, the causative verb *hacer* in *hacer-por* behaves similarly to passive morphology. Based on the observation that the external argument is not projected into an argument position in the *hacer-por* construction, Guasti (1996) proposes that *hacer* has a bare VP, instead of a small clause, as its complement. When the *por* PP is overt, it is realized as an adjunct to VP (cf. 17).

- (17) a. [IP X *hacer* [VP [VP VP] *por* Y]  
 b. [IP *Pedro hizo* [VP [VP *romper la ventana*] *por Pedro*]

In English, the causative verb *make* behaves morphosyntactically as an independent verb, and not as an affix. The unacceptability of (18b) shows that in (18a) there is no implicit agent. Zubizarreta (1985) suggests that the embedded verb *break* in (18a) is in the intransitive/inchoative form (cf. 19a), and, therefore, there is no agent available in the structure. The unacceptability of (18b) and (19b) follows from that fact.

- (18) a. John made the window break.  
 b. \*John made the window break by Mary.  
 (19) a. The window broke.  
 b. \*The window broke by Mary.

The proposed structure of the English periphrastic causative derived from the intransitive/inchoative form is shown in (20a).

- (20) a. [IP X *made* [IP Y<sub>i</sub> [VP V t<sub>i</sub>]]  
 b. [IP John made [IP the window<sub>i</sub> [VP break t<sub>i</sub>]]

The structural difference between English and Spanish periphrastic causatives motivates their different interpretations. Since there is an implicit agent in (21a), it is interpreted as expressing indirect causation, i.e. the implicit agent is an entity that mediates between the causer *Juan* and the causee *la ventana* ‘the window’. In (21b), there is no mediating entity between agent and theme; therefore, it can be interpreted as encoding direct causation.

- (21) a. *Susana hizo abrir la puerta.*  
 “Susana had the door open”  
 b. Susan made the door open.

English native speakers tend to consider the periphrastic and the lexical causatives of alternating unaccusatives as synonymous, i.e. both *Susana made the door open* and *Susana opened the door* encode direct causation. However, there are pragmatic conditions under which one form is preferred to the other. The lexical form is preferred to express manipulative causation, i.e. when there is physical contact between causer and causee (Shibatani 1973, 1976). The periphrastic form, on the other hand, tends to be preferred if the causer does not manipulate the causee. For example, (21b) can be used if Susan opened a window, a breeze entered the room, and as a result the door opened.

The interpretations of (21b) discussed above are not cases of indirect causation, but of two possible interpretations of a direct causation situation. Given the pragmatic nature of the preference for one form over the other, variation among English speakers in the acceptability of these periphrastic causatives is expected. On average, the English native speakers that we tested as control group tended to accept periphrastic causatives with alternating unaccusatives to express a direct causation interpretation. This is what we expect if the syntactic structure of (21b) is (20a), i.e. if there is no agent available in the structure between the highest causer and the causee. On the other hand, Spanish periphrastic causatives (cf. 21a) are interpreted as encoding indirect causation due to their different syntactic structure, which includes an implicit agent in the complement of the causative verb *hacer* ‘make’ (cf. 17a).

In this section, we have seen that periphrastic causatives are productive structures, which are not restricted to a specific verb class. However, English and Spanish periphrastic causatives are different in two aspects. We summarize these differences in (22) and (23) below.

- (22) Morphosyntactic status of the causative verb:  
 In Spanish, but not in English, the causative verb *hacer* ‘make’ behaves like a morphosyntactic affix that forms a complex verb with the infinitive. This property motivates a difference in word order.
- (23) Complement of the causative verb with alternating unaccusatives:  
 Periphrastic causatives of alternating unaccusatives (*break/romper*) encode direct causation in English and indirect causation in Spanish, due to the different syntactic structure of the complement of *make/hacer*. In Spanish, the complement has a “passive” structure including an adjunct agentive *por* PP. In English, it has an intransitive/inchoative structure.

Our experimental study investigates how L1 knowledge influences the L2

acquisition of periphrastic causatives. More specifically, how the properties presented above determine interlanguage features. To our knowledge, Montrul (1997) and Cabrera & Zubizarreta (2003) are the only studies that have been conducted on this subject. In the next section, we discuss these studies.

## 2. *Previous studies*

### 2.1 *Montrul (1997)*

Montrul (1997) conducted an English/Spanish bi-directional study, which investigated the L2 acquisition of lexical and periphrastic causatives with non-alternating unaccusatives (*arrive/llegar*), unergatives (*laugh/reír*), and alternating unaccusatives (*break/romper*). The goal of this study was to investigate whether adult L2 learners treat periphrastic causatives in the same way that children learning their L1 do. Naturalistic and experimental studies of English child language have reported that children use lexical and periphrastic causatives interchangeably at some point in the acquisition process (Bowerman 1982, Slobin 1977). It has been concluded that children go through a stage in which they do not differentiate between direct and indirect causation.

Montrul (1997) investigates whether adult L2 learners make a distinction between direct and indirect causation or not. Adult L2 learners at the intermediate level of proficiency were tested using a picture-based acceptability judgment task. Learners had to rate the acceptability of periphrastic causative sentences in the context of pictures representing direct causation situations (situations involving an agent and a theme/patient only). It was found that periphrastic causatives of non-alternating unaccusatives (*arrive/llegar*) and unergatives (*laugh/reír*) were highly accepted, and that alternating unaccusatives (*break/romper*) were rejected by L1 Spanish learners or marginally accepted by the L1 English group. No significant differences between the L2 learners and the control groups were found. In other words, both groups of subjects behaved comparably to native speakers of the L2.

Montrul concluded that, differently to children, adult L2 learners are sensitive to the direct/indirect causation distinction. The L2 learners' responses were explained as a case of full L1 transfer. The assumption behind this conclusion is that English and Spanish periphrastic causatives have the same properties. However, as discussed in Section 1, English and Spanish are different in two aspects: word order and causation type encoded by periphrastic causatives of alternating unaccusatives, i.e. direct causation in English and indirect causation in Spanish. If learners transfer all their L1 knowledge when learning these structures in the L2, their acceptance of periphrastic causatives that exhibit a word order different to that of their L1 is not what we expect. Nevertheless, the difference between L1 English and L1 Spanish learners with respect to alternating unaccusatives suggest transfer of some syntactic properties of the L1, but not full transfer.

## 2.2 *Cabrera & Zubizarreta (2003)*

Another study that has brought data on the L2 acquisition of periphrastic causatives is Cabrera & Zubizarreta (2003). In this study, L1 English/L2 Spanish learners were tested with a picture acceptability judgment task based on Montrul (1997). All the pictures represented direct causation situations because the goal was to test whether periphrastic causatives were accepted with that interpretation. Differently to Montrul (1997), L2 learners at different levels of proficiency were tested. Similarly to Montrul (1997), it was found that learners preferred periphrastic causatives with non-alternating unaccusatives and unergatives to those with alternating unaccusatives. However, for alternating unaccusatives, learners at all levels had a significantly higher mean than the control group of Spanish native speakers. The fact that L1 English speakers tended to accept periphrastic causatives with alternating unaccusatives (*Peter made the window break*) with a direct causation interpretation indicates L1 transfer effects.

Summarizing, previous studies on the L2 acquisition of periphrastic causatives in English and Spanish have shown that learners, irrespective of their L1, accepted non-alternating unaccusatives and unergatives in that configuration. L1 English speakers tended to accept them when expressing direct causation, while the L1 Spanish group did not. The data suggest that L1 transfer plays a role in the acquisition of these structures. A study that further explores the role of L1 transfer in the acquisition of periphrastic causatives is necessary. We designed such study taking into consideration different levels of proficiency, and control groups for the L1 and the L2.

## 3. *Present study*

### 3.1 *Hypothesis and predictions*

Our study investigates how L1 knowledge influences the L2 acquisition of periphrastic causative structures in English and Spanish. Our central hypothesis is the following:

(24) Central hypothesis:

The properties of the L1 determine which verb classes are allowed in periphrastic causatives in the interlanguage.

From this hypothesis, the following predictions follow:

- (25) If L2 learners transfer the morphosyntactic status of the causative verb from their L1 (cf. 22), L1 English / L2 Spanish learners, and L1 Spanish / L2 English learners should reject periphrastic causatives with all verb classes based on the difference in word order between L1 and L2.



- (26) If L2 learners transfer the structure of the complement of the causative verb in periphrastic causatives of alternating unaccusatives (cf. 23):
- a. L1 English subjects should accept periphrastic causatives with alternating unaccusatives to the same extent as the L1 controls do. Some should accept these sentences with a direct causation interpretation due to their syntactic structure, but others should reject them for pragmatic reasons because they are less preferred to express manipulative causation.
  - b. The L1 Spanish subjects should reject these periphrastic causatives with a direct manipulative causation interpretation.

Predictions (25) and (26) are mutually excluding. Therefore, if transfer of these properties is at play, the only possible scenarios are (a) only one of these predictions is borne out or (b) some subsets of subjects behave according to one prediction or the other, i.e. individual variation.

### 3.2 *Experimental design*

3.2.1 *Participants.* There were two experimental and two control groups. The L1 English/L2 Spanish experimental group consisted of 71 students in the Spanish Basic Language Program at the University of Southern California (mean age = 19.20), tested in Los Angeles, California. The L1 Spanish/L2 English experimental group consisted of 60 students in the English Language Program at the Pontificia Universidad Católica del Perú (mean age = 21.40), tested in Lima, Perú. The control groups consisted of 18 native-Spanish-speaking students at the Pontificia Universidad Católica del Perú (mean age = 26.18), tested in Lima, Perú, and of 17 native-English-speaking students at the University of Southern California (mean age = 18.94), tested in Los Angeles, California.

The L2 proficiency level of the experimental groups was measured using a Cloze test, which included 3 paragraphs with a total of 75 blank spaces (1 blank space every 5 words), and which was corrected with the acceptable word criterion. For each experimental group, 3 levels of proficiency were obtained. In the L1 English/L2 Spanish experimental group, there were 28 beginners, 27 intermediates, and 16 advanced learners. In the L1 Spanish/L2 English experimental group, we found 19 beginners, 21 intermediates, and 20 advanced learners. The proficiency levels were significantly different from each other and from their corresponding control group ( $p < .0001$ ) in terms of their mean score on the Cloze test.

3.2.2 *Tests.* Besides the Cloze proficiency test, a verb-translation task (VTT) and an acceptability judgment test (AJT) were used. A total of 24 verbs were tested in the VTT and in the AJT. In the VTT, subjects were asked to translate a list of verbs in the L2 (cf. Table 1) into their L1. The purpose of this test was to

determine whether the subjects knew the idiosyncratic meanings of verbs, so that only the AJT responses corresponding to correctly translated verbs could be used in computing results. The verb classes tested in this task were alternating and non-alternating unaccusatives, unergatives, and verbs of manner of motion.

Alternating Unaccusatives (AU)	Non-Alternating Unaccusatives (NAU)	Unergatives (E)	Manner-of-motion (M)
<i>romper</i> / break	<i>aparecer</i> / appear	<i>ladrar</i> / bark	<i>bailar</i> / dance
<i>quemar</i> / burn	<i>llegar</i> / arrive	<i>acampar</i> / camp	<i>volar</i> / fly
<i>cerrar</i> / close	<i>venir</i> / come	<i>llorar</i> / cry	<i>saltar</i> / jump
<i>cocer</i> / cook	<i>entrar</i> / enter	<i>luchar</i> / fight	<i>marchar</i> / march
<i>abrir</i> / open	<i>ir</i> / go	<i>reír</i> / laugh	<i>desfilear</i> / parade
<i>parar</i> / stop	<i>ocurrir</i> / happen	<i>fumar</i> / smoke	<i>correr</i> / run

Table 1: Verbs tested in the VTT and in the AJT

The purpose of the AJT, which consisted of a total of 42 periphrastic causative sentences (24 test items and 18 filler sentences), was to see whether the subjects accepted the verb classes tested in the VTT in the periphrastic causative configuration (cf. Table 2). Following Montrul's (1997) design, the interpretation provided for the periphrastic causatives was a picture representing a direct manipulative causation situation, i.e. an agent manipulating a theme. Participants were instructed to rate the sentences focusing on grammaticality/acceptability in the target language, according to a 7-point Likert scale, from -3 (completely unacceptable) to +3 (completely acceptable). They were also instructed to use the value 0 in case they thought the sentence was neither good nor bad, and to leave the question blank if they were not sure about the acceptability of the sentence. Subjects were asked to rewrite correctly the sentences that they rated in the negative side of the scale (-1, -2 or -3). The information collected through these corrections was very useful in order to determine whether L2 learners rejected a periphrastic causative sentence due to the difference in word order or to the interpretation. Figure 1 illustrates the item used to test the manner-of-motion verb *jump* in a periphrastic causative.

<b>Alternating unaccusatives (AU)</b>	<i>*Pedro hizo romper la ventana.</i> Peter made the window <u>break</u> .
<b>Non-alternating unaccusatives (NAU)</b>	<i>El padre hizo llegar a la niña tarde a la escuela.</i> The father made the girl <u>arrive</u> at school late.
<b>Unergatives (E)</b>	<i>Pedro hizo reír a Juan.</i> Peter made John <u>laugh</u> .
<b>Manner-of-motion (M)</b>	<i>El general hizo marchar a los soldados.</i> The general made the soldiers <u>march</u> .

Table 2: Examples of tested periphrastic causatives

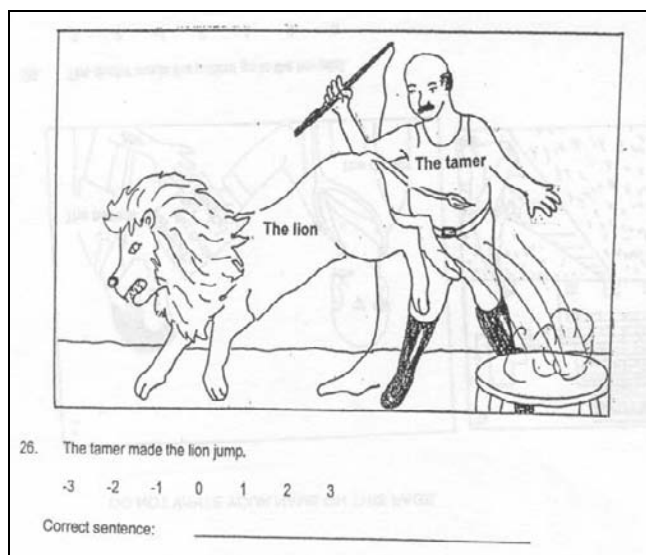


Figure 1: AJT periphrastic causative test item

### 3.3 Results

3.3.1 *Group Results.* Figure 2 shows the acceptability means for the L1 English/L2 Spanish experimental group at different levels of proficiency. We also included the means for two control groups: the English Control (EC), native speakers of the L1, English, and the Spanish Control (SC), native speakers of Spanish, the L2. We used one-way ANOVAS per verb class to compare the different levels of the experimental group and the control groups. All the ANOVAs were significant ( $p < .05$ ). Below we report the results of the post-hoc tests.

The description of the distribution and properties of English and Spanish periphrastic causatives provided in Section 1 was partially confirmed when comparing the two control groups. There was no significant difference between these groups for non-alternating unaccusatives, unergatives and manner verbs. As expected, the acceptability mean of the English Control for alternating unaccusatives in periphrastic causatives was significantly higher than the mean of the Spanish Control ( $p < .0001$ ). However, for the English control group, these sentences were only marginally acceptable, and, for the Spanish control group, only marginally unacceptable.

In general, L1 English learners were conservative with respect to periphrastic causatives with non-alternating unaccusatives, unergatives and manner-of-motion verbs at early levels of acquisition: the means of beginners and intermediates were significantly lower than the means of the control groups

( $p < .0001$ ). With respect to alternating unaccusatives, the mean of the beginners was significantly higher than the mean of the Spanish Control group ( $p < .0001$ ). Nevertheless, none of the means of the different levels was significantly different from the mean of the English control group, but these means decreased as proficiency increased.

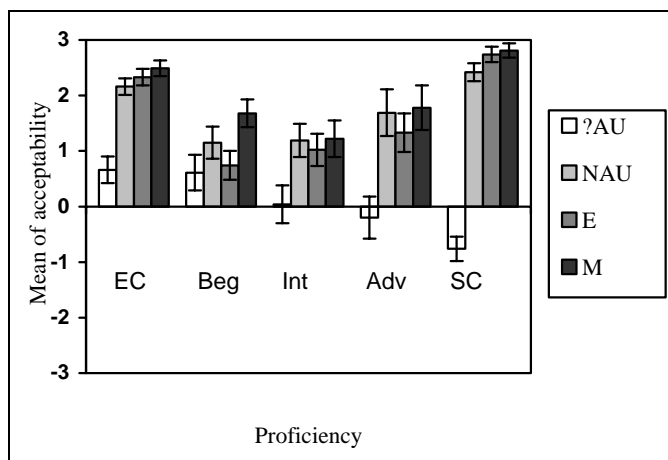


Figure 2: L1 English / L2 Spanish AJT Periphrastic Causatives

Figure 3 shows the acceptability means of the L1 Spanish/L2 English group and the corresponding control groups. We used one-way ANOVAs per verb class to compare the experimental group with the control groups. The ANOVAs were significant only for alternating unaccusatives, and not for non-alternating unaccusatives, unergatives, and manner-of-motion verbs. Similarly to the L1 English experimental group, periphrastic causatives with non-alternating unaccusatives, unergatives, and manner verbs were preferred over those with alternating unaccusatives. However, the L1 Spanish group was not conservative in their acceptance of periphrastic forms with non-alternating unaccusatives, unergatives and manner-of-motion verbs, and their means were not significantly different from the means of the control groups.

We ran a post-hoc test to compare the means of the different levels of proficiency and the control groups for alternating unaccusatives. We found that the beginners' mean was significantly higher than the mean of the Spanish Control group ( $p < .0001$ ), which may suggest that transfer of the *hacer-por* construction (cf. 112) is not at play at the earliest stage of acquisition. It should be noticed that both experimental groups showed the same developmental pattern: the mean for alternating unaccusatives decreased as proficiency increased. In the case of the L1 Spanish L2 English group, the mean of the

advanced level was significantly lower than the mean of the English control group, and it was not significantly different from the mean of the Spanish control group. This group tended to show clearer transfer effects at the advanced level of proficiency than at the beginning.

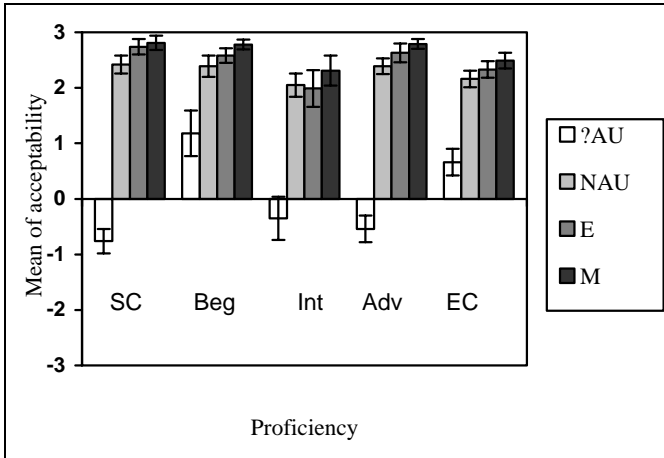


Figure 3: L1 Spanish / L2 English AJT Periphrastic Causatives

The results presented in this section led us to the following generalizations:

(27) Generalizations 1:

- a. Both experimental groups more readily accepted periphrastic causatives of verb classes disallowed in lexical causatives (non-alternating unaccusatives, unergatives, and manner-of-motion verbs) than those with verbs allowed in that configuration (alternating unaccusatives).
- b. Both experimental groups showed a similar developmental pattern: they tended to accept periphrastic causatives with alternating unaccusatives at the beginner level. The acceptance of these sentences decreased as proficiency increased. The advanced L1 Spanish/L2 English group showed the highest rejection.

As the standard error of the means in Figures 2 and 3 shows, there was a large amount of variation between subjects, especially with respect to alternating unaccusatives. To further explore these differences, we conducted an individual analysis.

3.3.2 *Individual Results*. In this section, we present two different individual analyses that were conducted to explore two aspects that could not be addressed in the group results. In order to test the prediction related to transfer of word order (cf. 25), it is necessary to focus on the learners who rated periphrastic causatives negatively and corrected them for word order<sup>7</sup>. Tables 3 and 4 showed the number and percentage of subjects that rejected periphrastic causatives due to word order with at least 1 verb in a given class. These learners did not exceed the 25% of subjects per level. They were mostly at beginner and intermediate proficiency in both experimental groups. Only in the L1 Spanish group there were some advanced learners (at most 10%) that showed this behavior.

<b>Proficiency</b>	<b>AU</b>	<b>NAU</b>	<b>E</b>	<b>M</b>
Beginner (n=28)	3 (11%)	5 (18%)	6 (21%)	6 (21%)
Intermediate (n=27)	2 (7%)	3 (11%)	6 (22%)	2 (7%)
Advanced (n=16)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Table 3: L1 English/L2 Spanish: Number of subjects rejecting sentences due to word order

<b>Proficiency</b>	<b>AU</b>	<b>NAU</b>	<b>E</b>	<b>M</b>
Beginner (n=19)	4 (21%)	3 (16%)	3 (16%)	3 (16%)
Intermediate (n=21)	3 (14%)	3 (14%)	5 (24%)	0 (0%)
Advanced (n=20)	0 (0%)	1 (5%)	1 (5%)	2 (10%)

Table 4: L1 Spanish / L2 English: Number of subjects rejecting sentences due to word order

In order to explore whether these subjects were consistent in rejecting periphrastic causatives with all verb classes due to word order, we calculated their proportions of rejection (number of rejected verbs / number of known verbs), and set a minimum of a 70% ratio of rejection for all verb classes as criterion for consistency. We found that only 1 learner (in the L1 Spanish experimental group) consistently rejected periphrastic causatives with all verb classes due to word order. Summarizing, some learners rejected periphrastic causatives based on word order, but they were not consistent in their rejection. Prediction (25) was partially borne out.

The means of acceptability for alternating unaccusatives had a high degree of variation among learners. In order to determine whether there were groups of learners who consistently accepted or rejected these structures, we calculated the proportion of acceptance for this verb class (number of accepted verbs/number of known verbs). Results are presented in Table 5. We found that beginners in both experimental groups accepted these sentences more consistently. Advanced learners showed a more consistent tendency to reject these periphrastic causatives. However, the L1 English intermediate and

<sup>7</sup> Other type of correction provided by the learners was the lexical causative form. This was the most frequent correction for alternating unaccusatives. However, some learners provided such correction for non-alternating unaccusatives, unergatives and manner verbs, as well.

advanced groups had higher acceptance ratios than the corresponding levels in the L1 Spanish group.

Proficiency	L1 English / L2 Spanish	Proficiency	L1 Spanish / L2 English
Beginner (n=28)	12 (43%)	Beginner (n=19)	11 (58%)
Intermediate (n=27)	10 (37%)	Intermediate (n=21)	3 (14%)
Advanced (n=16)	4 (25%)	Advanced (n=20)	3 (15%)
Span Control (n=17)	1 (6%)	Eng Control (n=18)	5 (28%) <sup>8</sup>

Table 5: Subjects with 70% of acceptance of alternating unaccusatives

The individual analyses presented in this section led us to the following generalizations:

(28) Generalizations 2:

- a. Some beginner and intermediate learners in both groups rejected periphrastic causatives based on word order. Few advanced learners rejected periphrastic causatives due to word order.
- b. Beginners in both experimental groups tended to accept alternating unaccusatives in periphrastic causatives. Advanced learners tended to reject these sentences, but their responses were more consistent with their L1 than with the L2.

### 3.4 *Discussion of results and analysis*

In this study, we tested the hypothesis that the L1 guides the acquisition of periphrastic causatives in the L2, i.e. that the properties of the L1 determine which verb classes are allowed in periphrastic causatives in the interlanguage (cf. 22-23). Depending on the L1 property that is transferred, predictions (25) and (26) follow. These predictions were partially borne out for different levels of proficiency, which suggests that different L1 properties are put to use at different stages of acquisition. Prediction (25) held for some subjects in both experimental groups at the beginner and intermediate levels of proficiency, who rejected periphrastic causatives based on word order (cf. 28a).

The predictions in (26) were borne out mainly for the advanced learners. Learners' responses were not significantly different from those of their L1 control groups. At this level, the L1 English group still accepted alternating unaccusatives in periphrastic causatives, although to a lesser extent. It seems that, at that level, subjects make use of their L1 pragmatic distinction between direct causation types (manipulative and non-manipulative), which allows them

<sup>8</sup> There were also 7 (39%) participants in the English Control group who had a 50% acceptance ratio.

to marginally reject periphrastic causatives with alternating unaccusatives with a direct manipulative causation interpretation. The L1 Spanish advanced learners more clearly make the distinction between direct and indirect causation at this level, which suggest that they transfer the properties of the *hacer-por* construction. Beginners, on the other hand, do not seem to transfer their L1 distinction between causation types: both groups tended to accept alternating unaccusatives in periphrastic causatives with a direct manipulative causation interpretation. This is clear in the case of the L1 Spanish group. However, even in the case of L1 English beginners, whose mean was very close to that of the English control group, the individual analysis revealed that the learners were more consistent in accepting these sentences than the English controls.

Our findings are consistent with a view in which transfer is developmentally constrained, and not with an approach in which all L1 properties are transferred at once (Schwartz & Sprouse 1994, 1996). The question is then why transfer operates in this way. An answer that has been put forth is that L1 transfer is constrained by the processability of a structure at a specific level of proficiency (Pienemann 1998, Carroll 2000, among others). In this view, an L1 structure cannot be transferred if the L2 learners' interlanguage processor has not yet developed the capabilities to process such structure. Our data suggests that L2 learners need to handle the different morphosyntactic status of the causative verbs (*make* and *hacer*) in the L1 and the L2, i.e. the word order differences, before they are able to put to use the L1 structure of the complement of the causative verb. We speculate that beginners' acceptance of alternating unaccusatives in periphrastic causatives may be taken as an indicator of acceptance of the L2 word order but not necessarily of the L2 interpretation of such sentences. Learners seem to start paying attention to the interpretation in the subsequent stage. In other words, only when learners have established a relationship between the L1 and L2 periphrastic causatives despite word order differences are they able to transfer the L1 syntactic structure and its corresponding interpretation. Our data, however, does not provide us with evidence to address the processing load of periphrastic causatives. Further research in the processing of these structures is warranted to investigate the processing capabilities in a developing interlanguage, and how these constrained L1 transfer.

#### 4. *Conclusion*

In this paper, we argued that different L1 transfer effects in the L2 acquisition of English and Spanish periphrastic causatives can be observed at different stages of acquisition. At earlier stages (beginner and intermediate proficiency), some L2 learners transfer word order properties from their L1. However, at the advanced proficiency stage, the L1 distinctions between causation types seem to be more at play. We speculate that transfer is



developmentally constrained by the processability of the L2 input. Our data is consistent with our previous research on the L2 acquisition of lexical causatives (Cabrera & Zubizarreta 2005), where we found that L2 learners transferred different L1 properties at different levels of proficiency, as well.

### **References**

- Bowerman, Melissa. 1982. "Evaluating Competing Linguistic Models with Language Acquisition Data: Implications of developmental errors with causative verbs". *Quaderni di Semantica* 3.5-66.
- Burzio, Luigi. 1986. *Italian Syntax: A Government and Binding Approach*. Dordrecht: Reidel.
- Cabrera, Mónica. 2003. "On the Acquisition of Spanish Causative Structures by L1 Speakers of English". *Proceedings of the 2002 Generative Approaches to Second Language Acquisition Conference (GASLA-2002): L2 links*, ed. by Juana M. Liceras, Helmut Zobl, & Helen Goodluck, 24-33. Somerville (Mass.): Cascadilla Proceedings Project.
- & María Luisa Zubizarreta. 2005. "Are All L1 Grammatical Properties Simultaneously Transferred? Lexical Causatives in L2 Spanish and L2 English". *Proceedings of the 7th Generative Approaches to Second Language Acquisition Conference (GASLA 2004)*, ed. by Laurent Deydtspotter et al., 24-37. Somerville (Mass.): Cascadilla Proceedings Project.
- Carroll, Susanne E. 2000. *Input and Evidence: The Raw Material of Second Language Acquisition*. Amsterdam & Philadelphia: John Benjamins.
- Comrie, Bernard. 1985. "Causative verb formation and other verb-deriving morphology". *Language Typology and Syntactic Description* 3, Grammatical categories and the Lexicon ed. by T. Shopen, 309-348. Cambridge: Cambridge University Press.
- Goldberg, Adele. 1995. *Constructions: a construction grammar approach to argument structure*. Chicago: University of Chicago Press.
- Guasti, María Teresa. 1993. *Causative and Perception Verbs. A Comparative Study*. Rosenberg and Sellier.
- 1996. "Semantic Restrictions in Romance Causatives and the Incorporation Approach". *Linguistic Inquiry*, 27(2). 294-313.
- Hale, Ken & Samuel J. Keyser. 2002. *Prolegomenon to a Theory of Argument Structure*. (Linguistic Inquiry Monograph). Cambridge (Mass.): MIT Press.
- Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity at the Syntax Semantics Interface*. (Linguistic Inquiry Monograph). Cambridge (Mass.): MIT Press.

- Montrul, Silvina. 1997. *Transitivity Alternations in Second Language Acquisition: A cross-linguistic study of English, Spanish, and Turkish*. Ph.D. Diss., McGill University.
- Pinker, Steven. 1989. *Learnability and Cognition: The acquisition of argument structure*. Cambridge (Mass.): MIT Press.
- Pienemann, Manfred. 1998. *Language Processing and Second Language Development: Processability Theory*. Amsterdam & Philadelphia: John Benjamins.
- Schwartz, Bonnie. 1994. "Word order and Nominative Case in nonnative language acquisition: A longitudinal study of (L1 Turkish) German Interlanguage". *Language Acquisition Studies in Generative Grammar: Papers in Honor of Kenneth Wexler from the 1991 GLOW Workshops*, ed. by Teun Hoekstra and Bonnie Schwartz, 317-368. Amsterdam & Philadelphia: John Benjamins.
- & Rex Sprouse (1996). "L2 cognitive states and the Full Transfer/Full Access model". *Second Language Research* 12(1):40-72.
- Shibatani, Masayoshi, 1973. *A linguistic study of causative constructions*. Ph.D. Diss., University of California, Berkeley.
- 1976. *The Grammar of Causative Constructions (Syntax and Semantics 6)*. New York: Academy Press.
- Slobin, Dan I. 1977. "Language change in childhood and in history". *Language learning and thought* ed. by J. Macnamara, 185-214. New York: Academic Press.
- Zubizarreta, María Luisa. 1985. "The relation between morphophonology and morphosyntax: The case of Romance causatives". *Linguistic Inquiry*, 16, 247-289.
- & Eunjeong Oh (2004). *The lexicon-Syntax Interface: The Case of Motion Verbs*. Ms. University of Southern California, Los Angeles.



# CLITIC OMISSION, NULL OBJECTS OR BOTH IN THE ACQUISITION OF EUROPEAN PORTUGUESE?\*

JOÃO COSTA AND MARIA LOBO

*Universidade Nova de Lisboa*

Previous studies have established a correlation between early clitic omission and the existence of past participle agreement, explainable with a maturational constraint – the UCC. Since Portuguese doesn't show past participle agreement, it is expected that Portuguese children will produce clitics early on. In order to find out whether this correlation holds for Portuguese, an experimental study was conducted reproducing Schaeffer's (1997) and adapting it to particular properties of Portuguese – the availability of null objects and variability of clitic position. The results of this study suggest that Portuguese children do omit clitics, apparently contradicting previous studies. Since clitic omission lasts until later than in other languages, we hypothesize that the explanation may rely on complexity factors.

## 1. *Introduction and background.*

Recent research on the acquisition of clitics reveals that clitics may be problematic for children depending on the language being acquired. In some languages, clitics are omitted while in other languages clitics are produced very early on. Clitics have been found to be problematic, and omitted, in Catalan (Wexler, Gavarró and Torrens (2003)), French (Hamman et al. (1996), Jakubowicz and Rigaut (2000)) and Italian (Schaeffer 1997). For Spanish (Wexler, Gavarró and Torrens (2003)), Greek (Tsakali and Wexler (2003)), Serbo-Croatian (Ilic & Ud Deen (2003)) and Romanian (Babyonyshev & Marin (2005)), it was found that children do not omit clitics. This differentiated behavior has been related to the existence of past participle agreement. Tsakali and Wexler (2003) and Wexler, Gavarró and Torrens (2003) argue that clitic omission is expected only in languages with past participle agreement.

Based on this background, the primary goal of this paper is to investigate whether children acquiring European Portuguese omit clitics. The prediction made by the authors mentioned above is quite straightforward. Since European

---

\* Research for this paper is partly supported by the project POCI/LIN/57377/2004.

Portuguese does not have past participle agreement (in compound tenses)<sup>1</sup>, as shown in (1), it is expected that Portuguese patterns like Spanish, and that children do not omit clitics.

- (1) a. *O Pedro já os tem lido.*  
 the Pedro already them<sub>CL</sub> has read<sub>sg</sub>  
 b. *\*O Pedro já os tem lidos.*  
 the Pedro already them<sub>CL</sub> has read<sub>pl</sub>

However, an evaluation of children's data in European Portuguese is not simple, because of the availability of discourse-bound null objects (Raposo 1986). As shown in (2), in root contexts, null objects freely alternate with clitics:

- (2) a. *Tirei os óculos da gaveta e pus [ \_ ] no bolso.*  
 (I) took the glasses from the drawer and put in the pocket  
 b. *Tirei os óculos da gaveta e pu-los no bolso.*  
 (I) took the glasses from the drawer and put **them**<sub>cl</sub> in the pocket

Given the availability of null objects in the adult grammar, if children omit a clitic, it is necessary to find a way of distinguishing between cases of omission (patterning like Italian or French) and target-like null objects. In other words, if it is found that children produce null complements, it has to be established whether they are target deviant in omitting clitics or whether they are target-like in producing null objects.

As Raposo (1986) shows, null objects are ruled out in strong island contexts:

- (3) A: *E a Maria?*  
 what about Maria  
 B: *O Pedro está triste porque o Zé \*(a) beijou.*  
 the Pedro is sad because the Zé her<sub>CL</sub> kissed

This restriction on the distribution of null objects provides the necessary distinguishing factor for distinguishing between clitic omission and null objects. It is, therefore, necessary to test strong island contexts in children's productions.

The second goal of this paper is, then, to present an experimental procedure testing clitic omission, but controlling its nature (clitic omission vs. null object).

<sup>1</sup> It is necessary to specify that past participle agreement is bad in compound tenses, since (1b) is grammatical if the participial form (adjectival) heads a small clause. For completeness, it is worth noting that the compound tense in (1a) has an habitual reading, and not perfective as in other Romance languages.

For several languages, it has been shown that children make no mistakes in clitic placement (see Guasti (2002) for a review). In European Portuguese, clitics can be enclitic or proclitic, depending on the syntactic environment (Duarte and Matos 2000, a.o.). Proclisis triggers include negation, some adverbs, a filled CP, and certain quantified subjects. Enclisis appears elsewhere. Contrary to the findings for other languages, Duarte and Matos (2000) show that children misplace clitics, tending to generalize enclisis. These facts make it necessary to test whether clitic placement is a relevant variable for determining rates of omission.

Summing up, this paper addresses the following questions:

- A. Is there clitic omission in European Portuguese?
- B. If children produce null forms, is it possible to determine whether they are target-deviant instances of clitic omission or target-like null objects?
- C. Is the proclisis-enclisis variation relevant for children's behavior in what concerns clitic omission?

The paper is organized as follows: in section 2, we present the experiment conducted for eliciting clitics; in section 3, the results of the experiment are presented; section 4 discusses and analyzes the results.

## 2. *Experiment.*

An elicitation task was run, modeled after Schaeffer (1997). Given the facts mentioned in section 1, three conditions were tested:

- a) Accusative 3rd person clitic production in enclitic environment in declarative contexts;
- b) Accusative 3rd person clitic production in proclitic environments (involving negation and questions);
- c) Accusative 3rd person clitic production in strong island contexts.

Conditions a) and b) aim at determining whether there is omission in enclitic and proclitic environments. Condition c) elicits clitics in strong island contexts, since this is the relevant domain to differentiate omission from null objects. Recall that in this context, null objects are ruled out, hence, if children produce a null form in a strong island, it can, in principle, be unambiguously identified as a case of clitic omission.<sup>2</sup> Given its structural properties, the strong islands

---

<sup>2</sup> An obvious alternative explanation is to think that children do not know the domain in which null objects are allowed. We will comment this alternative explanation in section 3.

are a necessarily proclitic environment, which makes it impossible to test enclisis in this context. Three test items per condition were used.

For conditions a) and b), we reproduced Schaeffer's (1997) experiment. In this protocol, in which a story acted out with props is commented upon by a puppet, a DP is made highly accessible, and children are asked to correct the puppet. In their correction, they are led to refer to the accessible DP, placed in an accusative context. Accordingly, children may cliticize it, omit it, or repeat the DP. The latter is not expected, given the discourse properties of the DP. In languages without null objects, cliticization is then the only available option for an adult. In European Portuguese, however, there may be alternation, in this context, between cliticizing the DP and producing a null object construction. In (4) and (5), we illustrate a test item for condition a) and b), respectively:

- (4) Example of test item – Condition a): enclisis

*Experimentador 1: Olha! Está aqui o Urso Pooh. Ele hoje encontrou o Tigre e achou que o tigre estava muito despenteado... Ah! Ele tem uma escova! Olha para o que o Pooh fez ao tigre.*

*Fantoches: Eu sei! Ele lavou o tigre!*

*Experimentador 1: Não...não lavou nada. Diz-lhe lá o que o Pooh fez ao tigre!*

**Expected response: penteou-(o)**

*Experienter 1: Look! Here's Pooh. Today, he met Tiger and he thought his hair was not nice...Ah! He has a comb! Look at what Pooh did to Tiger.*

*Puppet: I know! He washed Tiger!*

*Experienter 1: No...he did not. Tell him what Pooh did to Tiger.*

**Expected response: combed-(him)**

- (5) Example of test item – Condition b): proclisis

*Experimentador 1: O Pooh está a tentar pentear a princesa.*

*Fantoches: Eu não quero dizer mais asneiras. Não sei se ele já penteou a princesa...*

*Experimentador 1: Pergunta lá ao Pooh se ele já penteou a princesa.*

**Expected answer: Já (a) penteaste?**

*Experienter 1: Pooh is trying to comb the princess.*

*Puppet: I don't want to say more stupid things. I don't know if he has already combed the princess...*

*Experienter 1: Ask Pooh whether he has already combed the princess.*

**Expected answer: already (her) combed**

For condition c), the task had to be slightly changed, since eliciting a whole sentence with a strong island might add difficulties for the children. Hence, we

elicited the clitic in a completion task in which all the child had to produce was the clitic and the verb. An example of test item is given in (6):

- (6) Example of test item – Condition c): null object

*Experimentador 1: O Pooh ficou todo contente quando cheirou aquele bolo.*

*Fantoches: Ele ficou todo contente quando comeu aquele bolo!*

*Experimentador 1: Não foi nada...Não foi quando comeu o bolo. Diz lá*

*ao fantoches: o Pooh ficou contente quando fez o quê ao bolo? Ele ficou contente quando...*

**Expected response: o cheirou.**

*Experienter 1: Pooh was very happy when he smelled that cake.*

*Puppet: He was very happy when he ate that cake!*

*Experienter 1: No. It wasn't when he ate the cake. Tell the puppet: Pooh was very happy when he did what to the cake? He was very happy when....*

**Expected response: it smelled.**

As shown in the expected response, in the strong island context (the temporal adverbial clause), the clitic cannot be omitted, since this is not a legitimate null object context.

The elicitation task was followed by a repetition task, containing four instances of proclisis. This repetition task was created, because elicitation of proclisis tends to be more difficult (given the nature of the proclisis triggers). The inclusion of this repetition task aimed, then, at increasing the data on proclisis in case the elicitation of proclitics as in (5) would fail, which eventually did not happen.

Given these conditions, let us check what the possible results of this experiment are:

- A. If clitics are found in island contexts only, this will mean that there is no clitic omission, but there are target-like null objects. A result like this will be consistent with the predictions made by Tsakali and Wexler (2003), given the lack of past participle agreement in European Portuguese.
- B. If clitics are found in all contexts, it has to be concluded that there is no omission of clitics, and that children have not acquired null objects. A result like this will also be coherent with the prediction that the language should not have clitic omission because of the lack of past participle agreement.
- C. If clitics are omitted in all contexts, two reasons may underlie this behavior. Either Portuguese children omit clitics and produce target-like



null objects, or they omit clitics and have not yet acquired the availability of the null object construction.

*Prima facie*, the result hypothesized in C appears to be problematic. Note, however, that it is inconclusive just in what regards the mastery of the null object construction by children. It enables to assert that clitics are omitted. As it will become clear in the following sections, the results of the experiment enable to draw conclusions even in what regards the acquisition of null objects.

The experiment involved 21 monolingual children, aged between 2 and 4 (average age 3;10), and 6 adult controls with no linguistics background. The children were divided into two groups (2-3 year olds and 4 year olds), since, in the studies mentioned in section 1, it was shown that there was a developmental effect. The age effect will be relevant in the discussion of the results. The data were collected in individual sessions, and recorded with a minidisk recorder. One of the experimenters registered the data during the application of the experiment. The recordings and manual encoding were confronted for reliability. Ambiguous cases and cases that could not be properly heard were discarded and not counted.

### 3. *Results.*

In (7), (8), and (9), the results for the control group, the 2-3 year old group, and the 4 year old group, respectively, are presented. For each condition, we present the absolute number and the proportion of responses. The categories considered were clitic, DP, null form, and strong pronoun.

#### (7) *Control group:*

##### ***Condition a) - enclisis:***

Clitic	8/18	44,44 %
DP	1/18	5,55 %
Null	9/18	50 %
Strong pronoun	0/18	0 %

##### ***Condition b) - proclisis:***

Clitic	12/18	66,66 %
DP	2/18	11,1 %
Null	4/18	22,2 %
Strong pronoun	0/18	0 %

##### ***Condition c) - null object:***

Clitic	16/18	88,88 %
DP	2/18	11,11 %

##### ***Repetition task (proclisis)***

Clitic	24/24	100 %
--------	-------	-------

(8)	<i>2-3 year old group:</i>		
	<b>Condition a) - enclisis:</b>		
	Clitic	3/41	7,31 %
	DP	8/41	19,5 %
	Null	28/41	68,29 %
	Strong pronoun	2/41	4,87 %
	<b>Condition b) - proclisis:</b>		
	Clitic	5/39	12,82 %
	DP	6/39	15,38 %
	Null	28/39	71,79 %
	Strong pronoun	0/39	0 %
	<b>Condition c) - null object:</b>		
	Clitic	1/43	2,32 %
	DP	24/43	55,81 %
	Null	18/43	41,86 %
	<b>Repetition task (proclisis)</b>		
	Clitic	25/54	46,2 %
	DP	0/54	0 %
	Null	29/54	53,7 %
(9)	<i>4 year old group:</i>		
	<b>Condition a) - enclisis:</b>		
	Clitic	1/21	4,76 %
	DP	4/21	9,52 %
	Null	16/21	76,19 %
	Strong pronoun	0/21	0 %
	<b>Condition b) - proclisis:</b>		
	Clitic	5/22	22,72 %
	DP	2/22	9,09 %
	Null	15/22	68,18 %
	Strong pronoun	0/22	0 %
	<b>Condition c) - null object:</b>		
	Clitic	0/23	0 %
	DP	15/23	65,21 %
	Null	8/23	34,78 %
	<b>Repetition task (proclisis)</b>		
	Clitic	21/28	75 %
	DP	0/28	0 %
	Null	7/28	25 %

We would like to draw the reader's attention to some aspects of these results. Note, first, that the control group behaves as expected. In the proclisis and

enclisis conditions, there is a fair split between production of null objects and production of clitics. Proclisis favored the production of the clitic, a tendency not reproduced in children's results. In condition c), no null objects appeared, and clitics were massively produced. DPs were produced at a non significant rate. Overall, for the control group, clitic production was much higher than for the children in conditions a) and b) (55,55%), and, in island contexts, clitics were produced 88,88% of the time.

A second aspect is that there are very few cases of clitic production in both groups in all conditions. Collapsing all conditions, the rate of clitic production is 10% in the 2-3 year old group, and 13,95 % in the 4 year old group. No developmental effect was found. The lack of developmental effect contrasts with what was found for other languages, in which it was found that 4 year olds typically no longer omit clitics.

Null forms are found in all contexts, which correspond to pattern C of the preceding section. According to the discussion made above, this result leads to the conclusion that there is clitic omission in European Portuguese, a matter we will return to in the next section.

The rate of DP production in island contexts is higher than in conditions a) and b) (for the 2-3 year old group, there was 17,5% of DPs in conditions a) and b), and 55,81% of DPs in island contexts; for the 4 year old group, there was 13,95% of DPs in conditions a) and b), and 65,21% of DPs in island contexts).

There was more production of clitics in the repetition task than in the other task.

A final aspect worth noting, but not visible from the presentation of results above is that some of the few clitics produced in the proclitic environments was misplaced, contrary to what is reported for other languages, which confirms Duarte and Matos' (2000) observation that there is a tendency to overuse enclisis.

#### **4. *Discussion.***

Let us now consider the results presented in light of the questions outlined in the introduction. The first aspect to be noted is that the prediction that European Portuguese should not have clitic omission, because it does not have past participle agreement, is not confirmed. As presented above, the fact that there are null forms in strong island contexts makes it possible to state that these null forms are instances of omitted clitics rather than target-like null objects. Recall from section 2 that we discussed the fact that a result in which children produce null forms across the three conditions might be inconclusive, since it might correspond to a overuse of null objects. Accordingly, this might mean that children have null objects, but have not learnt the special characteristics of the strong island context. However, it is possible to show that

such reasoning does not hold. First, if clitic omission was just a case of target-like null object in European Portuguese, as defended for Brazilian Portuguese (Lopes 2003)<sup>3</sup>, clitics should appear in island contexts, and the results for conditions without islands should not differ significantly from those obtained for the control group. More importantly, the rate of DP production is much higher in condition c), showing that children do have some knowledge of the distribution of null objects. It is, then, the rate of DP production that provides the crucial piece of evidence to conclude that the null forms in the strong island contexts are not just a target-deviant extension of the null object construction. Since it is possible to argue that children know that strong islands are not a legitimate domain for null objects, it is possible to conclude that there is clitic omission in European Portuguese.

Clitic omission in European Portuguese differs, however, from what has been found for other languages. Crucially, the age at which there is no clitic production is higher than in languages with clitic omission (for instance, in Wexler, Gavarró and Torrens (2003), it is shown that clitic omission in Catalan drops down from 74% to 25% in the 3 year old group). This difference calls for an explanation. We contend that the nature of omission in European Portuguese is different.

In order to understand our proposal, let us first review the proposal made by Wexler, Gavarró and Torrens (2003) in order to explain clitic omission. The authors assume the analysis of clitics outlined in Sportiche (1996), among others, according to which clitics are verbal agreement morphemes generated in the functional domain, and heading a clitic phrase, as shown in (10)

(10) [CIP CL<sub>*i*</sub> [AgrOP [VP ... DP<sub>*i*</sub>

As shown in (10), clitics are coindexed with an DP (typically a *pro*) in an argumental position. This XP must raise to the specifier position of CIP, passing through Spec,AgrOP in languages in which there is past participle agreement.

This analysis of clitics contrasts with those arguing that clitics are generated in argumental positions, and then raise to the inflectional domain. This has been argued for European Portuguese in Duarte and Matos (2000), among others. We contend that the two analyses do not exclude each other. Rather, they correspond to differentiated status of clitics, correlating with the availability of clitic-doubling in different languages. In other words, if a clitic is generated in the functional domain and coindexed with a DP in argument position, this DP may host *pro* or a lexical DP. In the latter case, doubling

---

<sup>3</sup> Note that, in Brazilian Portuguese (BP), the structural conditions for the occurrence of null objects are not as restricted as in European Portuguese. In particular, in BP null objects seem to be allowed in island contexts (cf. Bianchi & Figueiredo-Silva (1994)). This means that the nature of children's omissions in BP may be different.

arises. If the clitic is generated in the argument position, it cannot be doubled by a lexical DP.<sup>4</sup> Bearing these analytical tools in mind, let us return to Wexler, Gavarró and Torrens' analysis. The authors sustain that clitic omission is a consequence of a constraint available for children, subject to maturation, stating that a given D-feature can only check against one functional category – the Unique Checking Constraint (UCC), defined in Wexler (1998). Since the DP coindexed with the clitic in (10) has to check a D-feature on AgrO and in CIP, the UCC prevents it from doing so. As a solution, CIP is not projected, and the DP only has to check a D-feature against AgrO. This results in clitic omission. Recall that this explanation holds for clitic-doubling languages, in which the clitic is a verbal agreement morpheme not generated in argument position.

Let us now return to the European Portuguese data. European Portuguese is not a clitic-doubling language. Clitics are argumental and cannot be doubled by lexical DPs. Nevertheless, it could still be argued that the UCC explains our data, in the sense that the clitic itself enters a double checking relation. The clitic must check Case and is attracted to Infl. Assuming that both movements are motivated by some kind of feature checking, this may yield a violation of the UCC. An analysis along these lines might explain clitic omission in spite of the lack of past participle agreement. The crucial distinguishing factor to explain patterns of clitic omission would then be the clitic doubling nature of the language. However promising this type of approach may be, it cannot be the explanation for our data, given the differences in age.

Recall that omission lasts until later in European Portuguese than in other languages. Given the maturational nature of the UCC, if it were to explain our data, the age at which omission ceases should be similar across languages. Accordingly, the UCC does not seem to be the most adequate explanation for the pattern of omission we found in our data. In other words, as mentioned above, the nature of omission in Portuguese has to be different. If this conclusion is right, the results obtained are important, because their contradiction of the correlation between the availability of past participle agreement and clitic omission is only apparent.

Having established that the nature of omission in European Portuguese is different, it must be determined what it is. Let us first consider what is required to acquire clitics in EP:

- a) To know that clitics and null objects coexist in some contexts.
- b) To learn that null objects are ruled out in strong island contexts.
- c) To learn clitic placement.

---

<sup>4</sup> In Fiéis and Pratas (2005), it is argued that the functional and argumental analyses do not exclude each other even language-internally, which explains differences between reflexive and non-reflexive clitics, and between argumental and non-argumental clitics.

These characteristics contrast with those observable in other languages. Let us consider Catalan, for the sake of illustration. Catalan, like most Romance languages, lacks null objects, and clitics are proclitic across most contexts. In this sense, the clitic system of Catalan is less complex than the Portuguese one.

In fact, Portuguese children do not have to abandon omission, but specialize the contexts in which omission (null object) is in complementary distribution with clitics. This requires sensitivity to strong island contexts. The significant difference in production of DPs in strong island contexts compared to the other conditions shows that the children tested are already displaying some sensitivity to the special characteristics of these domains.

In short, what we are suggesting is that complexity factors add difficulty for Portuguese children. Complexity comes from two different sources:

- a) The existence of null objects.
- b) Clitic placement (which explains the generalization of enclisis)

Naturally, if we are assuming that complexity is the key factor behind omission, we have the burden of proposing a metric for complexity. Let us assume with Reinhart (1999) that certain interface operations require reference set computation, and, consequently, add effort to children. The choice between a clitic and a null object is post-syntactic and discourse-conditioned. It passes the criteria to induce reference-set computation, since the conditions for choosing a clitic or a null object partly intersect, and, mostly, because a derivation with a clitic competes with a derivation with a null object in order to convey the same meaning.

Summing up, we argue that, in European Portuguese, there is clitic omission, but not due to the UCC. Rather, there may be two sources for clitic omission. In some languages, clitic omission is explained by the UCC. In that case, there must be an early developmental effect (coinciding with the Optional Infinitive stage), and it must correlate with past participle agreement or any other double checking phenomena. If the source of omission is complexity, it is expected that omission lasts until later, and it relates with the complexity of the system. This approach may extend to French data on object omission. Hamman et al. (1996), Jakobowicz & Rigaut (2000), and Tuller (2005) show that there is late omission in French, correlating with structural deficiency. According to the reasoning outlined above, this late omission should correlate with some complexity aspect. As noted in Zribi-Hertz (1985) and Cummins & Roberge (2005), Colloquial French has various types of empty/elliptical objects, which adds complexity to the French system, and correctly predicts that French and European Portuguese should behave alike in displaying late clitic omission.

## 5. *Conclusion.*

In this paper, we investigated whether there is clitic omission in the acquisition of European Portuguese, controlling for the difference between

target-deviant clitic omission and target-like null objects. It was shown that the results on European Portuguese might, in principle, provide a testing ground for the claim that there is a correlation between omission and past participle agreement, and consequently for approaches to omission based on the UCC.

The results obtained appeared to contradict previous studies for other languages, since it was found that there is clitic omission, distinguishable from null object, disproving a correlation with the availability of Past Participle Agreement.

However, since the omission lasts until later, and the nature of clitics is different, we suggest that the nature of clitic omission in European Portuguese is not the UCC. In this sense, our results do not contradict the UCC, but show that different sources may explain surface similar behaviors. In the particular case of European Portuguese, complexity can explain the performance of Portuguese children, provided that the special properties of Portuguese clitics and the availability of null objects are taken into account.

In future work (Costa and Lobo (in progress) and Silva (in progress)), we test the complexity hypothesis, by comparing these results with those to be obtained from elicitation of dative, reflexive and non-argumental clitics. Since many of these clitics do not freely alternate with null objects, they provide good means to detect whether any type of omission in European Portuguese is explainable by the UCC.

### **References**

- Babyonyshev, M. & S. Marin. 2005. "The Acquisition of Object Clitic Constructions in Romanian". *Theoretical and Experimental Approaches to Romance Linguistics*, ed. by Randall S. Gess & Edward J. Rubin. 21-40.
- Bianchi, V. & M. C. Figueiredo-Silva. 1994. "On some properties of agreement object in Italian and Brazilian Portuguese". *Issues and Theory in Romance Linguistics. Selected papers from the Linguistic Symposium on Romance Languages XXIII*. ed. by Michael L. Mazzola. 181-197. Washington, D.C.: Georgetown University Press.
- Cummins, S. & Y. Roberge. 2005. "A Modular Account of Null Objects in French". *Syntax* 8.1. 44-64."
- Duarte, I. & G. Matos. 2000 "Romance Clitics and the Minimalist Program". *Portuguese Syntax. New Comparative Studies*, ed. by J. Costa. 116-142. Oxford: Oxford university Press.
- Fiéis, A. & F. Pratas. 2005. "A natureza do clítico de reflexividade do tipo *se*: evidência do Caboverdiano". *Actas do XX Encontro Nacional da Associação Portuguesa de Linguística (Lisboa, 2004)*. Lisboa: APL; 591-603.
- Guasti, M. T. 2002. *Language Acquisition. The Growth of Grammar*. Cambridge, (Mass.): MIT Press.

- Hamman, C. et al. 1996. "On the acquisition of subject and object clitics in French". *Generative perspectives on language acquisition*, ed. by H. Clahsen. 309-333. Amsterdam & Philadelphia: John Benjamins.
- Ilic, T. & K. Ud Deen. 2003. "Object Raising and Cliticization in Serbo-Croatian Child Language". *The proceedings to the GALA Conference*, ed. by J. van Kampen & S. Baauw. 235-243. LOT: Utrecht.
- Jakubowicz, C. & C. Rigaut. 2000. "L'acquisition des clitiques nominatifs et des clitiques objets en français". *Canadian Journal of Linguistics* 45(1/2). 119-157.
- Lopes, R. 2003. "The production of subject and object in Brazilian Portuguese by a young child". *Probus*, 15, 1. 121-144.
- Raposo, E. P. 1986. "On the Null Object Construction in European Portuguese". *Studies in Romance Linguistics*. ed. by O. Jaeggli & Silva-Corvalán. 373-390. Dordrecht: Foris.
- Reinhart, T. 1999. *The Processing Cost of Reference-Set Computation: Guess Patterns in Acquisition*. UiL-OTS Working Paper.
- Schaeffer, J. 1997. *Direct object scrambling in Dutch and Italian child language*. Ph.D.Diss., UCLA.
- Sportiche, D. 1996. "Clitic Constructions". *Phrase Structure and the Lexicon*, ed. by J. Rooryck & L. Zaring. 213-276. Dordrecht: Kluwer.
- Tsakali, V. & K. Wexler. 2003. "Why children omit clitics in some languages but not in others: new evidence from Greek". *Proceedings of GALA 2003*, ed. by J. van Kampen & S. Baauw. 493-504. Utrecht: LOT.
- Tuller, L. 2005. Paper presented to EUCLDIS Conference, Royaumont.
- Wexler, Kenneth. 1998. "Very early parameter setting and the unique checking constraint: a new explanation of the optional infinitive stage". *Lingua* 106. 23-79
- Wexler, K., A. Gavarró & V. Torrens. 2004. "Feature checking and object clitic omission in child Catalan and Spanish". *Romance Languages and Linguistic Theory 2005* ed. By Reineke. Bok-Bennema, Bart Hollebrandse, Brigitte Kampers-Manhe & Petra Sleeman, 253-269. Amsterdam & Philadelphia: John Benjamins.
- Zribi-Hertz, A. 1985. "L'ellipse zeugmatique et le principe de récupérabilité". *Linguisticae Investigationes*, IX. 131-165.





# METRICAL STRUCTURE, TONAL ASSOCIATION AND FOCUS IN FRENCH <sup>1</sup>

ELISABETH DELAIS-ROUSSARIE\* AND ANNIE RIALLAND<sup>o</sup>

\* CNRS – UMR 7110 / *Laboratoire de linguistique formelle,*  
*Université de Paris VII, France*

<sup>o</sup> CNRS – UMR 7018 / *Laboratoire de phonétique et phonologie,*  
*Université de Paris III, France*

The main purpose of this paper is to show that focus is a pivot in tune-text association, which plays a central role for the anchoring of intonational tones. This paper also presents the main characteristics of the French prosodic system. The first section provides an overview of French metrical structure. The second section introduces intonational tones and profiles. Any utterance has a "Nuclear Contour" made up of three elements (T\* T\* T%), where T = H or L tone. It is the 'center' of the intonational profile and the source of copying processes. The third section concerns focus and intonation. It shows how the Nuclear Contour is mapped from right to left from the right edge of the focus domain. A sub-section is devoted to two types of cleft sentences: i) canonical clefts, and ii) broad-focus clefts. We argue in favor of a model in which the metrical grid provides prominent points for tonal association while focus divides the text into domains with specific intonational characteristics.

## 1. *Introduction*

This paper presents an overview of the major characteristics of the French prosodic system, in particular in relation to focus. Our proposal is developed in the autosegmental-metrical (AM) framework. The prosodic representation associated with utterances involves three types of elements:

- a metrical representation that accounts for prominence relations among the syllables of an utterance. The metrical pattern may be represented as a grid or as a metrical constituent structure;

---

<sup>1</sup> The authors would like to thank Jean-Marie Marandin and Brechtje Post for comments on earlier versions of this paper. The research presented in this paper results from a collective work that has been carried out in various research groups in which several people participated besides the authors (Claire Beyssade, Jenny Doetjes, Michel de Fornel, Jean-Marie Marandin and Georges Rebuschi).

- a tonal representation that accounts for the intonational profile associated with an utterance. This profile is represented by a sequence of tonal elements such as pitch accents and boundary tones;
- a set of rules that explains how the tonal representation is associated with the metrical representation.

The central point of this paper is to show that focus is a pivot and plays a crucial role in providing domains for tonal association and tonal processes. Arguments in favor of this view will be illustrated by a variety of examples belonging to different sentence types (questions, statements, etc.). Special attention will also be given to cleft sentences.

The proposal is based on the analysis of various types of data : short dialogs enacted by different speakers in speech laboratories, utterances extracted from speech corpora such as news broadcasts, interviews, chronicles (in particular, the *Ester Corpus*) and informal conversations (the *CIO* corpus, etc.).<sup>2</sup>

The paper proceeds as follows. At first, the major characteristics of the French prosodic system are presented. The first section provides an overview of metrical organization. The second section is devoted to intonational tones (pitch accents, boundary tones) and the intonational profile (made of intonational tones), with special attention to the ‘Nuclear Contour’. Then we show the central role played by focus in providing domains for the association of intonational tones and contours, in particular of the intonational tones involved in the ‘Nuclear Contour’.

## **2. *The French prosodic system: its major characteristics and its representation***

The aim of the two following sections is twofold: i) to present the major characteristics of the French prosodic system that are relevant to our proposal; and ii) to set out the representational categories we assume. In the first section, we focus on metrical aspects, while the second one is concerned with the representation of intonation.

### **2.1 *Metrical organization***

In French, the distribution of stress syllables occurs at the phrasal level. Stress is thus culminative at that level. In other words, we may say that French

---

<sup>2</sup> The ESTER Corpus includes 40 hours of broadcast news, interviews and chronicles: 20h ‘France-Inter’ (7h-9h) December 1998, 5h ‘France-Inter’ (19h) Mai-Juin 1999, 15 ‘RFI International’, 15h RFI International news and chronicles. Sound files are aligned with an orthographic notation. This corpus is distributed by ELRA. Laboratoire de phonétique et phonologie (UMR 7018) and Laboratoire de linguistique formelle (UMR 7110), both, have a user-licence.

has a phrasal stress, but no lexical one. Even if any lexical word (i.e word belonging to lexical categories such as N, A, V and Adv) may receive a primary accent on the last metrical syllable, it is not obligatory.<sup>3</sup> Primary accent is only obligatory on the rightmost metrical syllable of the rhythmic group (or accentual phrase).<sup>4</sup>

- (1) a. *Le jeune frère de François est venu ce matin.*  
 “François’ younger brother came this morning.”  
 b. *le jeune frère de François est venu ce matin.*  
 c. *(le jeune frère) (de François) (est venu) (ce matin).*

In (1b), all the syllables that may be primary stressed are underlined. In (1c), the primary accented syllables are underlined and the segmentation in rhythmic groups is given. As is shown, primary accents are realized on the last metrical syllables of rhythmic groups. The metrical realization of a lexical word depends on its linear position in the utterance. In (1), the adjective *jeune* is not primary stressed, while it will be so in sentences such as (2).

- (2) a. *Ces enfants sont jeunes.*  
 “These children are young.”  
 b. *(ces enfants) (sont jeunes).*

From these examples, it seems clear that stress has no distinctive function at the lexical level in French, contrary to English (see the opposition between the noun PERmit and the verb perMIT).

Concerning the distribution of stressed syllables in general, and that of primary stressed one in particular, it is important to note that it is regulated by two types of independently motivated constraints (see, among others, Dell 1984; Delais-Roussarie 1996, 2000): i) constraints that account for the relation between the metrical structure and the morpho-syntactic construal, and ii) purely metrical constraints that guarantee the well-formedness of the metrical pattern (e.g clash avoidance, lapse avoidance, rhythmic alternation, etc.). Concerning the syntax-prosody interface, the most important constraint is ‘the right culmination constraint’:

<sup>3</sup> Final syllables of polysyllabic words whose nucleus is a schwa are extrametrical. Consider, for instance, the item *Regarde* in meridional French ( $\{\{\leftrightarrow\}\gamma\alpha\{\cdot\delta\leftrightarrow\}\}$ ), in which the syllable  $[\delta\leftrightarrow]$  is extrametrical.

<sup>4</sup> See, among others, Mertens 1993 ; Di Cristo 1998 ; Di Cristo 1999 ; Di Cristo et al. 1997 ; Delais-Roussarie 1996. Note also that a metrical analysis of the French system has been proposed in a grid only framework (cf. Dell 1984 ; Delais-Roussarie 2000).

- (3) The right culmination constraint:<sup>5</sup>  
*The rightmost metrical syllable of a syntactic phrase has maximal prominence in that phrase.*

Thus, in any sentence, the rightmost metrical syllable is the most prominent one.<sup>6</sup> In (4a) and (4'a), the syllable [ve] is the most prominent one in the sentence. Likewise, in any NP, the rightmost metrical syllable is the most prominent one in that phrase. Consider examples (4b) and (4'b). The rightmost syllable of the subject NP ([ $\phi$ A]) and [ {t } respectively) is the most prominent one, even if the syllable does not belong to the lexical head of the NP (as in (4'b)).

- (4) *Les enfants sont arrivés.*  
 "The children arrived."

			*			*				*
	*	*	*	*	*	*	*	*	*	*
	le	zã	fã	sõ	ta	ri	ve			
a.	<i>(les enfants sont arrivés)</i>									
b.	<i>(les <b>enfants</b>) (sont arrivés)</i>									

- (4') *Les enfants de Marie sont arrivés.*  
 "Marie's children arrived."

						*				*
			*			*				*
	*	*	*	*	*	*	*	*	*	*
	le	zã	fã	də	ma	ri	sõ	ta	ri	ve
a.	<i>(les enfants de Marie sont arrivés)</i>									
b.	<i>(les enfants de <b>Marie</b>) (sont arrivés)</i>									
c.	<i>* (les <b>enfants</b>) (de Marie sont arrivés)</i>									

The application of the constraint (3) will disallow phrasing such as (4'c), where the syllable [ $\phi$ A]) is more prominent than the rightmost metrical syllable

<sup>5</sup> It is important to note that our description of the metrical aspects of the prosodic system does not make reference to a prosodic constituent structure that allows for indirect mapping between metrical phenomena and syntactic constituency (see, among others, Selkirk 1986; Delais-Roussarie 1996). Our proposal has been developed in a grid-only approach as advocated by Selkirk 1984 and Delais-Roussarie 2000, among others.

<sup>6</sup> A metrical syllable is a syllable which is not extrametrical (see note n° 4).

of the NP subject (the syllable [ʔ]). Note, however, that the constraint does not say anything about the prominence relation that holds between the NP subject and the head verb.

- (5) *Pierre conduit prudemment.*  
 “Peter drives carefully.”  
 a. (***Pierre***) (***conduit***) (*prudemment*).  
 b. (*Pierre* ***conduit***) (*prudemment*).  
 c. (*Pierre conduit* ***prudemment***)

The NP subject may be less prominent than the verb as is shown in (5b). At a sufficiently high speech rate, the NP subject and the head verb may be non prominent (see (5c)).<sup>7</sup>

Apart from the ‘right culmination constraint’, a non-compulsory constraint, that is a constraint that does not have to be respected, has to be formulated in order to account for the fact that prominence on syntactic heads is favored over prominence on non-heads.

The constraints accounting for the relation between the morpho-syntactic and the metrical structure are not sufficient to generate the metrical pattern obtained. Some metrical configurations are strongly disfavored, even though they respect syntactic constraints. Due to space limitations, we will not present all the rhythmic constraints that have to be formulated (e.g. Clash avoidance, Laspe avoidance, Eurhythmy, etc.). Consider, however, examples such as (6) and (7). (6a) and (7a) are very unlikely, despite respecting the right culmination constraint, while (6b) and (7b) are more likely, since stress clash is avoided.

- (6) *le président serbe.* “the Serbian president.”  
 a. ? (*le* ***président***) (***serbe***).  
 b. (*le* ***président*** ***serbe***).  
 (7) *Pierre mange.*  
 “Pierre eats.”  
 a. (***Pierre***) (***mange***).  
 b. (*Pierre* ***mange***).

The realization obtained in (6b) is a good example of the bipolarity principle that stipulates that, in any rhythmic group, a secondary accent is usually realized on left edge of the group, while the primary accent is realized on the right edge (more precisely on the rightmost metrical syllable). According to this principle, any lexical word in French (or ‘non leaner’ in the terminology of Zwicky 1982) may receive a secondary stress on its initial metrical syllable if

<sup>7</sup> For more information on that point, see Dell 1984.

the arising stress pattern yields a well-formed rhythmic pattern (see Fonagy 1979; Di Cristo 1999; Di Cristo & Hirst 1997, among others).<sup>8</sup> The bipolarity principle applies in three distinct cases illustrated respectively in (8), (9) and (10).

- (8) *La dégradation de ce procédé.* “the degradation of this process.”  
 (la dé gra da tion) (de ce pro cé dé).
- (9) *Un gentil garçon.* “a nice boy.”  
 (un gen til gar çon).
- (10) *Il verra Jean.* “He will meet Jean.”  
 (il ve rra Jean).

In (8), the lexical words *dégradation* and *procédé* are phrased in two distinct rhythmic groups. In each group, the initial and final syllables are both stressed in order to avoid lapses, the initial syllables receiving secondary stress and the final one the primary accent. In (9), the rhythmic group (*un gentil garçon*) is composed of two lexical words, but only the rightmost element receives a primary accent on its final syllable, while the adjective *gentil* receives secondary stress on its initial syllable. In (10), both lexical words are phrased in a single rhythmic group, even though *Jean* constitutes a NP on its own. Within the rhythmic group, primary accent is realized on the rightmost metrical syllable, while a secondary accent obtains on the initial syllable of the head Verb ‘*verra*’.

The examples illustrate the fact that stress is culminative at the phrasal level. In certain configurations, a lexical item may receive stress on its initial syllable, while remaining unstressed on its final one. In other configurations, however, the opposite stress pattern may be observed. In (6a), for instance, the only stressed syllable of the word *président* is the initial one; while in (6b) it is the final one.

To sum up, the stress pattern assigned to an utterance in French results from three distinct types of constraints : i) morpho-syntactic constraints such as the *right culmination constraint* that account for the mapping between the morpho-syntactic construal and the metrical structure; ii) purely metrical constraints such as *clash avoidance* or *lapse avoidance* that guarantee the well-formedness of the metrical pattern, and iii) the bipolarity principle that encourages bipolar stress patterns within a rhythmic group with an initial secondary stress and a final primary accent.

This metrical organization leads to distinguish two types of stressed syllables: i) primary stressed (or accented) syllables that occur on the rightmost metrical position of the rhythmic group; ii) secondary stressed syllables that

<sup>8</sup> Onsetless initial syllables are usually treated as extrametrical in French (see Plénat 1994).





well as the boundary tone. In French, there is no lexical stress that could attract a tone (or any element of the nuclear contour), but the stressed syllables provided by the metrical representation play a role in anchoring or attracting tones of the nuclear contour.

The three tonal units forming the nuclear contour in French are the following: an initial pitch accent ( $T^{*i}$ ) located on a ‘penultimate’ stressed syllable (either the secondary stressed syllable of the last rhythmic group or the primary stressed syllable of the penultimate rhythmic group), a final pitch accent ( $T^{*f}$ ), regularly associated with the last stressed syllable of the nuclear domain (to be precisely defined in section 3), and a boundary tone ( $T\%$ ).

**Nuclear contour :**  $T^* T^* T\%$

In previous works, an inventory of the nuclear contours of French has been proposed (Marandin to appear and Delais-Roussarie 2005, among other) and is given in (12). For a study of the meaning of several of these contours in a dialogue perspective, the reader is referred to Beyssade et al. (2004).

(12) Inventory of the nuclear contours in French

$H^* L^* L\%$	$H^* L^* H\%$
$L^* H^* L\%$	$L^* H^* H\%$
$L^* HL^* L\%$	$L^* HL^* H\%$
$L^* H+L^* L\%$	$L^* H+L^* H\%$

Examples of these various contours are given below. The way the tonal events are associated with the text will be described; but the principles that govern the tonal association will be formalized in section 3.2.

(13) *François a donné rendez-vous à Valérie*  
 “François gave an appointment to Valérie.”

*François a donné rendez-vous à Valérie*  
 $H^* \qquad \qquad H^* \qquad \qquad L^* L\%$

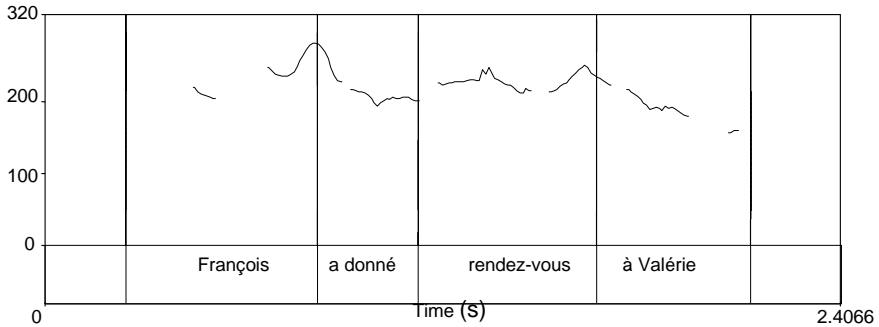


Figure 1 : *Pitch curve of “François a donné rendez-vous à Valérie.”*

In this utterance, the association of the nuclear contour **H\* L\* L%** is done within the two last rhythmic groups (*à Valérie*). The H\* initial pitch accent is associated with the primary stressed syllable of the penultimate rhythmic group (*vous*), while the last pitch accent L\* is associated with the primary accented syllable (*rie*). The last tone of the nuclear contour is a boundary tone occurring at the end of the utterance. The primary stressed syllables of the initial rhythmic groups (*François*) is associated with a H\* pitch accents, which is not part of the nuclear contour but is quite common in the stretch preceding the nuclear contour.

The following example corresponds to a question asked by a grandmother to her grand-son and is extracted from a spontaneous exchange. The nuclear contour associated with this utterance is of the shape: **L\* H\* H%**

- (14) *T'as été à la flûte?* “Did you go to your flute lesson ?”  
 L\*      H\*    H%

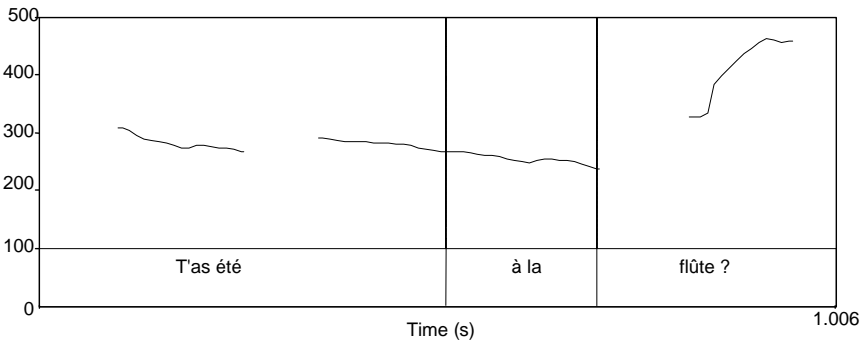


Figure 2 : *Pitch curve of “T'as été à la flûte ?”*

This sentence corresponds to a yes/no question with a rising pattern. The tonal sequence of the nuclear contour is L\* H\* H%. The L\* pitch accent is associated with the secondary accented syllable *té* of *T'as été à la flûte*, which forms a single rhythmic group. The H\* pitch accent is realized on the primary stressed syllable [flyt], together with the H%.

The following example has been uttered in a pseudo-dialog situation. It is an assertion realized with a nuclear contour of the form L\* HL\* L%

- (15) *François a donné rendez-vous à Valérie*  
 “François did give an appointment to Valérie.”  
*François a donné rendez-vous à Valé rie*  
 L\* L\* L\* HL\* L%

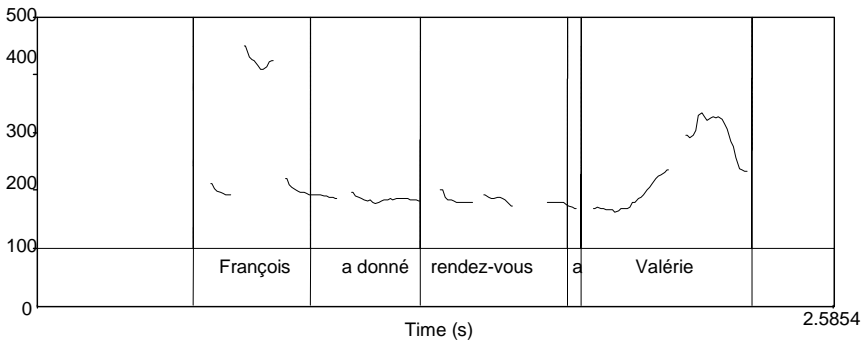


Figure 3 : Pitch curve of “François a donné rendez-vous à Valérie.”

In this utterance, the pitch accent is more complex than in the preceding examples, involving two tones: H and L, both being realized on the primary accented syllable *rie*. This utterance illustrates the copying process of the L tone of the initial pitch accent on the preceding final stressed syllables (last syllable of *François* and of *rendez-vous*).

The following example is extracted from a spontaneous speech exchange between a repairman and a customer. The repairman is checking whether the customer checked the recording settings. The nuclear contour associated with this utterance is of the form: L\* H+L\* L%.

- (16) *Vous avez essayé l'enregistrement ?*  
 “Did you check the recording ?”  
*Vous avez essayé l'enregis tre ment*  
 L\* L\* H+ L\* L%

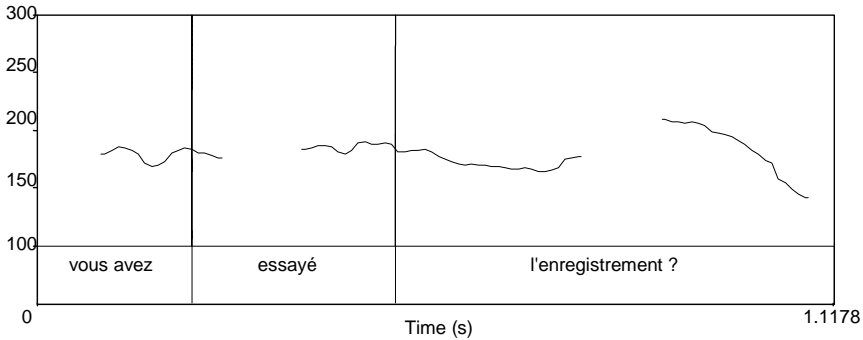


Figure 4: Pitch curve of “vous avez essayé l’enregistrement ?”

In this example, the final pitch accent is H+L\*. The H component is realized on the penultimate syllable, while the L\* is realized on the primary stressed syllable *ment*. The initial pitch accent L\* is realized on the secondary stressed syllable of the final rhythmic group (*l’enregistrement*) and is copied on a preceding accented syllable (the syllable *yé* of *essayé*).

Previous examples (15 and 16) illustrated copying processes triggered by the initial pitch accent. The boundary tone of the nuclear contour has also some interesting properties, which provide criteria to single it out: it is copied at the end of the post-focus part and might undergo a multiple copy process as it can be repeated at the end of each rhythmic group included within the post-focus sequence. These simple and multiple copying processes are exemplified in examples (25), (27) and (29) and respectively in figures 9, 11 and 13.

We mentioned previously ‘pragmatic’ accents as a special class of pitch accents, that we singled out. There are various types of ‘pragmatic accents’; here we focus on one of them: the ‘C’ accent, which expresses ‘contrast’. Phonetically, this ‘C’ accent involves a H tone, a lengthening and an expansion of the pitch register. It occurs on the first stressed syllable of the domain in question and might be repeated on stressed syllables within this domain. In association with a focus or a topic, it signals a ‘contrastive focus’ or a ‘contrastive topic’ respectively, and it can also be found within post-focus sequences (see Delais-Roussarie et al. 2002; Beyssade et al. 2005, among others).

Let us consider an instantiation of a ‘C accent’ repeated twice in the following example produced in a pseudo-dialog situation:

- (17) Speaker A : *Tu as pris le train de 19 heures ?*  
 “Did you take the 7pm train ?”  
 Speaker B : *Non, c’est celui de vingt et une heures que j’ai pris.*  
 “No, it’s the 9 pm one that I took.”

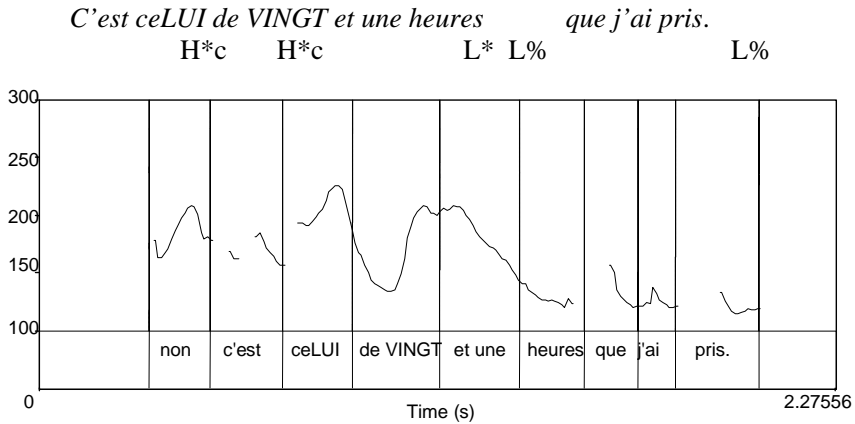


Figure 5 : Pitch curve of “Non, c’est celui de vingt et une heures que j’ai pris.”

In this utterance, a ‘C accent’, characterized by a high pitch and a lengthening of the syllable occurs on the stressed syllables *lui* and *vingt*. The presence of these ‘C accents’ express the contrast between *celui de dix-neuf* and *le train de 19 heures*, which is given in the preceding sentence of the dialog. For a further analysis of this example, which contains a ‘contrastive focus’ (*celui de vingt et une heures*), we refer the reader to 3.3. We insist that this ‘C accent’ is not related to focus organization, which is signalled by other markers (see section 3, below).

### 3. Tonal association and focus

In the previous sections, the metrical representation and tonal primitives (focusing on nuclear contours) have been presented. We now explain how to associate nuclear contours with the metrical representation. In the autosegmental metrical framework, this association is usually done within Intonational Phrases (see, among others, Pierrehumbert, 1980; or for French Post, 2000). In our proposal, this is done within a domain for which the extension is determined by focus.

#### 3.1 Focus and nuclear domain

In the literature, the terminology or concepts used to analyze the informative content of utterances are usually very unclear. Terms such as *focus*, *topic* and *old/new information* do not always have the same meaning in various theories. The term *focus*, for instance, may refer to various elements such as pitch accented constituent, the part of the propositional content that is new to the context (e.g not inferrable), etc. Even among the semantic definitions of

focus, different approaches may be distinguished:<sup>9</sup> the propositional approach to information and the segmentational view (for clarification on these distinctions, see, among others, Lambrecht 1994; or Beyssade et al. 2005).

The theoretical framework that our informational analysis relies on is essentially adopted from Büring 1997 and 1998 and from Jacobs 1984. It has the following characteristics: i) it relies on a propositional approach to information; ii) it is a dynamic approach; iii) methodologically, it is an analytical approach (see, for more details on these aspects, Beyssade et al. 2005).

In a propositional approach to information, a distinction may be proposed between two types of analyses. In some works, the ground/ focus articulation is formulated in informational terms. Ground is defined as the part of the propositional content that is inferable from the context, while focus is the part of the propositional content that is new to the context. In another line of research, the Ground/ focus articulation is related to the illocutionary semantics. Focus is thus defined as the part of the content that is affected by the illocutionary operator of the utterance (see Jacobs 1984). This latter view has the advantage of allowing a partition of the propositional content in any sentence types (assertion, question, command). In our work, we will adopt this illocutionary definition of the ground/ focus articulation.

The element that contributes the focal content of the proposition, or, to be more precise, that is specifically affected by the illocutionary operator associated with the utterance plays a crucial role in determining nuclear domain and post-focus domain. This element may be seen as a pivot, from which a barrier is constructed, delimiting two distinct zones. Consider example (18).

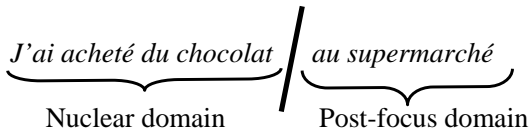
- (18) Speaker A: *Qu'as-tu acheté au supermarché ?*  
 "What did you buy at the supermarket ?"  
 Speaker B: *J'ai acheté du chocolat au supermarché.*  
 "I bought chocolate at the supermarket."

In this example, *du chocolat* contributes the content of what is specifically asserted. Two domains may be distinguished determined by the right edge of the focal element.

- (19) *J'ai acheté du chocolat au supermarché.*  
 "I did buy chocolate at the supermarket."

---

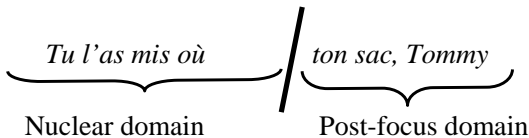
<sup>9</sup> As opposed to a prosodically motivated definition in which a focus element is a prosodically salient constituent.



As it appears clearly in (19), the nuclear domain is composed of the focus element *du chocolat*, but also of elements belonging to the ground such as *j'ai achet\acute{e}*. The nuclear domain is thus the linear sequence in S that spans from the beginning of the sentence to the right edge of the focal element.

Now let's consider the case of a question.

- (20) *Tu l'as mis o\`u ton sac, Tommy ?*  
 "Where did you put your bag, Tommy ?"



In this example, the wh word *o\`u* is the focus element. The sequence *tu l'as mis o\`u* constitutes the nuclear domain, while *ton sac, Tommy* is the post-focus sequence. Concerning the post-focus sequence, it spans from the right edge of the focus element up to the end of the sentence. As a result it may contain syntactic constituents of S such as arguments of the verb and adjuncts, but also incidental clauses, or right dislocated constituents (see *Tommy* in (20)).

This division of the utterance in two domains plays a crucial role in order to account for the association between the intonational profile and the text: the nuclear domain constitutes the association domain for nuclear contours.

### 3.2 *Text-tune association : principles and data*

As just said, the ground / focus articulation plays a crucial role in the text-tune association, since it provides the association domain. The association of the nuclear contour takes place according to the principles formalized in (21).<sup>10</sup>

#### (21) **Nuclear contour association principles**

The tonal elements that constitute the nuclear contour are associated with the text from right to left from the right edge of the focus element.

<sup>10</sup> The principles given in (21) apply to assertions and to specific types of questions (declarative question and WH in situ). According to current research we are carrying out, it may be necessary to associate the nuclear contour from left to right in case of WH fronted question types. In this case, the initial pitch accent would be associated with the WH word.

- i) the boundary tone of the nuclear contour is realized at the right edge of the focus element.
- ii) the final pitch accent of the nuclear contour is associated with the rightmost primary accented syllable of the focus element.
- iii) the initial pitch accent of the nuclear contour is either realized at the left edge of the rightmost rhythmic group of the nuclear domain or attracted to neighboring stressed syllables of the nuclear domain. Moreover this accent may be copied to preceding primary stressed syllables.

The crucial role of the ground/ focus articulation in the association of the nuclear contour appears clearly when we compare the prosodic realization of the same utterance realized as all focus in (22) and as narrow focus in (23).

- (22) Speaker A : *Qu'est-ce qu'il a fait ?*  
 Speaker B : *Il a montré son agenda au juge pendant sa garde.*  
 "He saw his diary to the judge while in custody."  
 [*Il a montré son agenda au juge pendant sa garde*]<sub>Focus</sub>  
                                   H\*                                  H\*          H\*                  L\* L%

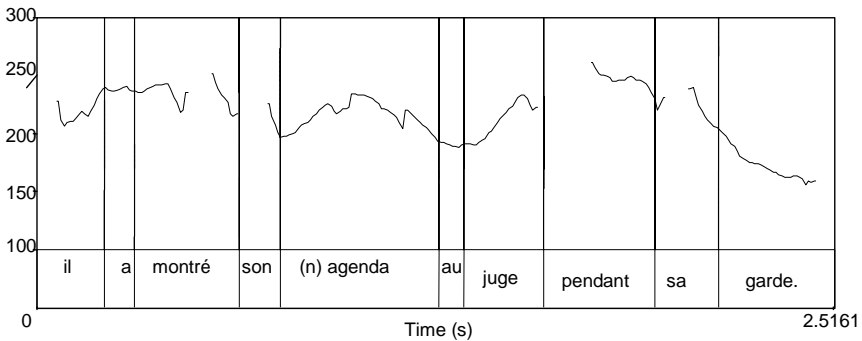


Figure 6 : *Pitch curve of "il a montré son agenda au juge pendant sa garde."*

The utterance in Figure 6 is realized with a falling nuclear contour of the form H\* L\* L%. Since the sentence is all focus, the contour is associated with the text from the end of the utterance. The L% boundary tone is thus realized at the right edge of the utterance. The L\* pitch accent is associated with the primary stressed syllable [ $\gamma\alpha\{\delta\}$ ], while the H\* pitch accent is attracted to the stressed syllable [ $\delta A$ ] of the last rhythmic group (*pendant sa garde*)

Now consider the example in (23), in which *son agenda* constitutes the focal element.







In figure 9, the nuclear contour again is associated with the text within the nuclear domain. The L\* initial pitch accent is realized at the left edge of the rhythmic group (*tu l'as acheté où*). The final pitch accent H\* is associated with the rightmost primary accented syllable of the focus element [u], while the H% boundary tone is realized at the right edge of the nuclear domain (that is the right edge of the focus element), and is copied on any primary accented syllable of the post-focus sequence.

To sum up, we have shown that the nuclear contour of an utterance is associated with the text in a domain entirely determined by focus. This association domain is composed of the focus element and of all other elements linearly adjacent on its lefthand side. Moreover, the nuclear contour is associated with the text from right to left from the right edge of this nuclear domain. It is important to note that post-focus sequences are realized as appendices, without carrying a specific nuclear contour. Their realization results from a copy of the boundary tone of the nuclear contour (see (24) and (25)). The proposal made here and the association principles formulated in (21) apply for any illocutionary types of sentences (assertion, question, etc.). In the next section, we will show that they hold true for cleft sentences as well.

### 3.3 *Intonation, focus and clefts*

Cleft sentences have been generally viewed as focus-related sentence with the XP in the frame *c'est XP qui/que* being marked as focus and the relative clause as post-focus (see Lambrecht 1994 or Rossi 1999). However, this view does not account for the full variety of clefts: clefts may have other types of semantic and prosodic structure besides focus and post-focus, and the XP need not to be the focus element. A large number of clefts are not subdivided between a focus and a post-focus domain but, as a whole, they form a broad focus sentence (see Rialland et al. 2002; Doetjes et al. 2005). Thus, depending upon their focal organization, as marked by intonation, two types of clefts will be distinguished: 1) 'canonical' cleft sentences with a focus/ post-focus organization and 2) broad-focus clefts.

3.3.1 *Canonical cleft sentences, with a focus/ post-focus organization.* The prosody of "focus-ground" clefts has been studied in various publications (Rossi 1974, 1999), including papers that we co-authored (Clech-Darbon et al. 1999; Rialland et al. 2002; Doetjes et al. 2005). In 'canonical' clefts, all or part of the XP is in focus, while the relative clause is post-focus. As for the other sentence types mentioned earlier, the nuclear contour (T\* T\* T%) of the utterance is associated with the text within the nuclear domain, the post-focus part presenting copy of the boundary tone of the nuclear contour. Let's consider some examples, involving various intonational contours, based on various nuclear contours.

The question in (26) has been uttered in a pseudo-dialog situation:

- (26) *C'est pour Jospin que Mathilde a voté ?*  
 "Is it for Jospin that Mathilde did vote ?"  
 [*C'est pour Jospin*]<sub>Focus</sub> [*que Mathilde a voté*]<sub>Post-focus Dom</sub>  
 L\*                      H\*H%    H%

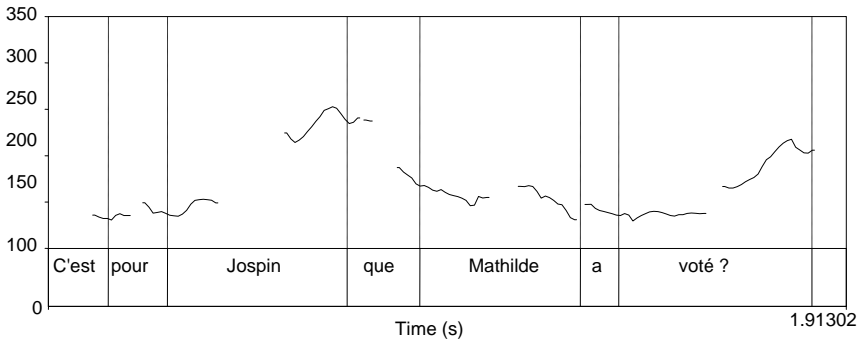


Figure 10 : Pitch curve of “C'est pour Jospin que Mathilde va voter ?”

The nuclear contour (L\* H\*H%) is mapped on the focal part and the boundary tone (H%) is repeated at the end of the utterance.

The following example is an assertion extracted from an enacted dialog. It is an answer to the question: *Pour qui Mathilde va-t-elle voter?* (“For whom will Mathilde vote ?”)

- (27) *C'est pour Tournier qu'elle va voter.*  
 "It is for Tournier that she will vote."  
 [*C'est pour Tournier*]<sub>Focus</sub> [*qu'elle va voter.*]<sub>Post-focus Dom</sub>  
 H\* L\* L%    L%

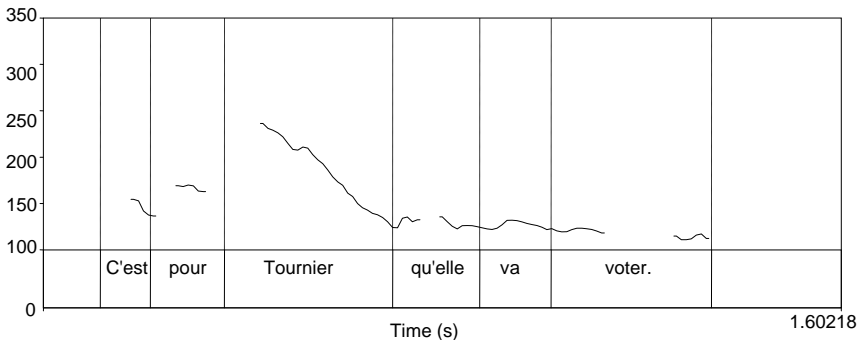


Figure 11 : Pitch curve of “C'est pour Tournier qu'elle va voter.”

A similar analysis can be proposed, the nuclear contour being  $H^* L^* L\%$  and the copied boundary tone being  $L\%$ .

The next example comes from the ESTER corpus and it is part of a radio interview of Badinter, who was ‘Garde des Sceaux’ (Attorney general) in France.

(28) *C'est le mot universel qui est essentiel, n'est-ce pas ?*

“It is the word universal that is essential, isn't it ?”

[*C'est le mot universel*]<sub>Focus</sub> [*qui est essentiel*]<sub>Post-Focus Dom</sub> *n'est ce pas?*  
 $L^*$   $HL^*L\%$   $L\%$   $L^*$   $H^*H\%$

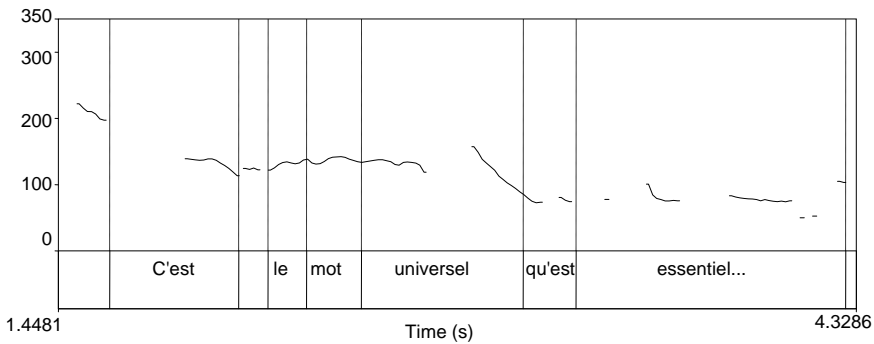


Figure 12 : *Pitch curve of “C'est le mot universel qu'est essentiel....” (Badinter)*

The nuclear contour ( $L^* HL^* L\%$ ) involves a complex pitch accent ( $HL^*$ ). The  $L\%$  (which is an extra low tone, as noticed by many authors, for example Maeda 1976 or Ladd 1996 for English) is copied at the end of the sentence. *N'est-ce pas* is a tag with an independent nuclear contour ( $L^* H^*H\%$ ).

Post-focus parts may also display multiple copies of the boundary tones, at the end of each rhythmic groups that they contain, as in example (29), which is an answer to the question *Combien de romans policiers a-t-il écrits?* (“How many detective novels did he write ?”) recorded in an enacted dialog.

(29) *C'est dix-sept romans policiers qu'il a écrits.*

“It is seven teen detective novels that he wrote.”

[*C'est dix-sept*]<sub>Focus</sub> [*romans policiers qu'il a écrits.*]<sub>Post-Focus Dom</sub>  
 $H^*$   $L^*L\%$   $L\%$   $L\%$

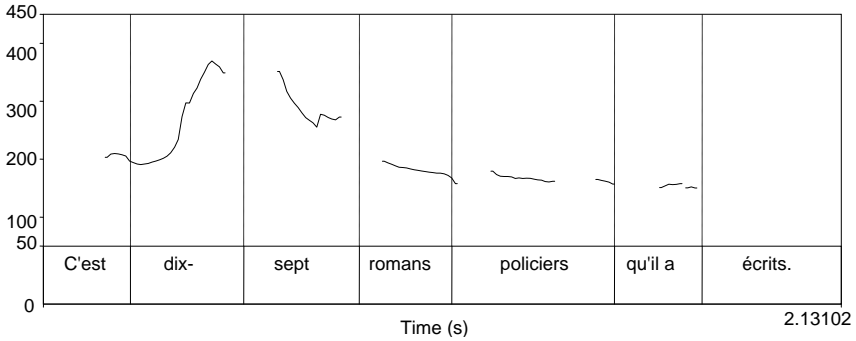


Figure 13 : *Pitch curve of “C'est dix-sept romans policiers qu'il a écrits.”*

Each L% triggers downstep on the following rhythmic group. For a study of such downstepping realizations, we refer the reader to Di Cristo and Jankowski 1999, Riolland et al 2002, Delais-Roussarie et al. 2002, Beysade et al. 2005.

These canonical clefts might also include a contrastive focus, which is marked by the combination of a focal intonation and a ‘C’ accent. Example (17) presented in section 2.2 includes a contrastive focus in a clefted sentence. Its pitch curve is reproduced below.

(30) *Non, c'est celui de vingt et une heures que j'ai pris.*

“No, it is the 9 pm train that I took.”

*Non, [c'est celui de vingt et une heures]<sub>FocusDom</sub> [que j'ai pris]<sub>Post-Focus Dom.</sub>*

H\*c    H\*c            L\* L%                            L%

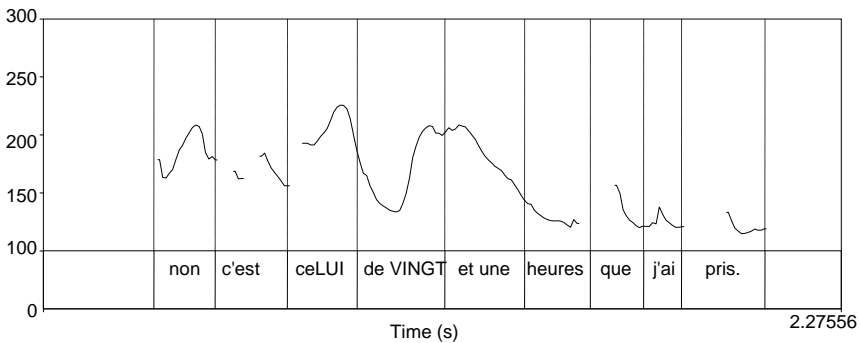


Figure 14 : *Pitch curve of “Non, c'est celui de vingt et une heures que j'ai pris.” as an answer to “Tu as pris le train de dix neuf heures?”*



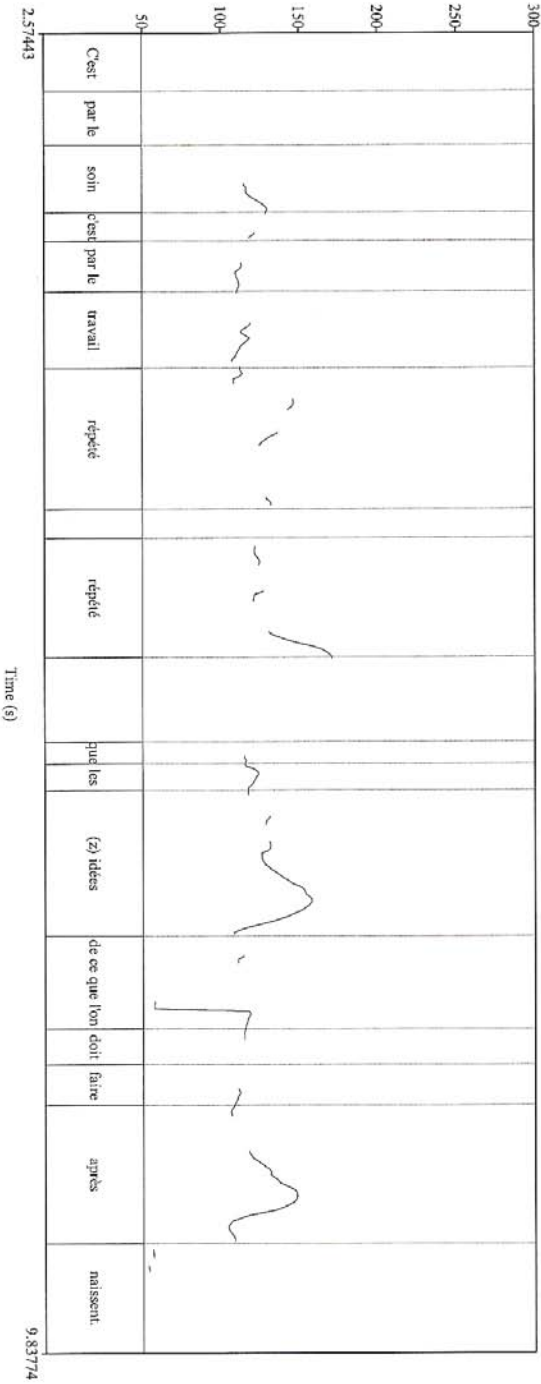


Figure 15: Pitch curve of "C'est par le soin, c'est par le travail répété répété que les idées de ce que l'on peut faire après naissent." César, corpus ESTER.



#### 4. *Conclusion*

The central point of this paper is that focus plays a central role in assigning a prosodic representation to an utterance. The focus element determines domains and boundaries for the anchoring, mapping and copying of intonational tones

Intonational tones include pitch accents and boundary tones. Among pitch accents, we recognize a number of ‘pragmatic accents’, including a ‘C’ accent involved in the expression of ‘contrastive’ focus, ‘contrastive’ topic, and ‘contrastive’ post-focus.

The metrical pattern provides prominent positions for intonational tone anchoring. This pattern is determined by two independently motivated constraint types (syntactic constraints and metrical constraints) and is sensitive to a ‘bipolarity’ principle (promoting initial and final position in a rhythmic group).

Focus is defined as the part of the content that is specifically affected by the illocutionary operator. In the nuclear domain, the intonational profile obligatorily contains a ‘Nuclear Contour’ made up of three intonational elements (T\* T\* T%) - that is anchored from right to left starting from the right edge of the domain; this ‘Nuclear Contour’ is the ‘center’ of the intonational structure and the source of various copying processes.

The post-focus domain, which extends from the right edge of the focal element up to the end of the utterance, has no proper intonational specification. Its intonational pattern is determined by copying processes and the nature of the boundary tone included in the Nuclear Contour. It is not dephrased and may include several accentual phrases (or rhythmic groups).

The proposed analysis applies to the major clause types (declarative, interrogative) regardless of their syntactic construction (canonical or cleft).

#### *References*

- Beyssade C, E. Delais-Roussarie, J. Doetjes, J.M Marandin & A. Rialland. 2005. “Information in French : Introduction”. *Handbook of French semantics*, ed. by F. Corblin & H. de Swart. 455-475. Stanford : CSLI.
- Beyssade C, E. Delais-Roussarie, J. Doetjes, JM Marandin & A. Rialland. 2005. “Prosody and Information in French”. *Handbook of French semantics*, ed. by F. Corblin & H. de Swart. 477-499. Stanford: CSLI.
- Beyssade, C. ; E. Delais-Roussarie, J.M Marandin, A. Rialland & M. De Fornel. 2004. “Le sens des contours intonatifs en français: croyances compatibles ou conflictuelles”. *Actes des XXV èmes Journées d’Etude sur la Parole (JEP-TALN)*, pp. 73-76.
- Büring, D. 1997. *The Meaning of Topic and Focus : The 59th Street Bridge Accent*. London: Routledge.

- Büring, D. 1998. "Focus and Topic in a complex model of discourse". Ms. <http://www.linguistics.ucla.edu/people/buring>.
- Clech-Darbon, A, G. Rebuschi & A. Rialland. 1999. "Are there cleft sentences in French?". *The grammar of focus* ed. by G Rebuschi & L. Tuller, p. 83-118. Amsterdam & Philadelphia: John Benjamins..
- Delais-Roussarie, E. 1996. "Phonological Phrasing and Accentuation in French". *Dam Phonology : HIL Phonology Paper II*, ed. by M. Nespor & N. Smith, p. 1-38. Den Haag : Holland Academic Graphics.
- Delais-Roussarie, E. 2000. "Vers une nouvelle approche de la structure prosodique". *Langue Française* 126. 92-112.
- Delais-Roussarie, E. 2005. *Phonologie et Grammaire : études et modélisation des interfaces prosodiques*. Mémoire d'Habilitation, Université de Toulouse-le Mirail.
- Delais-Roussarie, E., A. Rialland, J. Doetjes & J.M. Marandin. 2002. "The Prosody of post-focus sequences in French". *Proceedings of speech prosody 2002*, ed. by B. Bel & I. Marlien. Aix en Provence.
- Dell, F. 1984. "L'accentuation dans les phrases en français". *Forme sonore du langage: structure des représentation en phonologie*, ed. by F.Dell, D. Hirst & J.R Vergnaud, pp. 65-122. Paris : Hermann.
- Di Cristo, A. 1998. "Intonation in French". *Intonation Systems. A Survey of Twenty Languages*, ed. by D Hirst & A. Di Cristo. 88-103. Cambridge: Cambridge University Press.
- , A. 1999. "Le cadre accentuel du français contemporain. Première partie". *Langues* 2-3: 184-205. Deuxième partie. *Langues* 2-4: 258-267.
- Di Cristo, A. & D. Hirst. 1997. "L'accent non-emphatique en français : stratégies et paramètres". *Hommages à I. Fonagy*, ed. by J. Perrot. Paris: L'Harmattan.
- Di Cristo, A & J. Jankowski. 1999. "Prosodic organization and phrasing after focus in French". *Proceedings of the XIV<sup>th</sup> International Congress of Phonetic Sciences (ICPhS)*. 1565-1568. San Francisco, USA.
- Doetjes, J. G. Rebuschi & A. Rialland. 2005. "Cleft sentences". *Handbook of French semantics*, ed. by F. Corblin and H. De Swart. Stanford: CSLI.
- Fonagy, I. 1979. "L'accent français : accent probabilitaire, l'accent du français contemporain". *Studia Phonetica* 15 : 123-233.
- Gussenhoven, C. 1984. *On the grammar and semantics of sentence accents*. Dordrecht: Foris.
- Jacobs, J. 1984. "Funktionale satzperspektive und illokutionssemantik". *Linguistische Berichte* 91:25-58.
- Kadmon, N. 2000. *Formal Pragmatics: Semantics, Pragmatics, Presupposition, and Focus*. Oxford: Blackwell.

- Jun, S.-A. & C. Fougeron. 2000. "A phonological model of French intonation". *Intonation : Analysis, Modeling and Technology*, ed. by A. Botinis, pp. 209-242. Dordrecht : Kluwer Academic Publishers.
- Ladd, R. D. 1996. *Intonational Phonology*. Cambridge: Cambridge University Press.
- Lambrecht, K. 1994. *Information structure and sentence form: Topic, focus and the mental representation of discourse referents*. Cambridge: Cambridge University Press.
- Maeda, S. 1976. *A characterization of American English Intonation*, Ph.D. Diss., MIT.
- Marandin, J.-M., C. Beyssade, E. Delais-Roussarie & A. Rialland. 2002. "Discourse marking in French: C accents and discourse moves". *Proceedings of Speech Prosody 2002*, ed. by B. Bel & I. Marlien. Aix en Provence.
- Marandin, J.-M. (to appear). "Contours as Constructions". *Proceedings of ICCG-3 - The Third International Conference on Construction Grammar*. Marseille, France.
- Mertens, P. 1993. "Accentuation, Intonation et Morphosyntaxe". *Travaux de Linguistique*, 26/93. 21-69.
- Pierrehumbert, J. 1980. *The phonology and phonetics of English Intonation*. Ph.D. Diss. MIT.
- Plénat, M. 1994. "L' "extramétricalité" des voyelles initiales". *French Generative Phonology : Retrospectives and Perspectives*, ed. by C. Lyche. 237-258. ESRI Publication.
- Post, B. 2000. *Tonal and phrasal structures in French intonation*. The Hague : Holland Academic graphics.
- Rialland, A.; J. Doetjes & G. Rebuschi. 2002. "What is focused in C'est XP qui/que cleft sentences in French?". *Proceedings of Speech Prosody 2002*, ed. by B. Bel & I. Marlien, 595-598.
- Rossi, M. 1974. "L'intonation prédicative dans les phrases transformées par permutation". *Linguistics*, 103: 64-84.
- Rossi, M. 1999. *L'intonation: le système du français*. Paris : Ophrys.
- Selkirk, E. O. 1984. *Phonology and syntax: the relation between sound and structure*. Cambridge (Mass.): MIT Press.
- Selkirk, E. O. 1986. "On derived domains in sentence phonology". *Phonology Yearbook 3*: 371-405.
- Vallduvi, E. & M. Vilkuna. 1998. "On Rheme and Kontrast". *Syntax and Semantics 29: The Limits of Syntax*, ed. by P. Culicover & L. McNally. pp. 79-108. New York: Academic Press.
- Zwicky, A.M. 1982. "Stranded *to* and phonological phrasing in English". *Linguistics*, 20: 3-57.

# ON AFFIXAL SCOPE AND AFFIX-ROOT ORDERING IN ITALIAN<sup>1</sup>

ANNA MARIA DI SCIULLO  
*Université du Québec à Montréal*

I raise the question why different sorts of affixes occupy different canonical positions in morphological expressions, and focus on Italian. I show that the semantic scope between affixes and the precedence relations between affixes and roots follow from Asymmetry Theory (Di Sciullo 2005). First, I define the properties of morphological derivations and morphological domains. Second, I provide evidence that the affixal scope, legible at LF, is derived by the operations of the morphology applying under asymmetric Agree. Finally, I show that the ordering of affixes with respect to roots, legible at PF, follows from the position of affixes in their minimal trees, given a linearization operation that applies to the units of morphological domains.

## 1. *Purpose*

The examples in (1) illustrate that certain affixes occupy certain canonical positions in word-structure.

- (1) a. *probabil-ità* ‘probability’, *sensazion-ale* ‘sensational’ (It)
- b. *ri-caric-are* ‘rewind’, *dis-tend-ere* ‘distend’
- c. *a-(m)maestr-are* ‘(to) master’, *a-(d)dorment-are* ‘asleep’
- d. *ch-i* ‘who’, *ch-e* ‘what/that’
- e. *qu-esto* ‘this’, *qu-ello* ‘that’

In standard Italian, as well as in the other Romance languages, derivational affixes occur to the right of the root, e.g., *-ità* ‘-ity’, *-ale* ‘-al’ in (1a), and to the left of a root, e.g., *ri-* ‘-re’, *dis-* ‘dis-’ in (1b) and *a-* ‘ad-’ in (1c), whereas inflectional affixes, including the verbal and the nominal inflection, occur in the right periphery of a root. Assuming Di Sciullo’s (2005) basic bi-partite analysis of wh-words and demonstratives of the examples in (1d) and

---

<sup>1</sup> I thank the anonymous reviewers for their comments on a previous version of this work supported in part by funding from the Social Sciences and Humanities Research Council of Canada to the Interface Project, grant number 214-2003-1003, as well as by a grant to the Dynamic Interfaces Project from FQRSC, grant number 103690.

(1e) illustrate that the *wh*-operator affix, e.g., *ch-/qu-*, precedes the affix spelling out the restrictor of the variable bound by the operator, e.g., *-i/-e, ello-esto*.<sup>2</sup>

In this paper, I show that Asymmetry Theory makes correct predictions for the semantic scope and the ordering of affixes with respect to roots in Italian.<sup>3</sup> First, I define the basic properties of morphological derivations, including the notions of morphological domains. Second, I show how affixal scope is derived in the morphology and is legible at LF. Third, I show how morphological linearization is derived in the phonology, and is legible at PF.

## 2. Morphological derivations

### 2.1 Architecture, operations, and projections

According to the fully parallel model of the Asymmetry Theory, morphology and syntax share basic properties of the primitives and the operations of the grammar, while they differ in the instantiations of these properties. Asymmetry is the characteristic property of relations in the morphology, as opposed to being one of the relations available in the syntax.<sup>4</sup>

Affixes and roots, with their features, are part of minimal trees before they enter the computational space. A minimal tree is a tree with exactly one head, one specifier, and one complement, and its hierarchical structure follows from the Universal Base Hypothesis (Kayne 1994). The minimal tree is the unit of the morphological domains, derived by the operations of the grammar, i.e.,

---

<sup>2</sup> Italian *wh*-words and demonstratives have the basic bi-partite form of functional elements. They include an operator, which is spelled out by an initial consonantal element, followed by a restrictor, which is spelled out by a vocalic constituent. The morphological content of the vocalic constituent of determiners ranges over the set of interpretable features including human/thing, distal/proximal, time/place, and the part/amount:

R	Ø	person	thing	distal	Proximal	place	Time	part	amount
<i>qu-</i>	-e			-esto	-ello	-ove	-ando	-ale	-ando
<i>ch-</i>	-e	-i	-e						

The fact that Italian uses the same morpheme, i.e., *qu-* for demonstratives, e.g., *qu-esto* ‘this’, *qu-ello* ‘that’, and for question words, e.g., *qu-ando* ‘when’, *qu-anto* ‘how much’, and *qu-ale* ‘which’, falls out from the assumptions that morphemes are underspecified for the operator features [ $\pm Q$ ], [ $\pm D$ ], [ $\pm wh$ ], [ $\pm th$ ] and that in Italian, the same morpheme, i.e., *qu-* is the spell-out of the [ $+Q$ ,  $-th$ ] and the [ $+D$ ,  $+th$ ] features. Demonstratives are [ $+D$ ,  $+th$ ] operators with either a proximate or a distal restrictor. *Wh*-words are [ $+Q$ ,  $-th$ ] operators, and have either a part or an amount restrictor, a time or a place restrictor. See Di Sciullo (2005) for discussion.

<sup>3</sup> I refer the reader to Di Sciullo (2006) showing how the theory accounts for cross-linguistic variation in the position of affixes with respect to roots, for strong suffixing languages, such as Turkish, as well as for strong prefixing languages, such as Yekhee, a Niger Congo language, while keeping constant the basic morphological affixal scope relations.

<sup>4</sup> As shown in Di Sciullo (2005), whereas inversion of constituents as well as scope ambiguity are possible in syntax in some cases, whereas they are generally impossible in morphology.

morphological merger (M-Shift) and feature checking (M-Link), applying under asymmetric Agree, (2).

- (2) *Agree* ( $\phi_1, \phi_2$ ): Given two sets of features  $\phi_1$  and  $\phi_2$ , Agree holds between  $\phi_1$  and  $\phi_2$ , iff  $\phi_1$  properly includes  $\phi_2$ , and the node dominating  $\phi_1$  sister-contains the node dominating  $\phi_2$ .

The morphological categories are defined on the basis of the morphological features, including the Argument [ $\pm A$ ] and Predicate [ $\pm \text{Pred}$ ] features. The combination of these features define the morphological categories, including the following: argument: [+A, -pred]; primary predicate: [-A, +pred]; secondary predicate: [+A, +pred]; and expletive: [-A, -pred]. The [+pred] affixes occupy the head position of their minimal tree and take roots as their arguments.<sup>5</sup> Furthermore, a [+A] feature occupies the specifier or the complement position of a minimal tree if this position has an argument feature. For example, a causative affix has a [+A] specifier, since it contributes an external argument to the expression it is part, and a [-A] feature occupies the specifier position of a non-causative affix.

In this model, feature checking applies to pairs of contra-valued features, and results in the deletion/valuing of an active (uninterpretable) feature, i.e., the negative value of a feature. Checking eliminates active features before the interfaces, where Full Interpretation (FI) requires that each element be interpretable.<sup>6</sup>

The morphological scope relations are derived in the morphology and are legible at LF. Morphological merger builds the *Hierarchy of Homogeneous Projections*, (4), where functional (F) projections scope over non-functional projections universally, and where asymmetric c-command holds between Operators (Op), Aspectual modifiers (Asp) and Predicates (Pred).<sup>7</sup>

- (3) [... Op F [ Asp F [ ... Pred ... ]]]

The ordering of affixes with respect to roots is derived in the phonology and is legible at PF. Affix-root linearization may require the application of the

---

<sup>5</sup> Aspectual modifiers and operators are also morphological categories defined on the basis of binary features. See Di Sciullo (2005) for the full feature structure specification.

<sup>6</sup> Morphological and syntactic checking operate with different features, and have different effects. While active syntactic features are associated with syntactic categories, such as T and C, active morphological features are associated with morphological categories such as argument (A) and predicate (Pred). Furthermore, syntactic checking may lead to overt movement, whereas this is not the case for morphological checking.

<sup>7</sup> See also Cinque (1999), Chomsky (2001), Carlson (2005), Baker (1988), Speas (1990), Rice (1998), among other works, for similar functional hierarchies.

operation M-Flip, (4).<sup>8</sup> This PF operation applies to minimal trees with no PF features in the specifier position, (5a, b), it does not apply to minimal trees with PF features in the specifier position, (5c, d).

(4) *M-Flip (T)*: Given a minimal tree *T* such that the specifier of *T* has no legible PF features, *M-Flip (T)* is the tree obtained by creating the mirror image of *T*.

- (5) a. [... af [...root...]] => b. [...root... [ af...]]  
 c. [ af ...[ ...root...]] => d. [ af... [ ...root...]]

In this model, the properties of morphological expressions, such as strict scope and precedence relation, local domains and atomicity, are not the consequence of construction specific rules or conditions, but they follow from more basic properties of grammar.<sup>9</sup> The model does not reduce morphology to syntax, while it allows similarities between the two sub-systems to follow from its parallel architecture.

## 2.2 Morphological domains

2.2.1 *Local checking*. The operations of the morphology apply cyclically in local domains. The morphological domains are the Pred-domain, the Asp-domain, and the Op-domain. The structure in (6) is an example of a minimal Pred-domain (Pred), where a Pred-affix takes a root as its argument (A).

- (6) [<sub>Pred</sub> [-A] Pred-af [<sub>A</sub> [+A] root [+A]]]

The morphological domains are the locus of active (uninterpretable) feature checking. Active features must be checked (deleted/valued) before the interfaces in order to satisfy FI.<sup>10</sup> The converging derivations yield interpretable

<sup>8</sup> The FLIP operation is independently motivated. There is a syntactic instance of this operation, i.e. S-Flip, deriving the order of modifiers with respect to heads in the syntactic derivation. Contrary to M-Flip, S-Flip applies when the specifier of a minimal tree is PF legible. See Di Sciullo (2005) for discussion.

<sup>9</sup> For example, in the fully parallel model of the Asymmetry Theory, Di Sciullo and Williams's (1987) Atom Condition, according to which words are atomic to sentence level rules, follows from the architecture of the grammar, since syntactic rules do not apply in the morphological plane of the computational space.

<sup>10</sup> Morphological trees differ from syntactic trees categorically and configurationally. There is no syntactic category in morphological trees, and the morphological features have a more restricted distribution than syntactic features. For example, in morphological trees, the internal and the external argument features are part of the same minimal tree, whereas this is not the case in syntactic projections, where the external argument is located in the Specifier of vP and the internal argument is located in the complement of V, as in Chomsky (2001).

morphological expressions, whereas derivations that do not converge, e.g., interface expressions with surviving active features, yield morphological gibberish (#). Consider the example in (7).

- (7) a. [<sub>Pred</sub> [-A] -ore [<sub>A</sub> [+A] giocare [-A] ]]      giocatore  
 b. [<sub>Pred</sub> [-A] -ore [<sub>Arg</sub> [-A] arrivare [+A] ]]      #arrivatore

The example in (7a), *giocatore* ‘player’ illustrates the deletion of an active feature. The affixal head *-ore* ‘-er’ selects the head of its complement, and asymmetric Agree holds between the selector and the selectee. The active [-A] feature occupies the specifier position of the affix *-ore*, since this affix has no external argument feature. This active feature is checked/deleted by the [+A] feature of the specifier of the root *giocare* ‘play’. Witness the fact that the external argument of the root is no longer an argument of the derived nominal, (8). In (7b), the active [-A] feature of *-ore* cannot be checked by the [+A] feature of the root, since *arrivare* has a [-A] feature in its specifier position.<sup>11</sup> Thus, the derivation in (7b) yields morphological gibberish, i.e., #*arrivatore* ‘arriver’. This expression does not satisfy FI at the interface, since it includes active features.

- (8) a. Gianni gioca. / b. Il giocatore (\*da Gianni).  
 “Gianni plays.” / “The player (\*by Gianni)”.

The examples in (9)-(11) illustrate the valuing of an active feature. Considering (9a), the active [-A] feature in the specifier of the predicate affix *-ivo* is checked/valued by the [+A] feature of the root, and the external interpretable argument of the root becomes the external argument feature of the derived nominal used predicatively, (10).<sup>12</sup> In (9b), feature checking does not apply since the [-A] feature in the specifier of the root cannot check the [-A] feature in the specifier of the affix *-ivo*. Consequently, the derivation yields morphological gibberish, (11), #*cadivo* ‘fallive’ fails to satisfy FI.

- (9) a. [<sub>Pred</sub> [-A] -ivo [<sub>Arg</sub> [+A] impegnare [+A] ]]      impegnativo  
 b. #[<sub>Pred</sub> [-A] -ivo [<sub>Arg</sub> [-A] cadere [+A] ]]      #cadivo

<sup>11</sup> The function of Pred is to relate function to argument, without making reference to the notion of subject. To this extent, it is not identical to Bowers’s (2001) predication category (Pr) which relates subject to predicate.

<sup>12</sup> Additional properties are required to differentiate affixes such as *-bile* ‘-able’ and *-ivo* ‘-ive’, which have different linking properties. Di Sciullo and Williams’s (1987) function-composition statement per affix can be derived from the presence of an active feature on an affix that triggers the linking to the complement of the root.



- (10) a. *Lo studio impegna Gianni.*  
 “Studying takes Gianni’s time.”  
 b. *La stodio è impegnativo.*  
 “Studying takes a lot of time.”
- (11) a. *L’albero cade.*  
 “The tree falls.”  
 b. *#L’arbero è cadivo.*  
 “The tree is fallive.”

Thus, the derivation of Italian deverbal nouns and adjectives brings empirical support to the hypothesis that active feature checking applies in morphological domains.

2.2.2 *Morphological domains and phases.* The notion of ‘phase’ was introduced in Chomsky (2001) as a way to account for the locality of syntactic operations by reducing the computational load in the derivations.<sup>13</sup> The complement of a phase is sent to Spell-Out, and thus is no longer accessible for further computation, only the head and the edge of a phase are.

The next paragraphs provide evidence that morphological domains share properties of phases.

First, morphological domains are recursive. Feature checking applies within a morphological domain and between adjacent domains: however, it may not apply between non adjacent domains, (12).

- (12) [ ...Op ... [ ...Asp ... [... Pred ... ]]]
- 

For example, the active feature of *awh*-morpheme in an Op-domain cannot be checked by an interpretable feature in a Pred-domain. However, it may be checked by a feature that is part of the immediately lower Asp-domain. Thus, the English, *wh*- and *th*- morphemes may combine with aspectual categories such as adverbs, e.g., *wh-here*, *th-here*, but not with predicates such as adjectives, e.g., *\*wh-near*, *\*th-near*. Likewise in Italian, the *qu*-morpheme may combine with another Op-affix such as a pronoun, e.g., *qu-ello* ‘that’, but not with an adjective, e.g., *\*qu-bello* ‘th-nice’.

<sup>13</sup> By standard assumptions, (Chomsky 2001, 2005, Uriagereka 1999), the phase includes an F-XP configuration, it is impenetrable, and it is isolable at the interfaces. According to Chomsky (2001), the syntactic phase is propositional (vP, CP), and it is a complete functional complex.

Second, the morphological domain is impenetrable. This is illustrated in (13a) with the Italian causative verb *formalizza* ‘(she/he) formalizes’. This verb includes two Pred sub-domains, Pred<sub>1</sub> and Pred<sub>2</sub>. Only the edge of Pred<sub>1</sub>, here the specifier position of Pred<sub>1</sub>, is accessible to Pred<sub>2</sub> for feature checking, the non edge of Pred<sub>1</sub> is not.

- (13) a. *formalizza*  
 [Pred<sub>2</sub> [+A] -a [Pred<sub>1</sub> [-A] -i(z)- [[-A] formale [+A] ] ]
- 
- b. *La grammatical è formale. / Gianni formalizza la grammatica.*  
 ‘(The) grammar is formal.’ / ‘Gianni formalizes the grammar.’

In (13a), the [+A] feature in the specifier position of the causative affix *-a* checks the [-A] feature of the inchoative affix *-i-*, in the specifier position of Pred<sub>1</sub>. It does not check the uninterpretable [-A] feature of the adjective *formale* ‘formal’ in the complement of Pred<sub>1</sub>. In effect, a causative affix adds an external argument to an inchoative verb, it does not add an argument to an adjective.

Third, locality restrictions are observed between different morphological domains. For example, in (14a), the head of a Pred-domain is accessible to checking by an element in the Asp-domain, i.e., by the privative affix *in-* ‘un-’, but the complement of the Pred-domain is not. The derived expression is correctly interpreted as a derived adjective, and not as a derived verb. In (14b) the flexional affix *-i* has two values: the masculine, plural inflection of nominal categories, and the 2<sup>nd</sup> person singular present tense inflection of verbal categories. The head of a Pred-affix is accessible to operations from the next domain up, i.e., the Op-domain, but its complement is not. The derived morphological expression is correctly interpreted as a plural derived nominal, and not as the nominalization of a tensed verb.

- (14) a. [Asp *in-* Asp [Pred [-A] -bile [A[+A] ] penetrare [[+A] ] ]
- 
- b. [Op ...-i [Pred [-A] -ion [A[+A] ] distruggere [[+A] ] ]
- 

The facts above show that the morphological domains do share properties with the phase.

Chomsky's (2001) conceptual argument for the phase is that it contributes to the computational load reduction. When morphological structure is complex, computational complexity may arise, as discussed in Di Sciullo and Fong (2005), and the notion of phase can reduce the computational complexity in the morphological derivation. But if so, what are the morphological phases? The Pred-domain and the Op-domain are good candidates.<sup>14</sup> Contrary to the Asp-domain, they are complete functional complexes, they are impenetrable and they are isolable at the interfaces. They are parallel to the syntactic phases vP and CP.

Assuming that the material in the sister position of the head of a phase is spelled out and transferred to the interfaces, roots with their feature structures would be transferred to the interfaces first, independently from the full inflected expressions they are part, and spelled out subsequently. This is illustrated in (15) with the plural denominal verb *produttori* 'producers'.

- (15) a. Ph1 Spell-Out => [ [+A] produrre [+A]]  
 b. Ph2 Spell-Out => [Op-Ph -i [Pred-Ph [-A] -ore [ [+A] produrre [+A]]]

The locality restrictions on active feature checking, such as the ones discussed in this section, follow from a morphological derivation by phase.

The fully parallel model of the Asymmetry Theory predicts that even though they share properties the morphological and the syntactic phases are not co-extensive. In effect morphological domains are strongly impenetrable, and they are isolable at the interfaces in ways syntactic phases are not.<sup>15</sup>

### 2.3 Summary

Morphological domains are the local domains of the morphological computation. The locality of active morphological feature checking makes the

<sup>14</sup> See also Marantz (2003) where abstract functional categories, including small v and small n head the nominal and verbal phases, where each functional complex is a morphological phase, and where it is unclear what the non-phases are.

<sup>15</sup> The morphological domain is subject to a strong version of Chomsky's (2001) Phase Impenetrability Condition (PIC). According to the PIC, only the head and the edge (specifier and adjuncts) of a phase are accessible for agreement with a constituent in the next phase up, the difference being that agreement does not lead to movement in morphology, as it may be the case in syntax. Thus, the head and the edge (Spec) of a morphological phase are accessible to the next domain up for feature checking, whereas the complement is not accessible for further computation. With respect to LF-isolability, whereas syntactic phases are propositional (Chomsky 2001), morphological domains are not. With respect to PF-isolability, propositional pronominalization and pseudo-clefting cannot be used to isolate morphological phases because morphological phases are not propositional.

Pred-domain and the Op-domain parallel to syntactic phases vP and CP respectively.

The next sections are devoted to the LF and PF legibility of affixes. The features at the edge of morphological domains are determinant for the scope and the ordering of affixes, as evidenced below on the basis of Italian.

### 3. *Interface legibility*

#### 3.1 *LF legibility*

Once active features are checked, only interpretable morphological features survive at LF, where semantic relations are legible.

Affixes occupy fixed positions in the LF functional projection chain according to their morphological features. Affixes with operator features asymmetrically c-command affixes with aspectual features, and the latter asymmetrically c-command affixes with predicate affixes. Assuming that scope is implemented in terms of asymmetric c-command, higher-level affixes scope over lower-level affixes at LF, see (3) above.

Thus, the semantic relations (predicate-argument, aspect and operator-variable relations) between affixes and roots are derived in the morphology and are legible at LF. The following paragraphs identify the properties of the interpretable morphological features that are part of the morphological derivations on the basis of Italian.

Predicate features [+Pred] determine the semantic type and the argument structure of a morphological expression. The aspect features [+Asp] determine the aspectual type, and they may also affect the argument structure of the morphological structure they modify. The operator-variable features [+Op-X] determine the operator type of a morphological expression. Each type of morphological feature has two sub-types:

- (16)
- a. [+Pred] : Primary, Secondary
  - b. [+Asp] : External, Internal
  - c. [+Op-X]: Internal bound, External bound

What positions do affixes occupy in a minimal tree? According to the theory, a [+Pred] affix occupies the head position of a minimal tree, since it determines the semantic type and the argument structure of the morphological expressions of which it is part. The examples in (17) and (18) illustrate that a [+Pred] affix affects the argument structure of a root. The examples in (17a, b) are cases where an argument of the root is not an argument of a derived morphological expression; conversely, the example in (17c, d) and (18c, d) are cases where an argument of the derived morphological expression is not an argument of the root.

- (17) a. *Gli studenti amministrano il sistema.* (It)  
 “The students administer the system.”  
 b. *L’amministratore del sistema (\*da parte degli studenti).*  
 “The administrator of the system (\*by the students).  
 c. *La grammatica è formale.*  
 “Grammar is formal.”  
 d. *I linguisti formalizzano \*(la grammatica).*  
 “Linguists formalize \*(grammar)”.
- (18) a. *Un progetto per costruire una città galleggiante.* (It)  
 “A project to build a floating city”.  
 b. *Un progetto costruttivo (\*di una città galleggiante).*  
 “A constructive project (\*of a floating city)  
 c. *I linguisti sono sistematici.*  
 “Linguists are systematic.”  
 d. *I linguisti sistematicamente \*(analizzano le lingue).*  
 “Linguists systematically \*(analyze languages)”

Primary [+Pred] affixes such as *-ante* (-ing), *-ore* (-er), *-ismo* (-ism) differ from secondary [+Pred] affixes, such as *-bile* (-able) and *-mente* (-ly), since the first sort of affixes derives lower order (lexical) predicates (entity, and event predicates), whereas the other derives higher order (functional) predicates (attributes of entities, and predicates of events). A partial listing of Italian [+Pred] affixes is provided below.

- Primary:** -ante, (cantante), -mento (scorrimento), -ità (facilità),  
 -izzare, (vaporizzare), -are (alienare), -ifi- (codificare), ...
- Secondary:** -bile (mangiabile), -tivo (costruttivo),  
 -ino (fiorentino), -ile (infantile), -oso (cremoso),  
 -mente (caramente, dolcemente, lentamente), ...

The [+Asp] features determine the aspectual properties of the predicate to which they apply and, in certain cases, they may modify the argument structure of that predicate, see (19). Because [+Asp] features do not generally determine the semantic type of morphological expressions, they do not head their minimal tree, but they occupy the specifier position of that tree.

- (19) a. *Il ponte è alzato./ Hanno innalzato \*(il ponte).* (It)  
 “The bridge is raised.”/ “(They) have raised the bridge.”  
 b. *Maria ha dormito. / Lucia ha addormentato \*(Maria).*  
 “Maria slept.” / “Lucia got Mary to sleep.”

- c. *Gianni ha corso. / Gianni è incorso in \*(molte difficoltà).*  
 “Gianni ran.” / “Gianni ran into many problems.”

[+Asp] affixes may apply to primary predicates, as well as to secondary predicates. External (sequential) Aspect affixes do not change the aspectual type of the predicate they modify, whereas Internal (spatial) Aspect affixes do, as evidenced in Di Sciullo (1997) on the basis of French. A partial listing of Italian [+Asp] affixes is provided below.

<b>sequential:</b>	ri- (ricaricare), dis- (disfare), s- (snodare)
<b>spatial :</b>	in- (intagliare), a- (adormentare)
<b>negative:</b>	in- (impossibile), non- (non permanente), s- (spiacevole)
<b>privative:</b>	a- (asociale), im- (immorale), ir- (irresponsabile),
<b>numeral:</b>	semi- (semi annuale), bi- (bipolare), di- (disillabico), tri- (tridimensionale), quadri- (quadrifonico)
<b>relational:</b>	anti- (antimissile), contro- (controattacco), pro- (proattivo), auto- (autodeterminazione), ex- (ex-poliziotto)

Relational, numeral, and negative/privative, as well as sequential aspect affixes are external aspect affixes, since they do not alter the aspectual type of the event/predicate they modify. Contrary to internal aspect, which do change the aspectual type and in some cases the argument structure of a predicate, external aspect can be recursive. Recursion may apply to the same sort of external aspect affix, e.g., *ri-ri-caricare l'orologio* ‘reset the clock’, or to different sorts of external aspect, e.g., *in-dis-solubile* ‘undissolvable’, (20). In the hierarchy of AspE projections, a superior AspE asymmetrically selects the AspE it immediately sister-contains.

(20) [<sub>AspE</sub> in- AspE [<sub>AspE</sub> dis- AspE [Pred solubile ]]]

The [+Op-X] features determine the morphological operator type and they are in the specifier and the head positions. The [+Op-X] affixes that bind a variable word-internally, such as *wh-* and *th-* affixes, differ from the [+Op-X] affixes that do not bind a variable word-internally, such as comparative and superlative affixes, and inflectional affixes. The Internal-bound [+Op-X] affixes occupy the specifier of their minimal tree, whereas the External-bound [+Op-X] affixes occupy the head of their minimal tree.

- (21) a. *Chi è arrivato in tempo?* (It)  
 “Who arrived in time?”  
 b. *Lui sa quando arriveranno.*  
 “He knows when they will arrive.”

- c. *Hanno visitato **questa** città.*  
 “They visited **that** city.”
- d. *Sanno **che** Gianni è intelligente.*  
 “(They) know **that** Gianni is intelligent.”
- (22) a. *Giovanni idolatrava il suo maestro di violino. (It)*  
 “Giovanni idolized his violin teacher.”
- b. *Gli studenti si erano riuniti nel giardino.*  
 “The students gathered in the garden.”

The Internal-bound [+Op-X] feature is part of Determiners and Complementizers. The External-bound [+Op-X] feature is part of predicates and operators. A partial listing of Italian [+Op] affixes is provided below.

**External-bound operators:**

φ-affixes: -o (amo), -erà (amerà), -va (andava), ...  
 -o (gatto/bello), -i (gatti/belli), -a (gatta/bella), -e  
 (gatte/belle)

**Internal-bound operators:**

determiners: l- (l, la, le); demonstratives: qu- (questo, questa, questi)  
 wh-words: ch-(chi, che, ...); complementizers: ch- (che)

Thus, the morpho-logical structure of the feminine singular definite determiner *la* ‘the’ in (23) is derived in the morphology. The consonantal segment *l-* spells out the Internal-bound operator features [+D, -wh], and the vocalic segment *-a* spells out the restrictor of the variable bound by the D-operator. The singular and the feminine features head the External bound phi-feature operators (Op<sub>φ</sub>), and they sister contain the Internal bound Operator, i.e., OpD. Active phi-feature checking applies under Agree, (3), between pairs of contravalued phi-features, and the functional word satisfies FI at LF.

- (23) [ Op<sub>φ</sub> NUM [+num<sub>SING</sub>, [-gen]] [ Op<sub>φ</sub> GENDER [-num] [+gen<sub>FEM</sub>] ] [ Op<sub>D</sub> l- [ R -a ] ] ] ] ]
- 

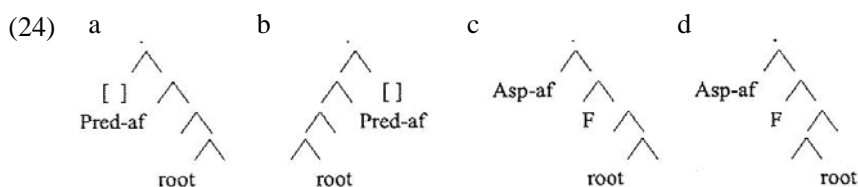
Summarizing, three sorts of affixes can be identified according to the interpretable features they bear. The position of the affixes in the head or in the specifier of their minimal tree is defined according to the semantic effects of the affixes. Thus, [+Pred] affixes determine the semantic type and argument structure, and they head their minimal tree. [+Asp] affixes determine the

aspectual modification, and in some cases they may modify argument structure, and occupy the specifier position of their minimal tree. Finally, [+Op-X] affixes determine the operator type. Internal bound [+Op-X] affixes link a variable in the morphology and are in the specifier of their minimal tree. External bound [+Op-X] affixes link a variable in the syntax and head their minimal tree.

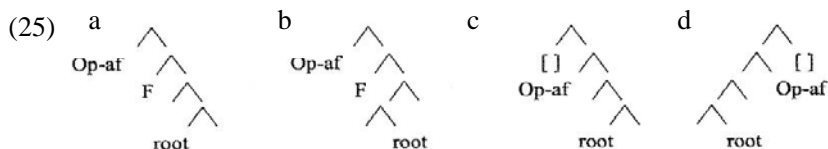
### 3.2 *PF legibility*

According to the Asymmetry Theory, the linear order of affixes with respect to a root is derived in the phonology and is legible at the PF interface. The application of M-Flip depends on the PF legibility of the edge (Spec) of a morphological phase. At the PF interface, M-Flip(T), defined above in (4), applies in the morphology if the edge of T has no relevant PF features.

The structure in (24) and (25) illustrates the application of M-Flip to minimal trees, depending on the PF legibility of their specifier. Thus, in (24a), M-Flip applies to a minimal tree headed by a Pred-af, since there is no PF legible feature in the specifier position, and yields the mirror image of the minimal tree, (24b). M-Flip does not apply to the upper layer of (24c), since the specifier position of the minimal tree is occupied by the modifier affix, and thus the affix remains in situ at PF.



In (25a), the Internal-bound affix occupies the specifier of its minimal tree, thus M-Flip does not apply to that tree, and the affix remains in situ at PF, (25b). In (25b), the minimal tree headed by an Internal bound affix undergoes M-Flip, since there is no PF legible feature in the specifier of that minimal tree, and thus the tree in (25d) is derived at PF.



The theory correctly predicts that, in languages such as Italian, Pred-affixes follow the root, (26). It also correctly predicts that Mod-affixes precede



the root, (27). Finally, it predicts that Internal-bound Op-affixes precede the root, (28), and that External bound Op-affixes follow the root, (29).

- (26) a. *amministr-atore, formal-izzare*  
 “administrator”, “formalize”  
 b. *sistema-tico, sistematica-mente*
- (27) a. *in-tagliare, a-(b)bottonare*  
 “(to)cut off”, “(to) button”  
 b. *ri-caricare, dis-tendere*  
 “(to)recharge”, “(to) distend”
- (28) a. *qu-esto, qu-esta, qu-esti*  
 “this”, “that”, “those”  
 b. *ch-i, ch-e*  
 “who”, “what”
- (29) a. *l-o, l-a, l-e*  
 “the-masc.-sing”, “the- fem.-sing”, “the-plur”  
 b. *qu-esto, qu-esta, qu-esti*  
 “this-masc-sing”, “that-fem-sing”, “those-masc/fem-plur.”

Summarizing:

- (30) Linear order of the affixes with respect to roots in Italian

	precede / follow
Pred-af :	√
Mod-af :	√
Spec-Op-af :	√
Head-Op-af :	√

Crucially, to be PF legible, the edge of a morphological tree must be the locus of relevant PF features.

Thus, the position of an affix to the left or to the right of a root in Italian follows from the theory, given the universal morphological properties and language specific morpho-phonological properties. The proposed account for the derivation of affixal scope and ordering relations is related to other proposals in generative morphology. In particular it is related to Rice’s (1998) account of the ordering of morphemes in *Salve*, a Northern Athapaskan language spoken in North America. Her analysis is based on verb-movement, and the assumption that ‘When a morpheme is in the scope of another, the morpheme of greater scope must be higher in the tree than the morpheme within its scope.’ (Rice 1998: 679). This paper provides further evidence that

asymmetric Agree determines the scope relations between affixes at LF, and that the PF legibility of the edge (i.e., the specifier) of a morphological domain determines the affix-root precedence relations. The effects of head movement are derived by an independently motivated operation that is part of the linearization of the morphological constituents.<sup>16</sup>

#### 4. *Summary*

This paper provides additional evidence, based on Italian data, supporting the Asymmetry Theory, according to which the properties of the linguistic expressions are the consequences of the architecture of the grammar, rather than the consequence of construction specific rules and conditions. Affixal scope relations are fixed and, given the asymmetry of morphological relations, they are not altered at the semantic interface cross-linguistically. They are derived by the operations of the morphology applying under asymmetric Agree. The precedence relations between affixes and roots are legible at the sensory-motor interface, and are derived by the operations of the phonology, which apply to the units of the morphological domains.

#### *References*

- Aronoff, Mark and Nanna Fuhrhop. 2002. "Restricting Suffix Combinations in German and English: Closing Suffixes and the Monosuffix Constraint." *Natural Language and Linguistic Theory* 20. 451-490.
- Baker, Mark C. 1988. *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Bowers, John. 2001. "Predication". *The Handbook of Contemporary Syntactic Theory*, ed. by Mark Baltin and Chris Collins, 299-333. Oxford: Blackwell.
- Carlson, Gregory. 2005. "Interpretive Asymmetries in Major Phrases". *Asymmetry in Grammar, Volume 1: Syntax and Semantics* ed. by Anna Maria Di Sciullo. 301-315. Amsterdam & Philadelphia: John Benjamins.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge (Mass.): MIT Press.
- 2001. "Derivation by Phase". *Ken Hale: A Life in Language*, ed. by Michael Kenstowicz, 1-52. Cambridge, Mass: The MIT Press.
- 2005. "On Phases". To appear in *Foundation of Theoretical Linguistics* ed. by Carlos Otero et al. Cambridge (Mass.): MIT Press.

---

<sup>16</sup> The comparison with other analyses on the restrictions on affix ordering, including the works of Aronoff and Fuhrhop (2002), Hay (2002), and Hay and Plag (2004) is beyond the space limitations of this paper. However, it is not clear how these analyses would account for the distribution of affixes, in strong prefixing languages, such as the African Languages, and in strong suffixing languages, such as Turkish. See Di Sciullo (2006) for discussion.

- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. Oxford: Oxford University Press.
- Di Sciullo, Anna Maria. 1997. "Prefixed-Verbs and Adjunct Identification". *Projections and Interface Conditions. Essays in Modularity* ed. by Anna Maria Di Sciullo, 52-74. New York: Oxford University Press.
- 2005. *Asymmetry in Morphology*. Cambridge (Mass.): MIT Press.
- 2006. "Affixes at the Edge". Special 50th Anniversary Issue of the *Canadian Journal of Linguistics*.
- & Sandiway Fong. 2005. "Morpho-Syntax Parsing". *UG and External Systems* ed. by Anna Maria Di Sciullo, 247-268. Amsterdam & Philadelphia: John Benjamins.
- & Edwin Williams 1987. *On the Definition of Word*. Cambridge (Mass.): MIT Press.
- Hay, Jennifer & Ingo Plag. 2004. "What Constrains Possible Suffix Combinations? On the Interaction of Grammatical and Processing Restrictions in Derivational Morphology". *Natural Language and Linguistic Theory* 22. 565-596.
- Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge (Mass.): MIT Press.
- Marantz, Alec. 2003. "Pulling Words Up by the Root. Handout McGill talk.
- Rice, Keren. 1998. "Slave (Northern Athapaskan)". *The Handbook of Morphology* ed. by Andrew Spencer and Arnold Zwicky, 649-689. Oxford: Blackwell.
- Speas, Peggy. 1990. *Phrase Structure in Natural Language*. Dordrecht: Kluwer.
- Uriagereka, Juan. 1999. "Multiple Spell-Out". *Working Minimalism* ed. by Samuel David Epstein and Norbert Hornstein, 251-283. Cambridge (Mass.): MIT Press.

# SCOPE ECONOMY IN POSITIVE POLARITY EXTREME DEGREE QUANTIFICATION

RAQUEL GONZÁLEZ RODRÍGUEZ  
*Universidad Complutense de Madrid*

This paper focuses on degree expressions, such as *extremadamente* ‘extremely’, which cannot occur in negative sentences, thus patterning with Positive Polarity Items (PPIs). I describe the properties of these constructions and offer an analysis that accounts for their incompatibility with negation. Contrary to the standard syntactic view on polarity items, I propose that these PPIs remain in the structural position where they are merged, without checking any positive feature by movement or Agree against certain higher functional projection. Their incompatibility with negation is due to the fact that these constructions denote extreme degree quantification, affirming emphatically the degree to which a property is held. The proposed analysis explains the distribution of these PPIs in negative sentences, as well as the differences between the elements studied and other positive items, establishing a distinction between triggers of positive polarity and positive polarity items.

## 1. *Introduction*

Positive Polarity refers to the restriction of certain items (Positive Polarity Items, PPIs) to appear only in affirmative sentences. Although there are several types of constructions which work as PPIs, I will focus on those PPIs that belong to the class of degree expressions. The research conducted in this paper is based on Spanish. However, the analysis can be extended to other Romance languages as well. The degree modifiers in (1) are PPIs, as shown by their incompatibility with the negative operator:

- (1) a. *Esos alumnos (\*no) son extremadamente inteligentes* (Spanish)
  - b. *\*Ces étudiants ne sont pas extrêmement intelligents* (French)
  - c. *\*Aquells alumnes no són extremadament intel.ligentes* (Catalan)
- “Those students are not extremely intelligent.”

Note that the examples in (1) are ungrammatical only when they are pronounced out of the blue, but they become grammatical if the negative operator has an external interpretation<sup>1</sup> (cf. Bosque 1980; Szabolcsi 2004). In other words, the sentences in (1) are grammatical when they refute a previous statement or a presupposed proposition. In this reading, the negative operator can only refute a constituent of a previous statement, and, as a result, the negated constituent receives contrastive focus, as shown by the possibility to introduce a corrective phrase (*\*no sumamente peligroso* ‘no extremely dangerous’/ *no sumamente peligroso, sino un poco peligroso* ‘no extremely dangerous, but a little dangerous’). This interpretation must be excluded in all examples throughout this paper.

This paper is structured as follows: section 2 introduces the properties of degree quantifiers that cannot appear in negative sentences; section 3 puts forward an analysis of the degree expressions that function as PPIs; and section 4 shows how my proposal can be extended to other PPIs.

## 2. *Properties and Context of Licensing*

I will start by describing two properties of degree expressions which are PPIs: their denotation and their distribution.

### 2.1 *Extreme Degree Quantification*

As I pointed out, there are some degree expressions which cannot co-occur with negation, as in (2a)<sup>2</sup>, but this does not hold for other degree quantifiers, which can appear in negative sentences, as is shown in (2b-c):

- (2) a. *Sus amigos (\*no) son rematadamente tontos*<sup>3</sup>  
 “His friends are not extremely silly.”  
 b. *Esos alumnos (no) son muy tontos*  
 “Those students are not very silly.”  
 c. *El vaso (no) está completamente lleno.*  
 “The glass is not completely full.”

<sup>1</sup> A referee judges that *extremely* can be negated in English and in other Romance languages, but, according to my informants, *\*Those students are not extremely intelligent* is ungrammatical if the interpretation of external negation is excluded. I suspect that the subtlety of the judgments is caused by the possibility of having such reading of the negative operator.

<sup>2</sup> Interestingly, those quantifiers are not incompatible with other downward entailing operators, such as the preposition *sin* ‘without’ (*Tiene muchos amigos sin ser extremadamente simpático* ‘He has many friends without being extremely friendly’), a matter I put aside here.

<sup>3</sup> The sentence is also ungrammatical if the degree quantifier modifies a positive predicate, such as *inteligente* ‘intelligent’, so that the difference between positive and negative predicates does not play any role in explaining the impossibility of negating the modifiers studied.

This contrast can be accounted for by a crucial difference between those quantifiers. On the one hand, the modifier in (2b) expresses simply high degree, while the one in (2a) denotes extreme degree. Evidence for this description of (2a) comes from the impossibility for this sentence to continue with expressions such as *pero menos que* ‘but less than’, as is shown in (3). The quantifier in that sentence denotes extreme degree, and, therefore, it is not allowed to introduce constructions which imply the existence of a higher degree:

- (3) *Sus amigos son rematadamente tontos, pero lo son menos que Pedro.*  
 “His friends are extremely silly, but they are less silly than Peter.”

On the other hand, although the quantifiers in (2c) and (2a) are upper endpoint-oriented modifiers, they do not have exactly the same meaning. The modifier *completamente* ‘completely’ usually modifies adjectives associated with closed scales. In contrast, *rematadamente* ‘extremely’ appears with adjectives associated with open scales (cf. Kennedy & McNally 2005). The quantifier in (2a) has a more complex meaning than the one in (2c), since it closes an open scale, and, therefore, expresses extreme degree quantification. The speaker determines that the degree to which the subject possesses the property in question is the upper endpoint of the scale, affirming emphatically the degree to which a property is held. In contrast, in (2c), the degree modifier simply takes the relevant property to the maximal degree of a closed scale.

Thus, the degree constructions which cannot appear in negative sentences possess the property of closing open scales, and, as a result, are interpreted as extreme degree quantifiers. That is, the polarity of these expressions is due to the fact that, as a consequence of closing a scale, they are interpreted as maximal endpoints. The relation among positive polarity and these operators is parallel to the one described between negative polarity and certain idioms, such as the ones in (4), which have a complement which denotes lexically a minimal value (cf. Bosque 1980; Fauconnier 1975; Sánchez López 1999):

- (4) a. *\*(No) ver {un alma/ tres en un burro...}*  
       not to-see {a soul/ three in a donkey...}  
       “He is not able to see absolutely anything.”  
   b. *\*(No) costar un {céntimo/ real/ duro...}*  
       not to-cost a {cent/ dime/ five-cents...}  
       “‘It does not cost a thing.’ [from Bosque 1980:124]”

The maximal degree expressed by modifiers that close infinite scales is associated with positive polarity in the same way as minimizers are associated with negative polarity. Each extreme of the scale reinforces a type of polarity:

the extreme degree quantifiers which close an open scale show the same behavior as PPIs; those that are minimizers behave as negative polarity items (NPIs). Although the link between minimal-maximal values of the scale and polarity has been pointed out in several works (cf. Hoeksema & Rullmann 2001; Israel 2001), to my knowledge, a deeper explanation of this connection has not been given. Since this issue deserves detailed study, I will not pursue it here, but I would like to suggest that this type of polarity items expresses either a negation or an emphatic affirmation in the field of degree quantification.

## 2.2 *Distribution of Extreme Degree Quantification in Negative Sentences*

As I said, PPIs are characterized by their impossibility to appear in negative sentences (cf. Bosque 1980; Hernanz 1999). However, the construction in (5), in which negation co-occurs with an expression denoting extreme degree, seems to escape this generalization:

- (5) *Ninguno de sus alumnos está loco de atar*  
 none of his students is crazy of to-be-tied  
 “None of his students is extremely crazy.”

The grammaticality of (5) shows that this type of PPIs can appear in the scope of negation, as opposed to what happened with other PPIs (cf. Szabolcsi 2004; van den Wyngaerd 1999, among others). They are sensitive to the focus, rather than the scope, of negation. In other words, they can appear in negative sentences if they are not the element that is being negated. This means that their sensitivity is closely related to the fact of being negated, but not to the semantic properties that characterize the c-command domain of negation, such as being a downward entailing context<sup>4</sup>. Under this description, PPIs can appear in negative sentences that contain a negative word, a purpose clause or a rational clause in subjunctive. The reason is that these constituents are forced to be the focus of negation (cf. Sánchez López 1999). This prediction is borne out, as is shown in (5) for negative words and in (6) for purpose clauses and rational clauses:

---

<sup>4</sup> The fact that these quantifiers are compatible with other triggers of negative polarity (see footnote 2) could be related to this, since the last elements usually trigger a negative context without having the possibility of negating different constituents of the sentence.

- (6) a. *Esther no ha contratado a un chico antipático de narices*  
 Esther not has hired to a boy unfriendly of noses  
*[Focus para que el negocio pierda clientela]*  
 for that the business loses customers  
 “Esther has hired an unbelievably unfriendly boy not for the  
 business to lose customers.”
- b. *Ángel no ha suspendido a un alumno listo como el*  
 Ángel not has suspended to a student smart like the  
*hambre [Focus porque odie a su padre]*  
 hunger because hates to his father  
 “Ángel has suspended an extremely smart guy not because he  
 hates his father.”

Summarizing, the properties of degree expressions patterning with PPIs are basically two: first, they close an open scale, affirming emphatically the degree to which the modified constituent has a property; second, these PPIs can appear in negative sentences when they are not the focus of negation.

### 3. *Positive Polarity and Extreme Degree Quantification*

The standard syntactic view on Polarity Items is that they move overtly or covertly to the Specifier (Spec) of a functional projection, such as Sigma Phrase, in order to check the relevant feature against the head (cf. Belletti 1990; Bosque 1994; Hernanz 1999, 2003; Laka 1990; Progovac 2000)<sup>5</sup>. This analysis is illustrated in (7), where the NPI *nada* ‘anything’ has a negative feature which is licensed by movement checking the relevant feature against the head of Sigma Phrase:

- (7) *No modificaron nada en la sentencia*  
 “They did not modify anything in the judgment.”  
 [<sub>SigmaP</sub> Nada<sub>i</sub> [<sub>Sigma</sub>’ no ]][<sub>IP</sub> modificaron t<sub>i</sub> en la sentencia]

This proposal, however, does not account for PPIs that are degree expressions, since these can appear in negative sentences when we consider other syntactic environments. As I pointed out, if the degree expression is not the focus of negation, the sentences are grammatical, as in (8). It would not be possible in these cases for the PPIs to check their positive feature by moving to Spec of Sigma Phrase, since this projection is negative. Furthermore, note that other theoretical accounts for checking the relevant feature of PPIs against Sigma Phrase, such as (long-distance) Agree, raise the same empirical problem.

<sup>5</sup> I will not deal with the semantic approaches to polarity items, such as the ones proposed by Chierchia (2004), Krifka (1995) and Lahiri (1997), among others.



It should not be possible to establish the Agree mechanism between a PPI and a negative Sigma Phrase:

- (8) [*Focus Ninguno de esos alumnos*] *es extremadamente inteligente*  
 “None of those students is extremely intelligent.”

My proposal at this juncture is that PPIs satisfy all the relevant features within the phrase in which they are merged, without checking any positive feature by movement or Agree against certain higher functional projection, such as Sigma Phrase, in line with the anti-licensing condition proposed by Giannakidou (1998). Following Chomsky (2004), I assume that lexical items are a bundle of features. Under this assumption, extreme degree quantification is associated with an [Extreme Degree] feature (cf. Masullo 2003). Therefore, I consider that expressions that denote extreme degree carry an [Extreme Degree] feature<sup>6</sup>, which is a semantic feature (cf. Matushansky 2002). Crucially, other types of degree quantification, such as *bastante* ‘quite’, *demasiado* ‘too much’, etc., do not have this feature. Furthermore, the empty degree operator that occupies the head position of Degree Phrase can optionally carry the interpretable [iExtreme Degree] feature and the EPP feature. The Selection which constitutes a Numeration will determine if the degree operator has these features. In that case, when the degree operator is merged, the structure is the one in (9)<sup>7</sup>:

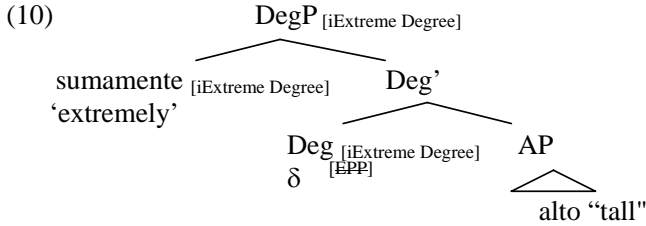
- (9)
- 
- ```

graph TD
  Deg_prime["Deg'"] --- Deg["Deg"]
  Deg_prime --- AP["AP"]
  Deg --- delta["δ"]
  AP --- alto["alto"]
  AP --- tall["tall"]
  
```

When the head carries the EPP feature, it must be deleted, via the merge of an element in the edge of Degree Phrase. This requirement is satisfied with an external merge of an extreme degree modifier, as is depicted in (10):

<sup>6</sup> Although only the extreme degree quantifiers which close an infinite scale are PPIs (see section 2.1), I will use the general label of [Extreme Degree] for expository reasons. Thus, I will ignore the existence of the other extreme degree quantifiers, such as *completely*.

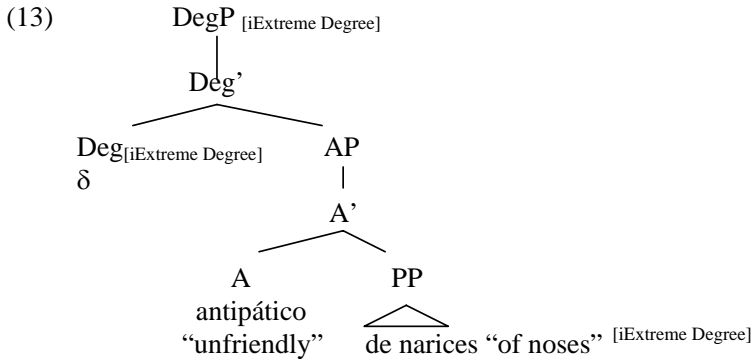
<sup>7</sup> For expository reasons, I use X' notation.



However, if we assume the representation in (10) to be valid, where do modifiers that appear to the right of the adjective (*loco de atar* ‘crazy of to-be-tied’, etc.) generate in the structure? According to Bosque (1999:223), the position of post-adjectival modifiers is due to their prepositional nature. Moreover, there are lexical restrictions on the relation between the adjective and the degree modifier. In other words, not all gradable adjectives can be modified by all degree expressions, as is illustrated in (11) and (12):

- (11) a. *antipático de narices*  
unfriendly of noses  
“amazingly unfriendly”  
b. *feliz como una perdiz*  
happy like a partridge  
“extremely happy”
- (12) a. *#antipático como una perdiz*  
unfriendly like a partridge  
b. *#feliz de narices*  
happy of noses

The post-adjectival position of these modifiers does not allow them to delete the uninterpretable feature of the degree operator via Merge. I assume that post-adjectival modifiers, like the other extreme degree quantifiers, have an [iExtreme Degree] feature and, thus, they are associated with an empty degree operator that carries the same feature. However, in these cases, the operator does not have the EPP feature, so it does not need the merge of an element in the edge of the phrase. The structure of the phrases in (11) is as follows:



Emphatic assertion expressed by means of extreme degree quantification takes scope only over the constituent it selects, without affecting either other phrases in the sentence or the propositional force of the statement<sup>8</sup>. The emphatic value of the degree expressions in (14) has scope only over the modified constituent, the Adjective Phrase<sup>9</sup>:

- (14) *Marta está sumamente interesada en la moda*  
 “Marta is extremely interested in fashion.”

Following Chomsky (2004), and Fox (2000), covert movement is allowed only if it modifies the semantic interpretation of the output; Fox (2000:75) proposes the Scope Economy Principle: “Covert optional operations cannot be scopally vacuous”. According to this economy principle, the degree expression in (14) remains in the position where it is merged, i.e. Degree Phrase, and so does not need to move to Sigma Phrase in order to check an uninterpretable feature or to take scope over the sentence, since it only affects the constituent it modifies. Moreover, this movement operation would not affect the semantic interpretation of the entire sentence.

Besides being more economical, my proposal accounts for the distribution of PPIs denoting extreme degree in negative sentences. I argued for the association between extreme degree quantification and PPIs, which predicts the ungrammaticality of negative sentences with PPIs. Positive polarity and

<sup>8</sup> Hernanz (2003:7-8) distinguishes assertive *bien* ‘well’ from degree *bien* ‘well’. The former takes scope over a single constituent, while the latter takes scope over the entire sentence.

<sup>9</sup> Note that, if that emphatic value had scope over the whole sentence, it would be interpreted as an emphatic affirmative sentence, but this is not the situation that we found. Thus, the degree expression does not modify the assertoric force of the sentence. This fact is reinforced by the possibility of having these modifiers within syntactic islands, as I will show below. In these contexts, the operator could not move to a higher projection in order to take sentential scope.

negative polarity are opposite polarities (cf. Laka 1990). Therefore, they cannot appear in the same sentence, as shown in (15):

- (15) \**Javier sí no sabía cocinar*  
 Javier yes not knew to-cook  
 “Javier did not know how to cook<sup>10</sup>.”

The ungrammaticality of (16) is explained by the same restriction. Extreme degree quantification denotes the maximal endpoint of the scale, which is associated with positive polarity, so it is incompatible with negation:

- (16) *Ese chico(\*no)es listo como el hambre*  
 that guy not is smart like the hunger  
 “That guy is not extremely smart.”

The example of (16) shows that Degree Phrase<sub>[iExtreme Degree]</sub> and Sigma Phrase are related projections, although extreme degree quantification neither moves to the latter one nor establishes the Agree relation with it. Both projections have a feature associated with emphatic assertion. The difference between them is due to their scope: emphatic affirmation denoted by Degree Phrase<sub>[iExtreme Degree]</sub> affects only its constituent, while the one expressed by Sigma Phrase modifies the whole sentence<sup>11</sup>. Since positive polarity and negative polarity are opposite polarities, negation localized in Sigma Phrase cannot refute a constituent which has a feature of emphatic assertion, such as Degree Phrase<sub>[iExtreme Degree]</sub> in (16). In other words, if Degree Phrase<sub>[iExtreme Degree]</sub> is the focus of sentential negation, the features of that projection need to be compatible with the features of Sigma Phrase.

Moreover, the proposed analysis explains that extreme degree quantification can appear in negative sentences when it is not the focus of negation, while these data cannot be accounted for if we assume that these constructions check their positive feature against Sigma Phrase via movement or (long-distance) Agree. In these cases, negation and extreme degree quantification are not incompatible, although they express opposite polarities. The features of Degree Phrase<sub>[iExtreme Degree]</sub> do not need to be compatible with the ones of Sigma Phrase because the former is not the focus of sentential negation:

- (17) [<sub>Focus</sub> Ninguno de sus amigos] es extremadamente simpático  
 “None of her friends is extremely friendly.”

<sup>10</sup> The underlined *did* represents the auxiliary introduced in emphatic affirmative sentences.

<sup>11</sup> Section 4 explores in detail this difference.

The contrast between the ungrammaticality of (16) and the grammaticality of (17) supports my proposal. In the first case, the [iExtreme Degree] feature associated with positive polarity is the focus of negation, causing the ungrammaticality of the sentence (cf. 18a), since the [iExtreme Degree] feature of Degree Phrase is not compatible with the negative one of Sigma Phrase. In contrast, the sentential negation in (17) does not refute the extreme degree quantifier, since another constituent is its focus. Therefore, the features of Sigma Phrase and Degree Phrase do not need to be compatible, and a derivation such as that illustrated in (18b) converges:

- (18) a. \*Neg ..... [Focus.... DegreeP<sub>[iExtreme Degree]</sub>.....]  
           └──────────────────────────────────▲  
       b. Neg ..... DegreeP<sub>[iExtreme Degree]</sub> ..... [Focus .... X..... ]  
           └──────────────────────────────────▲

Additional evidence for my proposal comes from the environments that constitute syntactic islands. As Bosque (1994) shows, NPIs cause the ungrammaticality of the sentence when they appear inside a syntactic island. Under the standard account of NPIs, the reason is that, in these environments, these elements cannot move to Sigma Phrase in order to be licensed<sup>12</sup>:

- (19) a. \**No vi [DP tus fotos de ningún barco]*  
           not saw your pictures of any ship  
           ‘‘I did not see any of your ship pictures.’’  
       b. \**Nunca han robado [NP retratos de ningún pintor español*  
           never have stolen portraits of any painter Spanish  
           *del baron von Thyssen]*  
           of-the baron von Thyssen  
           ‘‘They have never stolen portraits by a Spanish painter belonging  
           to baron von Thyssen.’’ [from Bosque 1994:178]

The NPI *ningún* ‘any’ in (19a) is inside a Determiner Phrase (DP) with a possessive term that blocks its extraction. Therefore, the NPI cannot be licensed and the sentence is ungrammatical. A similar situation is found in (19b). The presence of a possessor in DPs blocks the extraction of the agent, while the presence of an agent has no effect on the extraction of a possessor. This explains the ungrammaticality caused by the NPI that expresses the agent in the DP, since the extraction of the NPI is not possible in this case.

However, PPIs denoting extreme degree can appear inside a syntactic island without inducing ungrammaticality, as shown in (20). The expression

<sup>12</sup> I have added the square brackets and the translation in these examples.

*sumamente prestigioso* ‘astonishingly prestigious’ in (20a) appears inside a possessive Determiner Phrase that blocks its extraction. This construction expresses the agent in (20b), and, since the possessor is present, it cannot be moved to a higher projection. This phenomenon provides evidence for the analysis outlined above, that is, that PPIs do not move to a higher projection in order to take scope or to check a feature associated with the sentential periphery. If PPIs would do so, they could not appear inside syntactic islands. However, they are allowed in that syntactic environment:

- (20) a. *He visto* [<sub>DP</sub> *tu cuadro de un pintor sumamente prestigioso*]  
 “I have seen your portrait of an astonishingly prestigious painter.”
- b. *Han robado* [<sub>NP</sub> *cuadros de un pintor sumamente prestigioso de un coleccionista italiano*]<sub>Agent Possessor</sub>  
 “They have stolen portraits by an astonishingly prestigious painter belonging to an Italian collector.”

It could be argued that the grammaticality of (20) does not support the lack of movement of PPIs. The reason is that the whole NP or DP could be pied-piped under PPIs movement. But there seems to be some evidence for the lack of pied-piping in these cases. If the entire phrase containing a polarity item moves to a higher projection, the ungrammaticality of (19) remains unexplained because the NP or the DP could be pied-piped in order to check the negative feature of the NPI against Sigma Phrase. Furthermore, the checking relation involved in that data does not need to be followed by movement if we assume that features can be valued long-distance via Agree. Following Boeckx (2003), the operation of Agree is subject to locality conditions, so it cannot be established across syntactic islands. Under this approach, the ungrammaticality of (19) is due to the impossibility of establishing the Agree mechanism between the NPI and the Sigma Phrase, where the sentential negation is placed, since the former is inside a syntactic island. The operation of Agree is unnecessary in (20) in order to check a positive polarity feature, and, therefore, the PPI is not sensitive to islands, as illustrated by the data above.

#### 4. *Two Types of Positive Polarity Elements*

This section shows that my analysis predicts the differences between extreme degree quantification, and other PPIs studied in the literature, such as the adverb *bien* ‘well’ (cf. Hernanz 2003), as well as exclamative sentences (cf. Masullo 2003; Villalba 2004), which cannot be negated either:

- (21) a. *Bien (\*no)podría ir al congreso*<sup>13</sup>  
 well not could to-attend to-the conference  
 “You could (not) very well attend the conference.”
- b. *¡Juan (\*no) es de simpático!*  
 John not is of friendly!  
 “John is (not) such a friendly guy!”

I have proposed that extreme degree quantifiers have an [iExtreme Degree] feature associated with positive polarity. This feature has scope only over the Adjective Phrase, so no movement is called for. That is, the quantifier remains in the position in which it is merged. In contrast, emphatic assertion denoted by the adverb *bien* ‘well’ and exclamatives has scope over the whole sentence, since it reinforces the assertoric force of the sentence. Therefore, *bien* ‘well’ and exclamative quantifiers need to move to or merge in the left periphery, more concretely in Focus Phrase (cf. Hernanz 2003; Masullo 2003). This contrast allows us to distinguish between two types of elements associated with the polarity we are dealing with: triggers of positive polarity and positive polarity items. Triggers of positive polarity, such as the adverb *bien* ‘well’ and exclamative sentences, reinforce (or emphasize) the assertive value of the sentence in which they appear<sup>14</sup>. Positive polarity items, such as extreme degree quantification, have an emphatic value that affects only their constituent, but not the whole sentence. This distinction explains the following asymmetries:

a) Triggers of positive polarity cannot co-occur with other expressions emphasizing the assertive value of the sentence, such as the particle *sí* ‘yes’, because these elements have the same function (cf. 22). In contrast, PPIs have scope only over its constituent, so they can appear with the emphatic *sí* “yes” (cf. 23):

- (22) a. *\*Bien sí podría atender todos sus compromisos*  
 well yes could to-take-care-of all his commitments  
 “He could very well take care of all his commitments.”
- b. *\*¡Juan sí es más alto!*  
 John yes is more tall  
 “John do be more tall!”

<sup>13</sup> The assertive adverb *bien* ‘well’ has no exact equivalent in English, so the translation is misleading.

<sup>14</sup> Note that I am not proposing that triggers of positive polarity license certain polarity items, as occurs with triggers of negative polarity. Rather, I propose that their emphatic value affects the whole sentence.

- (23) *Sus hijos sí son extremadamente revoltosos*  
 their children yes are extremely unruly  
 “Their children do be extremely unruly.”

The adverb *bien* ‘well’ and exclamative sentences are incompatible, since both of them are triggers of positive polarity (cf. 24). Extreme degree quantification can co-occur with the adverb *bien* ‘well’ (cf. 25) or with an exclamative sentence (cf. 26) without yielding ungrammaticality:

- (24) \**¡Bien podría parecer más listo!*  
 well couldto-seem more smart  
 “He could very well seem so smart!”
- (25) *Bien podría querer a un hombre feo con ganas*  
 well couldto-love to a man ugly with desire  
 “She could very well love an extremely ugly man.”
- (26) *¡Una mujer fea con ganas se ha ligado a cada hombre!*  
 “A really really ugly woman has hooked up with such a man!”

b) Although triggers of positive polarity are not the focus of negation, they cannot appear in negative sentences (cf. 27), while PPIs are compatible with negation if they are not its focus (cf. 28). This contrast is due to the fact that the emphatic value takes scope over the whole sentence in the former case, but not in the latter:

- (27) a. \**Bien no se podría comprar una bici [Focus para pasear]*  
 well not CL could to-buy a bike for to-go-for-a-ride  
 “He could very well buy a bike not to go for a ride.”  
 b. \**¡No se liga a cada hombre [Focus para presumir]!*  
 “She doesn’t hook up with such a man not to show off!”
- (28) *No ha aprobado a un alumno rematadamente perezoso [Focus para que pase de curso]*  
 “She has passed an amazingly lazy student not to allow him to pass the course.”

c) The contrast in (29) shows that, if triggers of positive polarity are not merged in the left periphery, they need to move in order to take sentential scope. Therefore, they cannot appear in syntactic islands, as it is shown in (29a). PPIs show the opposite behavior with respect to triggers, so they do not need to move to a higher position in order to take scope (29b):



- (29) a. \**Asistió la gente de cada parte!* [from Masullo 2003:10]  
 attended the people of each place  
 “People from such a place attend!”  
 b. *Conoció a [DP los actores de una obra divertidísima]*  
 met to the actors of a play funny-ísima  
 “She met the actors of an extremely funny play.”

d) The ungrammaticality of (30) and (31) illustrates that triggers cannot appear with other operators placed in Focus Phrase, such as wh-phrases or focalized constituents, while PPIs can (cf. 32). This is due to the fact that the former are in that position to take scope over the entire sentence (cf. Hernanz 2003; Masullo 2003), but the latter are not in the left periphery:

- (30) a. \**¿Qué coche bien tiene Pedro!*  
 what car well has Peter!  
 “What a car Peter has a lot!”  
 b. \**UN CHALET bien pretende comprar María*  
 a-FOC house-FOC well pretends to-buy Mary  
 “Mary pretends a lot to buy A HOUSE”
- (31) a. \**¿Cuántos empleados son de simpáticos!*  
 “How many employees are so friendly!”  
 b. \**INSUFICIENTE le puso a un alumno más listo!*  
 D-FOC CL gave to a student more smart  
 “He gave A D to such a smart student!”
- (32) a. *¿Cuántos dependientes son antipáticos de narices!*  
 how-many employees are unfriendly of noses  
 “How many employees are amazingly unfriendly!”  
 b. *SOBRESALIENTE puso a un alumno sumamente vago*  
 A-FOC gave to a student unbelievably lazy  
 “He gave AN A to an unbelievably lazy student.”

## 5. Conclusions

I have argued that degree expressions patterning with PPIs denote extreme degree, affirming emphatically the degree to which a property is held. These PPIs satisfy all the relevant features within the phrase in which they are merged, without checking any positive feature by movement or Agree against Sigma Phrase. Extreme degree quantifiers carry an [iExtreme Degree] feature that ultimately projects to the label of the entire Degree Phrase obtained by Merge. This feature is associated with positive polarity, and, therefore, the  $\text{DegP}_{[\text{Extreme Degree}]}$  cannot be the focus of negation. Furthermore, I have

established a distinction between triggers of positive polarity and positive polarity items.

### **References**

- Belletti, Adriana. 1990. *Generalized verb movement: aspects of verb syntax*. Torino: Rosenberg & Sellier.
- Boeckx, Cedric. 2003. *Islands and Chains*. Amsterdam & Philadelphia: John Benjamins.
- Bosque, Ignacio. 1980. *Sobre la negación*. Madrid: Cátedra.
- , 1994. "La negación y el principio de las categorías vacías". *Gramática del español* ed. by Violeta Demonte, 167-199. México: El Colegio de México.
- , 1999. "El sintagma adjetival. Modificadores y complementos del adjetivo. Adjetivo y participio". *Gramática descriptiva de la lengua española* ed. by Ignacio Bosque & Violeta Demonte, vol. I, 217-310. Madrid: Espasa Calpe.
- Chierchia, Gennaro. 2004. "Scalar Implicatures, Polarity Phenomena, and the Syntax/Pragmatics Interface". *Structures and Beyond. The Cartography of Syntactic Structures* ed. by Adriana Belletti, 39-103. Oxford: Oxford University Press.
- Chomsky, Noam. 2004. "Beyond Explanatory Adequacy". *Structures and Beyond. The Cartography of Syntactic Structures* ed. by Adriana Belletti, 104-131. Oxford: Oxford University Press.
- Fauconnier, Gilles. 1975. "Polarity and the Scale Principle". *Papers from the Regional Meeting, Chicago Linguistic Society* 11.188-199.
- Fox, Danny. 2000. *Economy and Semantic Interpretation*. Cambridge (Mass.): MIT Press.
- Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)veridical Dependency*. Amsterdam & Philadelphia: John Benjamins.
- Hernanz, M<sup>a</sup> Lluïsa. 1999. "Polaridad y modalidad en español: en torno a la gramática de bien". *Report de recerca, Grup de Gramatica Teorica*. Barcelona: Universitat Autònoma de Barcelona. (<http://seneca.uab.es/ggt>).
- , 2003. "From polarity to modality: the case of bien", Ms. New York University & Universitat Autònoma de Barcelona.
- Hoeksema, Jack & Hotze Rullmann. 2001. "Scalarity and Polarity. A study of scalar adverbs as polarity items". *Perspectives on Negation and Polarity Items* ed. by Jack Hoeksema et al., 129-167. Amsterdam & Philadelphia: John Benjamins.
- Israel, Michael. 2001. "Minimizers and the Rhetoric of Scalar Reasoning". *Journal of Semantics* 18. 297-331.

- Kennedy, Christopher & Louise McNally. 2005. "Scale Structure, Degree Modification, and the Semantics of Gradable Predicates". *Language* 81:2. 345-381.
- Krifka, Manfred. 1995. "The semantics and pragmatics of polarity items". *Linguistic Analysis* 25.209-257.
- Lahiri, Utpal. 1997. "Focus and negative polarity in Hindi". *Natural Language Semantics* 6.57-123.
- Laka, Itziar. 1990. *Negation in Syntax: On the Nature of Functional Categories and Projections*. Ph.D. dissertation, MIT.
- Masullo, Pascual José. 2003. *Hidden Exclamatives in Spanish*. Ms. University of Pittsburgh.
- Matushansky, Ora. 2002. *Movement of Degree/ Degree of Movement*. Ph.D. Diss. MIT.
- Progovac, Liljana. 2000. "Negative and positive feature checking and the distribution of polarity items". *Negation in Slavic* ed. by Sue Brown & Adam Przepiorkowski. Slavica Publishers.
- Sánchez López, Cristina. 1999. "La negación". *Gramática descriptiva de la lengua española* ed. by Ignacio Bosque & Violeta Demonte, vol. II, 2561-2634. Madrid: Espasa Calpe.
- Szabolcsi, Anna. 2004. "Positive Polarity-Negative Polarity". *Natural Language and Linguistic Theory* 22.409-452
- Van den Wyngaerd, Guido. 1999. "Positively Polar". *Studia Lingüística* 53.209-226.
- Villalba, Xavier. 2004. "Exclamatives and negation". *Report de recerca, Grup de Gramàtica Teòrica*. Barcelona: Universitat Autònoma de Barcelona.

# THE ACQUISITION OF ASPECT IN L2 PORTUGUESE & SPANISH

## EXPLORING NATIVE / NON-NATIVE PERFORMANCE DIFFERENCES

C. ELIZABETH GOODIN-MAYEDA AND JASON ROTHMAN\*  
*University of California, Los Angeles*  
*The University of Iowa*

This study investigates the possibility of native-like ultimate attainment by analyzing L2 knowledge of aspect as seen in the Preterit/Imperfect contrast of highly successful English L2 learners of Portuguese and Spanish. Building on innovative work by Montrul & Slabakova (2003) and Slabakova & Montrul (2003), we test knowledge of semantic entailments associated with the acquisition of [+/- perfective] features checked in higher AspP. Additionally, we investigate the possibility of a specific pattern of associated target-deviant L2 performance. We hypothesize that L2 performance can be affected by explicit positive evidence (pedagogical rules) despite otherwise demonstrable native-like competence. Indeed, the data reveal a pattern of target-deviant performance noted only in three specific contexts, all of which can be linked to traditional instruction: (a) with particular stative verbs not used in the Preterit (b) when preceded by certain adverbial phrases (*e.g.*, *siempre*) and (c) so-called semantic shifting verbs (*e.g.*, *sabia* vs. *supe*).

### 1. *Introduction*

The question of UG-continuity in adult second language acquisition has been debated for over two decades (see White 2003 for discussion). On the one hand, the reality of variably target-deviant L2 grammars have prompted some researchers to hypothesize that UG-accessibility is a domain-specific phenomenon associated with L1 acquisition only (*e.g.*, Bley-Vroman 1990; Schachter 1989, 1996). On the other hand, *poverty-of-the-stimulus* (POS) effects in L2 grammars (*e.g.*, Dekydtspotter & Sprouse 2001; Dekydtspotter et

---

\* The authors' names appear in alphabetical order. They equally contributed to this article. We wish to thank Susan Plann and the two anonymous reviewers in particular for very helpful comments. Furthermore, we wish to thank Michael Iverson and Timothy Gupton for their help with the preparation of this manuscript.

al. 1997; Montrul & Slabakova 2003) are considered by others to be unassailable evidence that UG constrains adult L2 grammars, despite variable L2 target deviancy in some domains. One goal of contemporary L2 research has been to adequately account for target-deviant performance, despite syntactic competence that is demonstrably native-like (e.g., Goad et al. 2003; Lardiere 2000; Prévost & White 1999, 2000; Sorace 2000, 2003).

Most recently (Chomsky 1995), we have come to understand cross-linguistic differences in terms of variation in the language-to-language selection of functional categories and their respective features (including feature strengths) from the universal set of possibilities provided by UG. Accordingly, each language is, in a sense, a uniquely specific subset of UG, and functional categories and their associated formal features serve as the principle locus of parametric variation. Under minimalist assumptions, the computational processes of Move and Merge are purported to be universal. As a result, cross-linguistic differences are accounted for in terms of variable morphological properties. In terms of adult L2 acquisition, achieving native-like competence necessitates the acquisition of new functional categories, L2 morphosyntactic features and their strengths from UG's inventory as they learn the language-specific morphological forms of the target language. According to the *Failed Functional Feature Hypothesis*<sup>1</sup> (FFFH) (Hawkins & Chan 1997), adult L2 learners are unable to acquire features not represented in the L1 and, therefore, are unable to attain native-like competence.

In accord with innovative work done on the acquisition of [+/- perfective] aspect in L2 Spanish (Montrul & Slabakova 2000, 2001, 2002, 2003; Slabakova & Montrul 2002, 2003), the present study seeks to confirm UG-continuity by examining the morphosyntactic competence of advanced English learners of L2 Portuguese and Spanish. Building on Montrul & Slabakova (2003), the L2 learners are tested for different *poverty-of-the-stimulus* (POS) knowledge of semantic entailments accounted for in conjunction with the acquisition of Portuguese and Spanish [+/- perfective] features encoded in the Preterit and Imperfect verbal morphology. Additionally, assuming it is possible to attain native-like morphosyntactic competence and still make errors in performance (cf. Lardiere 1998, 2000; Prévost & White 1999, 2000; Sorace 2000, 2003), the present study seeks to uncover a predictable pattern of performance errors that even the most proficient of L2 learners make with the Preterit/Imperfect contrast in terms of how this contrast is formally tagged.

---

<sup>1</sup> It should be noted that the FFFH is a theory of local impairment (maturation of the functional component) as opposed to global impairment. While we will not comment on the difference herein, we note that they conceivably make different predictions since the FFFH allows for access to UG principles, and global impairment does not. Additionally, we acknowledge that more recent accounts of the FFFH (Hawkins 2005) make different predictions for the acquisition of interpretable vs. uninterpretable features by adult learners.

Most pedagogical presentations of the Preterit/Imperfect distinction are simplified and tailored to L1 translatability. For example, the Preterit/Imperfect difference of some verbs like *saber* is taught lexically. (e.g. *saber* = ‘to know’ in the Imperfect but ‘to find out’ in the Preterit). This simplification cannot, however, account for the grammaticality of (1), in which the Preterit form *supe* clearly means ‘to know’ and follows *siempre* ‘always’, which is one of the most frequently cited trigger words pedagogically associated solely with the Imperfect.

- (1) *Siempre supe que un día me dejarías.*  
 “I always knew that one day you would leave me.”

While the Preterit and Imperfect forms of certain verbs are, by far, more likely to be translated differently into English, it is ultimately not true to claim that in every possible context, the Preterit of these verbs will be equivalent to semantic value *X* while the Imperfect of the same verbs must be equivalent to semantic value *Y*. Additionally, most textbooks offer lists of trigger words that are associated with either the Preterit or the Imperfect (e.g., *siempre* ‘always’ and *todos los días* ‘every day’), despite the fact that contexts in which these trigger words are essentially ineffective abound. In this article, we investigate the possibility that such pedagogical conventions lead to the development of non-linguistic rules that affect L2 performance in spite of native-like competence. With the aforementioned discussion in mind, the research questions are the following:

- i. Is it possible for English L2 learners of Portuguese and Spanish to acquire the [+/- perfective] aspectual features associated with Preterit and Imperfect morphology?
- ii. If some of these advanced L2 learners continue to make errors, is there a pattern to these apparent errors? If so, is there a systematic way to account for these errors as performance phenomena?

This article is structured in the following manner. In section II, the morphosyntactic properties of lexical and grammatical aspect are reviewed for English, Portuguese and Spanish. In section 3, relevant L2 acquisition studies are discussed. In sections 4-7, the design of and data from the present empirical study is detailed and discussed. Given space limitations, only group data are analyzed herein.

## 2. *Grammatical & Lexical Aspect*

The choice between Preterit and Imperfect morphology forms of any verb is not arbitrary; it is contextually regulated in accord with a system of

aspect, which correlates to one's perspective of the action of the verb. The Preterit form corresponds to [+ perfective] aspect, which is bounded (Depraetere 1995) in that the action is implicitly interpreted as having a beginning and end point, but the internal structure is disregarded. Thus, the Preterit is most often episodic in nature.

- (2) *O João falou com essa mulher ontem.* (Portuguese)  
 "João spoke with that woman yesterday."

In contrast, the Imperfect, which corresponds to [- perfective] aspect, is unbounded (Depraetere 1995) as the focus is on the internal structure of the action with no regard to any specific beginning or end point, and thus, it most often takes a characterizing reading.

- (3) *O João falava com essa mulher todas as noites.* (Portuguese)  
 "João was speaking/used to speak with that woman every night."

In referring to past actions in Portuguese and Spanish, not only tense but also aspect features are encoded in the inflectional verbal morphology. This, however, is not the case in English, whose simple past can take both episodic and characterizing readings depending on the context, as seen in (4) and (5).

- (4) I ate at Olive Garden yesterday. (episodic)  
 (5) I ate at Olive Garden all the time when I lived in NY. (habitual)

However, since the English simple past is most often associated with an episodic reading, English uses other conventions, such as modal verbs 'would' or the 'copula (be) + gerund' construction to express past generalizations.

In earlier work (Coppetiers 1987), it was suggested that aspect distinction of this kind did not derive from principles of UG. However, more recent theoretical accounts (e.g., Bonomi 1997; Giorgi & Pianesi 1997; Lenci & Bertinetto 2000; Menéndez-Benito 2002) demonstrate that aspect distinction does derive from universal principles of grammar. Following Giorgi & Pianesi (1997), it is assumed that grammatical aspect manifests as a functional category, higher AspP. Both lexical and grammatical aspects are represented in the clausal projection of the verb, but in different positions. Lexical aspect is represented as a lower AspP where [+/- telic] features are checked in Portuguese, Spanish and English. Grammatical aspect is represented as a higher AspP (just below TP) where [+/- perfective] features are checked in Portuguese and Spanish. Following Giorgi & Pianesi's analysis, Portuguese, Spanish and English project higher AspP, however, English differs parametrically in terms

of which available features it instantiates in regards to this functional category: Portuguese and Spanish instantiate both [+ perfective] and [- perfective] features, while English only instantiates [+ perfective]. In English, Portuguese and Spanish, all verbs move to higher AspP; however, English verbs are already lexically marked as [+ perfective], whereas higher AspP in Portuguese and Spanish serves as the locus for [+/- perfective] feature checking via Preterit and Imperfect morphology (Giorgi & Pianesi 1997). Therefore, English L2 learners of Portuguese and Spanish must acquire the [- perfective] feature associated with the Portuguese and Spanish higher AspP to have native-like target-language competence in this domain. This is only possible if L2 learners are able to acquire features of functional categories not instantiated in their L1, *in contra* so-called failed features approaches.

The use of aspectual morpho-phonological forms in performance does not necessarily entail that the semantic distinction (inclusive of all semantic entailments) has actually been acquired. The semantic alternation between [+perfective] and [- perfective] aspect is often transparent; however, sometimes the nuance is considerably subtle yet paramount to native interpretation. In some cases, the input alone does not provide sufficient positive evidence in light of the ensuing knowledge. Let us consider the following associated POS semantic entailment<sup>2</sup>, which we employ to test L2 knowledge in the empirical portion of the present study. We have already discussed the fact that the prototypical reading of the Preterit is an episodic one. However, multi-clausal Preterit sentences with overt adverbial quantifiers are interpreted as generalizations with a specific reading, namely a [+accidental] one (Lenci & Bertinetto 2000; Menéndez-Benito 2002). When there is no overt adverb of quantification, the distinction is more explicit, whereby the Preterit denotes an episodic interpretation and the Imperfect denotes a characterization or generalization (Menéndez-Benito 2002) as can be seen in (6) and (7), for Portuguese.

- (6) *Episodic*  
*Quando a gente foi á universidade, a gente estudou na biblioteca.*  
 “When we went to the university, **we studied** in the library.”
- (7) *Generalization*  
*Quando a gente ia á universidade, a gente estudava na bibioteca*  
 “When we used to go to the university, **we would study** in the library.”

---

<sup>2</sup> See Montrul & Slabakova (2003) and Slabakova & Montrul (2003) for another associated POS semantic entailment, which underscores an associated constraint on available specific vs. generic interpretations with impersonal subjects.



Bonomi (1997) accounts for the apparent relationship between grammatical [+/-perfective] distinction and the episodic/characterizing distinction, as seen in (6) and (7), by arguing that there is a formal correlation between aspectual categories and quantificational structures. The claim is that [+ perfective] aspect correlates to existential quantification over eventualities while [-perfective] aspect correlates to contextually restricted universal quantification over eventualities. However, when there is an overt adverb of quantification, the semantic interpretations of the [+/- perfective] distinction are not explained by Bonomi's theory<sup>3</sup>, according to which there should be no interpretable difference between (8) and (9). Lenci & Bertinetto (2000) have demonstrated for Italian and Menéndez-Benito (2001, 2002) for Spanish that when there is an adverbial quantifier present, both the Preterit and Imperfect refer to generalizations about a certain event, as can be seen in (8) and (9), but there is an interpretable difference.

- (8) *Siempre que fuimos a esa tienda, compramos mucha porquería.*  
 "Whenever we went to that store, **we ended up** buying a lot of junk."
- (9) *Siempre que íbamos a esa tienda, comprábamos mucha porquería.*  
 "Every time we went to that store, **we bought** a lot of junk."

Menéndez-Benito (2001, 2002) maintains that the perfective/imperfective distinction is not neutralized when an adverbial quantifier is present, but that the distinction is interpreted with an accidental/non-accidental dichotomy whereby perfective sentences express accidental generalizations and imperfective sentences express non-accidental ones. She supports this claim by demonstrating that only imperfective sentences support the truth of counterfactuals and can be paraphrased with the conditional while only perfective sentences block the kind-referring reading of the subject DP and coerce individual-predicates into stage-level ones. She suggests that this might be explained if, like NPs, one envisages VPs as being able to denote either kinds of events or sets of events. Accordingly, the same VP could either denote a kind or a set, and in Romance languages this distinction is grammatical, mediated by the alternation of [+/- perfective] morphology.

We use this semantic alternation to test for L2 acquisition of aspect because this associated semantic entailment is not taught to L2 learners, nor is it derivable from input alone.

---

<sup>3</sup> Bonomi claims that overt adverbial quantifiers with universal force override the inherent quantificational structure associated with the [+perfective] feature. Thus, there should be no discernable difference between sentences like (8) & (9).

### 3. *Aspect & L2 Acquisition Studies*

It is important to note that the acquisition of aspect in L2 Spanish has received a privileged amount of attention in L2 research, and from a multitude of perspectives (e.g., Anderson 1986, 1991; Camps 2005; Liskin-Gasparro 2000; Montrul & Slabakova 2000, 2001, 2002, 2003; Ramsay, 1990; Salaberry 1999, 2000, 2002; Slabakova & Montrul 2002). However, most of these studies have exclusively examined the acquisition of Preterit and Imperfect morphology as it relates to the proper usage of these verbal paradigms in IL development following the Lexical Aspect Hypothesis (see Anderson 1986, 1991). That is, these studies examine the use of Preterit and Imperfect morphemes with different verb classes (e.g., stative vs. eventive) in a particular discourse context. Based on L2 morphological usage, it is inferred what semantic interpretation L2 learners assign to these morphemes. The aforementioned trend is important to keep in mind in relation to contemporary generative L2 research. So-called syntax-before-morphology approaches maintain a dissociation between syntactic and morphological development and have demonstrated that L2 learners tend to use overt inflectional morphological forms variably, often despite an underlying syntactic competence that is native-like (see Goad et al. 2003; Lardiere 2000; Prévost & White 1999; Schwartz 2003 for discussion). Accordingly, the ubiquitous target-deviancy in L2 morphological production is understood as problems in surface morphology realization. Therefore, it is not clear that the lack of use of one morphological paradigm with a particular class of verbs would entail that an L2 learner is unable to produce and interpret such verbs in that same aspectual paradigm (cf. Montrul 2004).

Only Montrul & Slabakova (2000, 2002, 2003) and Slabakova & Montrul (2002, 2003) have looked at the L2 acquisition of Preterit and Imperfect morphology in Spanish as they relate to formal linguistic features and their syntactic/semantic distributions. Their pioneering work has demonstrated that L2 learners are able to acquire functional features associated with verbal morphology. Particularly interesting are the Montrul & Slabakova (2003) and Slabakova & Montrul (2003) studies in which they demonstrate target language L2 *poverty-of-the-stimulus* semantic knowledge stemming from a semantic universal (Chierchia 1995), which English L2 learners of Spanish must access via the acquisition of [+/- perfective] grammatical aspect features. In fact, the present study builds on this work, investigating the knowledge of entailments in semantic interpretation associated with the acquisition of the Preterit/Imperfect morphological contrast.

### 4. *The study*

The present study employs two tests to examine the L2 acquisition of grammatical aspect: (i) a context sentence match test; and (ii) a production task. There were two control groups of Spanish (n=5) and Portuguese (n=4) native

speakers as well as English-speaking learners of L2 Spanish (n=17) and L2 Portuguese (n=5). Each of the L2 learners was an advanced learner of the target L2 and employed as a university-level instructor of the target L2. They were purposefully selected for their advanced ability in the L2 as well as their knowledge of prescriptive grammar. Given their superior knowledge of prescriptive grammar and pedagogical conventions, we believed them to be excellent candidates to pursue the question of whether or not a separate system of pedagogical rules could result in target-deviant performance despite underlying competence that is otherwise demonstrably native-like.

#### 4.1 *Test 1*

In addition to episodic and generalization sentences without adverbs of quantification for which the choice of Preterit or Imperfect is more transparent, this task utilizes the semantic entailment associated with the Preterit and Imperfect examined in examples (8) and (9) of section 3. As we saw, there is a non-predicted interpretive asymmetry associated with the use of the Preterit and Imperfect following an overt adverb of quantification. In these sentences, the universal force of adverbs like *siempre* should override the null-operator associated with [+perfective] morphology, resulting in no interpretable difference between the Preterit and Imperfect (Bonomi 1997). However, while it is true that following overt adverbial quantifiers both the Preterit and the Imperfect are interpreted as generalizations, there nonetheless exists a difference in interpretation whereby the Preterit correlates to an accidental interpretation and the Imperfect to a non-accidental interpretation. This accidental/ non-accidental distinction in the verbal domain is not taught to L2 learners in formal situations, nor is it directly discernible from the input. Menéndez-Benito (2001, 2002) maintains that this distinction occurs because VPs can denote either kinds of events or sets of events mediated grammatically via perfective and imperfective accordingly in Romance languages. As can be seen in test examples (10) and (11), the L2 learners were asked to match contexts to the sentence with an adverb of quantification that most appropriately depicts the context. The participants were asked to give an immediate (timed) response only. A context that implies an accidental interpretation should be most accurately described with the Preterit, as in (10).

- (10) *Os meus bons amigos Kelly e Kyle estão muito apaixonados. De fato, há quem diz que estão obsessionados. Sempre estão juntos, dia e noite. Eu não posso pensar em um só momento em que os vi separados em todos esses anos. Mas, esta semana uma coisa imprevista aconteceu; eu me encontrei com eles várias vezes e...*

“My good friends Kelly and Kyle are very much in love. In fact, some would say they are obsessed. They are always together, day and night. I

can't think of even one instance in which I saw them apart in all these years. But, this week something crazy happened; I saw them by chance several times and..."

- a. *Sempre que os vi, os vi separados.* (+ accidental)  
"Every time I saw them, I saw them apart." [+perf.]
- b. *Sempre que os via, os via separados.*  
"Every time I saw them, I saw them apart." [- perf.]

- (11) *Para mim, o esporte mais legal é, sem dúvida, o futebol. Claro que não se pode jogar sozinho. É por isto que, na minha casa,...*  
"For me, the most awesome sport is, without a doubt, soccer. Of course it cannot be played alone. It is for this reason that, in my house,..."

- a. *Sempre que os amigos visitaram, nós jogamos futebol.* [+ perf.]  
"Each time my friends came over, we played soccer."
- b. *Sempre que os amigos visitavam, nós jogávamos futebol.* (-accidental)  
"Whenever my friends came over, we played soccer." [- perf.]

#### 4.2 Test 2

This fill-in-the-blank production task employs contextualized paragraphs in the form of conversations, as in (12). There are thirty verbs to be conjugated, equally divided between stative and eventive verbs. Approximately half of the contexts were designed to elicit the Preterit while the other half elicited the Imperfect. Eventive verbs are further subdivided equally into 3 subgroups: achievements, accomplishments, and activities. In some contexts, particular verbs are chosen (most often stative verbs), which are explicitly taught to English L2 learners in terms of their English translations, so-called 'semantic shift' verbs (e.g., *sabía* vs. *supe* 'I knew' & *quería* vs. *quiso* 'he wanted'), in an effort to see if these particular verbs pose a problem for L2 learners when the context requires a use in contrast to pedagogical simplification. Another common pedagogical convention for teaching the Preterit/Imperfect contrast relies on matching one or the other form to certain adverbial complements (e.g., *siempre* 'always' & *a menudo* 'often' = Imperfect; and *de repente* 'suddenly' and *hasta que* 'until' = Preterit). We tested for atypical uses of the Preterit and Imperfect in these contexts as well. In light of the possibility of demonstrating POS knowledge associated with the acquisition of the relevant morphosyntactic features in Test 1, the ultimate goal of Test 2 was to determine any discernible connection between L2 target-deviant performance and explicit positive evidence in the form of simplified pedagogical rules, despite a competence that is otherwise quantifiably native-like.

(12) *Conversação 1* ‘Conversation 1’

**Paulinho:** *Eu nunca pensei (pensar) que você ia me deixar. Não sei como eu vou viver sem você. Você sempre fazia (fazer) coisas lindas para mim. Eu vou sentir muito a sua falta.*

“I never thought that you were going to leave me. I don’t know how I am going to live without you. You always did nice things for me. I am going to miss you.”

**Maria:** *Desculpe, Paulinho. Você tem que lembrar que o ódio não pode existir entre dois amigos que um dia foram (ser) namorados.*

“Sorry, Paulinho. You must remember that hatred can’t exist between two friends that once were lovers.”

**Paulinho:** *Por que você disse que me amava (amar) mas no final me deixou?*

“Why did you say that you loved me but in the end you left me?”

**Maria:** *Bom, eu sempre me dei (dar) bem com os seus pais até que eu soube (saber) que eles não gostam das relações interracialis. Não posso ser parte de uma família que não me aceite.*

“Well, I always got along well with your parents until I learned that they don’t approve of interracial relationships. I can’t be part of a family that doesn’t accept me.”

## 5. Results

### 5.1 Test 1

As can be seen in Figure 1 below, the L2 learners perform, more or less, native-like on this task. Accidental-non-accidental readings come from sentences with adverbs of quantification while episodic-general readings come from sentences that are not adverbially quantified.

As we compare native Portuguese speakers to L2 Portuguese speakers we note that there is no statistically significant difference in their performances for any of the test sentences: (i) accidental ( $p=.295$ ); (ii) n-accidental ( $p=.621$ ); (iii) episodic ( $p=.374$ ); (iv) general ( $p=.815$ ). With and without adverbs of quantification, these L2 learners interpret these contexts in line with the native controls, highly favoring the use of the Preterit in episodic and accidental generalization contexts and the Imperfect in other generalization contexts.

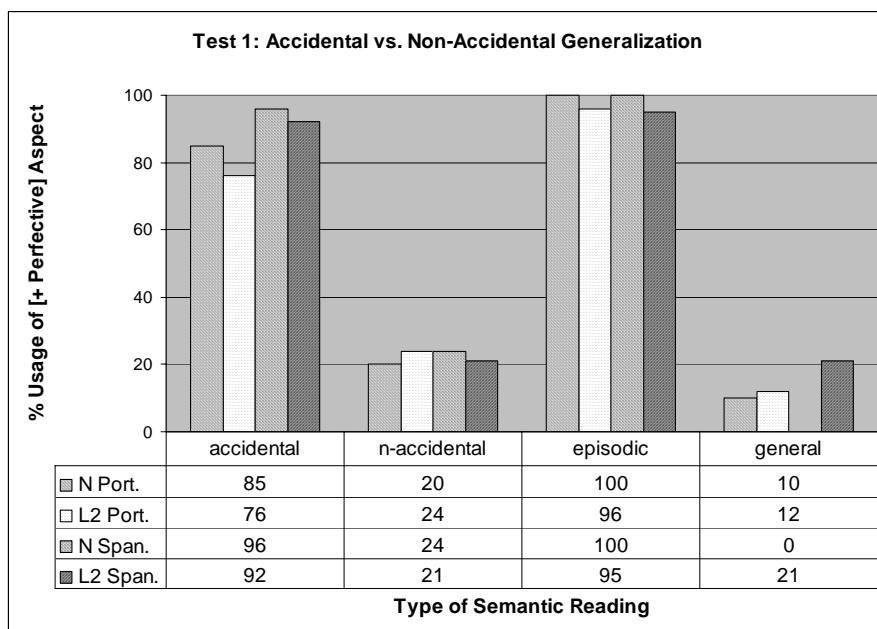


Figure 1: *Results of Test 1*

\*Percentages reported here are uses of the Preterit in relation to the type of reading favored by the context provided. The remaining percentage needed to equal 100% reflects the percent use of the Imperfect in any given context.

Comparing native Spanish speakers to L2 Spanish speakers we observe that there is no statistically significant difference in their performance for the relevant semantic entailment sentences: (i) accidental ( $p=.288$ ); (ii) non-accidental ( $p=.527$ ). While it is possible that there is a statistically significant difference in native/non-native choice of the Preterit in episodic contexts, the difference is marginally significant at best ( $p=.041$ ), and is more indicative of the native invariance (100% Preterit) and the relatively small sample size. In these contexts, L2 Spanish learners choose the Preterit 95% of the time.

There is a clear difference, however, in native/non-native performance in the generalization contexts without adverbs of quantification. Native Spanish speakers never use the Preterit in these contexts while the L2 group matches the Preterit with this context 21% of the time, yielding a statistically significant difference ( $p<.001$ ). It is important to remember that 21% really means that, on average, 1 of 5 relevant sentences was matched differently as compared to the native control. Therefore, the significant difference must be considered in light of the fact that the natives showed no variation. The L2 performance is,

however, in line with native use of the Imperfect in these contexts well above the level of chance (79% Imperfect). Importantly, both L2 Portuguese and L2 Spanish groups clearly have native-like knowledge of the accidental vs. non-accidental generalization distinction with the Preterit/Imperfect contrast in sentences with adverbial quantifiers with universal force.

## 5.2 Test 2

As hypothesized, there was more variation between native and non-native speakers in Test 2<sup>4</sup>. In addition, the results followed a pattern that could be predicted based on pedagogical rules that simplify this aspectual contrast.

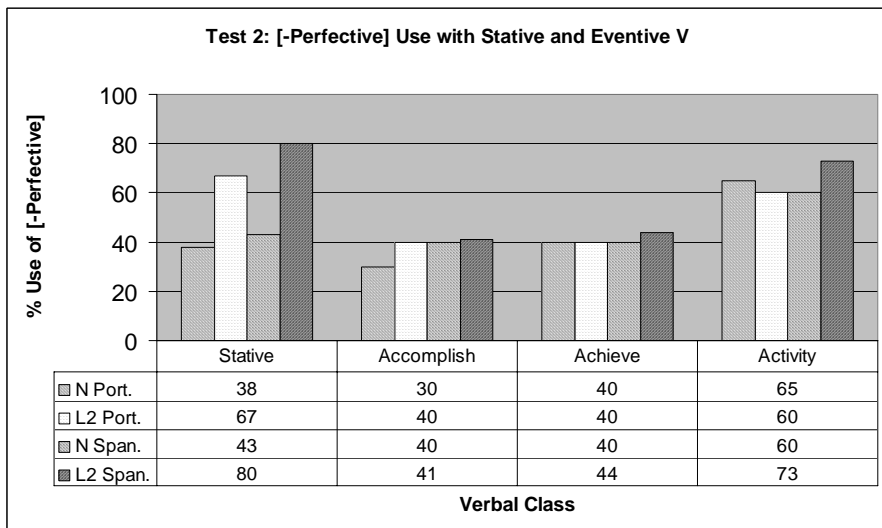


Figure 2: Results of Test

\*Percentage of use of the Imperfect in Stative and Eventive (further divided into Accomplishment, Achievement and Activity) contexts.

Comparing native Portuguese speakers and L2 Portuguese speakers, there is a significant statistical difference in the use of the Imperfect with stative verbs ( $t = 3.29$ ,  $p = .030$ ) only. Figure 2 illustrates that L2 learners were much more likely to use the Imperfect with stative verbs, regardless of the aspect given the context. So-called 'semantic-shifting verbs', taught lexically, such as *saber* and *querer* were particularly problematic. When the context called for a stative use, but the aspect was clearly [+ perfective], the L2 learners were much more likely to produce the Imperfect *in contra* the native control's uniform

<sup>4</sup> The percentages reported for the native controls correspond to the designed distribution of Preterit and Imperfect in this task, which is to say, the roughly 40% use of the Imperfect, for example, with stative verbs is what was expected given the design breakdown of the task.

Preterit response. It is important to note that there was very little variation among native speaker readings, meaning that, for the most part, native speakers responded with the Imperfect in the same contexts (remember that 7 out of 15 of the contexts were designed to elicit the Imperfect). Moreover, L2 learners also responded with the Imperfect in those contexts that elicited [-perfective] readings from native speakers; however, they differed in their performance in contexts of a [+perfective] reading of a stative verb, choosing the Imperfect more often in spite of contexts presenting [+ perfective] aspect. There was no statistically significant native/non-native difference for any types of eventive verbs, which means that, more or less, natives and L2 learners produced Preterit and Imperfect morphology in the same eventive verb contexts. For achievements the L2 group performed exactly like the natives ( $t=0$ ,  $p=1.00$ ). While there was slight L1/L2 variation for accomplishments ( $t= 1.58$ ,  $p=.189$ ) and activities ( $t= .46$ ,  $p=.672$ ) these difference were not statistically significant.

A similar pattern arises between L1 and L2 Spanish speakers. L2 learners of Spanish performed significantly differently from the native Spanish speakers with stative verbs ( $p < .001$ ), preferring Imperfect more often than native speakers. Not surprisingly, the instances with the highest rate of deviance by the L2 learners were the same in both the L2 Spanish and Portuguese groups (*i.e.*, with lexically taught so-called semantic-shift verbs as statives in the Preterit). Similar to the Portuguese L2 learners, L2 Spanish speakers' performance on achievements and accomplishments did not differ significantly from the native Spanish speakers ( $t= 1.85$   $p=.083$  and  $t=.32$ ,  $p=.75$  respectively). Different than the L2 Portuguese learners, however, there is a significant difference between Spanish natives and L2 learners for activities ( $t=3.8$ ,  $p=.002$ ). We note that this significant difference occurs as a result of considerable L2 variation on only one of five relevant sentences, whose verb was *correr* 'to run'. Although the context clearly called for an activity reading of the verb *correr* whose aspect was [- perfective], we believe that the L2 variation for this sentence resulted from the fact that this verb can be interpreted as an accomplishment if it selects for an NP complement. Interpreted as such, [+ perfective] aspect is possible in this environment.

Space does not permit us to explore individual data for all participants, however, two L2 learners, both Spanish speakers, performed completely native-like on all tests. On Test 2, there was no significant difference in the L2 performance of non-native Spanish subjects 3444 (stative  $t=1.63$   $p=.178$ , accomplishment  $t=0$   $p=1.00$ , achievement  $t=0$ ,  $p=1.00$ , activity  $t=0$ ,  $p=1.00$ ) and 2099 (stative  $t=2.45$ ,  $p=.070$ , accomplishment  $t=0$ ,  $p=1.00$ , achievement  $t=0$   $p=1.00$ , activities  $t=0$ ,  $p=1.00$ ) for any of the verb types.



## 6. Discussion & Conclusions

In accord with similar previous research (Montrul & Slabakova 2003; Slabakova & Montrul 2003), the data of the present study demonstrate that native-like adult L2 ultimate attainment is possible in the domain of [+/-perfective] contrast, substantiated by L2 knowledge of an associated semantic entailment in Test 1. Accordingly, the data demonstrate that features not selected from UG in L1 acquisition – in this case the [- perfective] feature associated with higher AspP in Portuguese and Spanish – can be acquired in adult L2 acquisition. This provides counterevidence for the FFFH (Hawkins & Chan 1997; Hawkins & Liszack 2003), at least in its original formulation<sup>5</sup>. While some variability exists between native and L2 participants in this study, which we account for in section 5 as performance phenomena, it is important to highlight that each individual adult L2 learner demonstrates native-like knowledge of the relevant semantic entailment in Test 1.

Upon analyzing the data from Test 2, a pattern emerges whereby target-deviant L2 performance is noted exclusively in three specific contexts: (a) with particular stative verbs (*ser, estar, haber, tener*) avoided in the Preterit; (b) when they follow certain adverbial phrases (e.g., *nunca, siempre, todos los días*); and (c) so-called ‘semantic shifting verbs’ in stative contexts (e.g., # 23 of test 2 *nunca quise*). We hypothesized that L2 target-deviant performance would be explainable in terms of how the Preterit/Imperfect contrast is taught to L2 learners. In an effort to facilitate the acquisition of the Preterit/Imperfect contrast, frequently used stative verbs are taught as defaulting to the Imperfect, certain adverbial ‘tag’ words are taught as absolute ‘triggers’ of the Preterit or Imperfect, and some verbs are taught in terms of their closest English translation equivalent (e.g., the aforementioned *supe* ‘(I) found out’ vs. *sabía* ‘(I) knew’). Examples (13) and (14) below, taken from Conversation 1 and 3, respectively, of Test 2, illustrate the target-deviant performance of non-native speakers compared to the native speaker consensus (underlined). While all the native speakers used the Preterit in these contexts, only 7 non-native speakers (2 L2 Portuguese, 5 L2 Spanish) did so in context (13) while in context (14) a mere 5 non-natives did so (1 L2 Portuguese, 4 L2 Spanish).

- (13) *Tienes que recordar que no cabe el odio entre dos amigos que un día fueron (ser) novios.* (stative verb in the Preterit)

“You have to remember that there is no room for hate between two friends that were once boyfriend/girlfriend.”

---

<sup>5</sup> Most recently, the FFFH (Hawkins, 2005) differentiates between interpretable and uninterpretable features whereby it is only the uninterpretable ones that are lost if not selected during L1 acquisition.

- (14) *Siempre supe (saber) que él \_\_\_\_\_ (ser) un sinvergüenza.*  
 (semantic shifting verb with its canonical meaning in the Preterit)  
 “I always knew that he \_\_\_\_\_ (be) shameless.”

Strictly adhered to, the notion of semantic-shifting verbs, as opposed to aspect-shifting verbs, does not account for the use of these verbs in the Preterit with its canonical meaning, as in (14). To suggest that *supe*, the first person singular form of *saber* in the Preterit ([+ perfective]) can only mean “I found out” to the exclusion of “I knew” is, simply put, not accurate. Given the nature of the verb *saber*, used in the Imperfect, its unbounded aspect correlates closely to the English semantic value of ‘to know’ and the Preterit with bounded aspect often most accurately correlates to the inherent endpoint of the English phrasal verb ‘to find out’. Nonetheless, aspect is ultimately determined by the perspective of the action of the verb given a particular context, which accounts for the possibility of the stative ‘to know’ translation of *saber* in the Preterit given particular contexts (e.g., #21 of test 2 *Siempre supe que....*).

It is possible that pedagogical explanations of fixed patterns that are accurate tendencies, yet in practice, are less than absolute, can affect L2 performance even at the highest levels of proficiency. Since they are stored as conscious knowledge, it is reasonable to believe that these rules, which compete with underlying competence, can prevail in performance. We believe that this very possibility explains the pattern of target-deviant L2 performance we observed, whereby the highest target-deviancy was noted in exemplars like the aforementioned<sup>6</sup>. While Anderson’s (1986, 1991) *Lexical Aspect Hypothesis* anticipates problems with stative verbs being used in Preterit forms, he bases this prediction on his claims about the strong relationship between the inherent lexical aspect of predicates and the subsequent morphology to which L2 learners default to in marking those verbs with past tense reference. Based on the data we provide; however, it is very possible that L2 learners have enduring problems with Preterit uses of stative verbs not due to an aspect learning hierarchy, but rather because of the way they are taught this aspectual contrast. This would explain why our participants have problems only with particular stative verbs in the Preterit (which coincide with pedagogical rules) and not others.

It is also important to highlight that despite L2 target-deviancy with stative verbs, there were two L2 learners who performed completely native-like on both tests. If our hypothesis in regards to the competition of conscious

---

<sup>6</sup> We acknowledge that the evidence for this connection we present here are somewhat circumstantial. Notwithstanding, they strongly support the possibility of the present hypothesis’ tenability. In further research, testing other domains of grammar for which pedagogical methods do not completely match linguistic rules as well as comparing the performances of tutored vs. untutored L2 learners may provide conclusive evidence to further support our conclusions here.

simplified pedagogical rules and actual linguistic competence at the level of performance is on the right track, the fact that these two learners performed completely native-like suggests that such interference is not inevitable. Therefore, a preponderance of the evidence presented favors the Full Access Hypothesis of adult UG-continuity. The acquisition of the [-perfective] feature needed to achieve native-like morphosyntactic competence by adult English learners of L2 Portuguese and Spanish provides evidence against the idea that adults are unable to acquire critical settings of L2 syntactic features (Hawkins, 2005; Hawkins & Chan 1997).

### References

- Anderso, R. 1986. "El desarrollo de la morfología verbal en el español como segundo idioma." *Adquisición del lenguaje/Adquisição da linguagem*. ed. by J. Meisel. 115-138. Frankfurt: Vervuert.
- 1991. "Developmental Sequences: The emergence of aspect marking in second language acquisition." *Crosscurrents in second language acquisition and linguistic theories*. ed. by T. Huebner & C.A. Ferguson. 305-324. Amsterdam & Philadelphia: John Benjamins.
- Bley-Vroman, R. 1990. "The logical problem of foreign language learning." *Linguistic Analysis* 20. 3-49.
- Bonomi, A. 1997. Aspect, quantification and when-clauses in Italian. *Linguistics and Philosophy* 20. 469-514.
- Camps, J. 2005. "The emergence of the imperfect in Spanish as a foreign language: The association between imperfective morphology and state verbs". *International Review of Applied Linguistics in Language Teaching* 43. 163-192.
- Chomsky, N. 1995. *The Minimalist Program*. Cambridge (Mass.): MIT Press.
- Coppetiers, R. 1987. "Competence differences between native and near-native speakers". *Language* 63: 3. 544-573.
- Depraetere, I. 1995. "On the necessity of distinguishing between (un)boundedness and (a)telicity". *Linguistics and Philosophy* 18. 1-19.
- Dekydspotter, L. & Sprouse, R. A. 2001. "Mental design and (second) language epistemology: Adjectival restrictions on *wh*-quantifiers and tense in English-French interlanguage". *Second Language Research* 17. 1-35.
- Dekydspotter, L. Sprouse, R. A. & Anderson, B. (1997). "The Interpretive Interface in L2 Acquisition: the Process-Result Distinction in English-French Interlanguage Grammars." *Language Acquisition* 6. 297-332.
- Giorgi, A. & Pianesi, F. 1997. *Tense and aspect: From semantics to morphosyntax*. Oxford: Oxford University Press.
- Goad, H., White, L., & Steele, J. 2003. "Missing inflection in L2 acquisition: Defective syntax or L1-constrained prosodic representations?" *The*

- Canadian Journal of Linguistics/La Revue canadienne de Linguistique* 48. 243-263.
- Hawkins, R. 2005. "Revisiting Wh-movement: The availability of an uninterpretable [wh] feature in interlanguage grammars". *Proceedings of the 7th Generative Approaches to Second Language Acquisition Conference (GASLA 2004)* ed. by Laurent Dekydtspotter et al., 124-137. Somerville (Mass.): Cascadilla.
- & C. Chan. 1997. "The partial availability of universal Grammar in second language acquisition: The 'failed functional features hypothesis'". *Second Language Research* 13 (3). 187-226.
- & S. Liszka. 2003. "Locating the source of defective past tense marking in advanced L2 English speakers". *The lexicon-syntax interface in second language acquisition* ed. by R. van Hout, A. Hulk, F. Kuiken, & R. Towell, 21-44. Amsterdam & Philadelphia: John Benjamins.
- Kanno, K. 1998. "Consistency and variation in second language acquisition". *Second Language Research* 14, 376-388.
- Lardiere, D. 1998. "Case and tense in the 'fossilized' steady-state". *Second Language Research* 14. 1-26.
- 2000. "Mapping features to forms in second language acquisition". *Second language acquisition and linguistic theory*. ed. by J. Archibald, 102-129. Oxford: Blackwell.
- Lenci, A. & Bertinetto, P. M. 2000. "Aspect, adverbs and events: Habituality and perfectivity". *Speaking of events*. ed. by J. Higginbotham, F. Pianesi & A.C. Varzi, 65-287. Oxford/New York: Oxford University Press.
- Liskin-Gasparro, J. 2000. "The acquisition of temporality in Spanish oral narratives: Exploring learners' perceptions". *Hispania* 83 (4). 830-844.
- Menéndez-Benito, P. 2001. "Aspect and adverbial quantification in Spanish". Ms. The University of Massachusetts at Amherst.
- 2002. "Aspect and adverbial quantification in Spanish". *Proceedings of the 32<sup>nd</sup> North Eastern Linguistics Society, GLSA*. ed. by M. Hirotani. Amherst (Mass.).
- Montrul, S. 2004. *The acquisition of Spanish: Morphosyntactic development in monolingual and bilingual L1 acquisition and adult L2 acquisition*. Amsterdam & Philadelphia: John Benjamins.
- & R. Slabakova. 2000. "Acquiring semantic properties of Preterit and Imperfect tenses in L2 Spanish". *BUCLD 24 Proceedings*. ed. by S. Catherine Howell et al. 534-545. Somerville (Mass.): Cascadilla Press.
- 2001. "Is native-like competence possible in L2 acquisition?" *BUCLD 25 Proceedings*. ed. by H. Anna & J. Do et al., 522-533. Somerville (Mass.): Cascadilla Press.
- 2002. "On aspectual shifts in L2 Spanish". *BUCLD 26 Proceedings*. ed. by B. Skarabela et. al., 631-42. Somerville (Mass.): Cascadilla Press.

- 2003. "Competence similarities between natives and near-native speakers: An investigation of the Preterit/Imperfect contrast in Spanish". *Studies in Second Language Acquisition* 25:3. 351-398.
- Perez-Léroux, A.T. & Glass, W. 1999. "Null anaphora in Spanish second language acquisition: probabilistic versus generative approaches". *Second Language Research* 15.220-249.
- Prévost, P. & White, L. 1999. "Finiteness and variability in SLA: More evidence for missing surface inflection". *Proceedings of the Annual Boston University Conference on Language Development* 23. 575-586.
- 2000. "Missing surface inflection or impairment in second language acquisition?" *Second Language Research* 16. 103-133.
- Ramsay, V. 1990. *Developmental stages in the acquisition of the perfective and the imperfective aspects by classroom L2 learners of Spanish*. Ph.D. Diss. University of Oregon.
- Salaberry, R. 1999. "The development of past tense verbal morphology in classroom L2 Spanish". *Applied Linguistics* 20.151-178.
- 2000. *Spanish past tense aspect: L2 development in a tutored setting*. Amsterdam & Philadelphia: John Benjamins.
- 2002. "Tense and aspect in the selection of Spanish past tense verbal morphology". *The L2 acquisition of tense-aspect morphology*. ed. by R. Salaberry & Y. Shirai. Amsterdam: John Benjamins.
- Schachter, J. 1989. "Testing a proposed universal". *Linguistic Perspectives on Second language Acquisition*. ed. by S.Gass & J. Schachter. Cambridge: Cambridge University Press.
- 1996. "Maturation and the issue of Universal Grammar in second language acquisition". *Handbook of second language acquisition*. ed. by W. Ritchie & T. Bhatia, 159-193. San Diego: Academic Press Ltd.
- Slabakova, R. & Montrul, S. 2002. "Aspectual tense in L2 Spanish: a UG perspective". *The L2 acquisition of tense-aspect morphology*. ed. by R. Salaberry & Y. Shirai. Amsterdam & Philadelphia: John Benjamins.
- 2003. "Genericity and Aspect in L2 Acquisition". *Language Acquisition* 11. 165-196.
- Sorace, A. 2000. "Syntactic optionality in non-native grammars". *Second Language Research*. 16. 93-102.
- 2003. "Near-Nativeness". *Handbook of Second Language Acquisition* ed. By C. Doughty and M. Long, 130-151. Oxford: Blackwell.
- White, L. 2003. *Second language acquisition and Universal Grammar*. Cambridge (Mass.): Cambridge University Press.

# MECHANISMS OF SCOPE RESOLUTION IN CHILD ITALIAN\*

ANDREA GUALMINI

*McGill University*

This paper presents the results of an experiment investigating children's interpretation of the Italian indefinite *qualche* and negation in the two arguments of the universal quantifier. The findings show that Italian-speaking children's interpretation of *qualche* in sentences containing negation is not limited to surface scope interpretations. The findings presented in the paper, together with the findings from English available in the literature, are used to evaluate alternative models of scope resolution in child language. A critique of the account offered by Musolino and Lidz (2006) is presented and an alternative account proposed by Hulsey et al. (2004) is reviewed.

## 1. *Scope Resolution in Child language*

Natural languages often present lexical items whose distribution or interpretation is constrained by the polarity of the relevant linguistic environment. For example, consider the English indefinites *some* and *any*: *any* must be interpreted in the scope of negation, whereas (stressed) *some* cannot be (see Ladusaw 1979).

- (1) a. The detective didn't find any guys. ( $\sqrt{\text{not}} > \text{any}$ ,  $^* \text{any} > \text{not}$ )  
b. The detective didn't find some guys. ( $^* \text{not} > \text{some}$ ,  $\sqrt{\text{some}} > \text{not}$ )

Adopting the terminology from recent studies of child language (see Musolino 1998), negation and the indefinite *any* receive an 'isomorphic' (surface scope) interpretation in (1)a, whereas negation and *some* receive a 'non-isomorphic' (inverse scope) interpretation in (1)b. In short, (1)b can be paraphrased as *There are some guys that the detective did not find*.

---

\* I wish to thank Luisa Meroni and Jennifer Morehouse for valuable comments. I also thank Gianni and Alessandra Gualmini for their help in conducting the experiment, and the children, teachers and staff at the preschool Arthur Andersen, Montefiorino, Italy.

In an experimental study, Musolino (1998) sought to determine whether English-speaking children can interpret the indefinite *some* outside the scope of negation. The results of one of Musolino's experiments suggested that this is not the case. Specifically, Musolino (1998) found that children as old as 5;9 rejected sentences like (1)b if the detective found two of the four guys available in the context, whereas a group of adult controls consistently accepted the target sentences. More precisely, many of the children tested by Musolino (1998) claimed that (1)b was incorrect because the detective had indeed found some guys. Children's failure to access the inverse scope interpretation of the relevant sentence, even though that interpretation would have made the sentence true, was taken as evidence that children's semantic scope is limited to syntactic scope. This is the Observation of Isomorphism proposed by Musolino (1998).

Subsequent research has attempted to determine whether children's non-adult judgments of sentences like (1)b require a grammatical explanation (see Gualmini 2004; 2005; Musolino 2006; Musolino & Gualmini 2004). For example, one such study by Gualmini (2004), which draws upon the observation by De Villiers and Tager-Flusberg (1975; p. 279) that "negative statements are generally used to point out discrepancies between a listener's presumed expectations and the facts," demonstrates that (i) children consistently access the non-isomorphic interpretation of sentences like (1)b if the experimental context supports the expectation that the detective should find all the guys and that (ii) only some children resort to the isomorphic interpretation if the relevant expectation is not supported by the context.

Let us review the relevant experiment by Gualmini (2004). In order to evaluate whether the context can mitigate children's difficulty with sentences containing negation, Gualmini (2004) presented children with stories in which a character had a task to carry out. In one of the trials, children were told a story about a troll, who was supposed to deliver four pizzas to Grover. Unfortunately, on the way to Grover's house two pizzas fell off the delivery truck. Children were then asked to evaluate either (2) or (3).

- (2) The troll didn't deliver some pizzas.
- (3) The troll didn't lose some pizzas.

Notice that both (2) - (3) are true in the context under consideration on the inverse scope interpretation. (2) is true because there are some pizzas that the Troll didn't deliver, namely the ones he lost on the way; (3) is true because there are some pizzas that the troll didn't lose, namely the ones he managed to deliver. Despite the fact that the two sentences have the same truth value, they differ in appropriateness. Whereas (2) points out that the troll failed in carrying out his task, upon hearing (3) the hearer has the impression that the speaker is

not addressing what is at stake. Thirty children (four- and five-year-olds) participated in the experiment. These are the results: children accepted sentences like (2) in 54 out of 60 trials (90%) but they accepted sentences like (3) only in 30 out of 60 trials (50%).

In this paper, we contribute to the debate on children's interpretation of sentences containing negation in two ways. First, we consider the Italian indefinite *qualche* ('some'). Although the Italian indefinite *qualche* does not seem to differ from its English counterpart *some* (see Zamparelli 2004), the experiment will provide us with new data against which Musolino's and Gualmini's hypotheses can be evaluated. Moreover, we will consider a new structure. In particular, we study children's interpretation of sentences containing the Italian indefinite *qualche* ('some') and negation in the two arguments of the universal quantifier (see Gualmini 2005 for English). The relevant examples are in (4) and (5).

- (4) *Ogni contadino non ha pulito qualche animale.* (Italian)  
 "Every farmer didn't clean some animal."
- (5) *Ogni contadino che non ha pulito qualche animale ha ricevuto una scopa.* (Italian)  
 "Every farmer who didn't clean some animal received a broom."

The sentences above present a contrast. Surface scope is barely available –if at all – for (4), but it is the preferred reading of (5). More specifically, the preferred interpretation of (4) is the non-isomorphic interpretation in (6), while the preferred interpretation of (5) is the isomorphic interpretation in (7).

- (6) For every farmer, there is some animal that he didn't clean.
- (7) Every farmer who didn't clean any animal received a broom.

One possible explanation of the contrast above is suggested by a recent paper by Szabolcsi (2004). Szabolcsi (2004) argues that the complex expression consisting of negation and the so-called positive polarity item should be viewed as a *negative* polarity item, subject to the licensing conditions that are typical of negative polarity items, e.g., the presence of a downward entailing operator.<sup>1</sup> Adopting Szabolcsi's account, we can account for the difference between (4) and (5) by that the indefinite *qualche* and negation occur in the two arguments

---

<sup>1</sup> Strictly speaking the sentences that we are concerned with could also be explained by a more traditional account that simply requires positive polarity items to be (interpreted) in upward entailing environments (see Ladusaw 1979).



of the universal quantifier. In particular, in (4), the indefinite *qualche* and negation occur in the second argument of the universal quantifier, an upward entailing environment. This makes inverse scope the preferred and possibly the only reading available. By contrast, in (5), the indefinite *qualche* and negation occur in the first argument of the universal quantifier, a downward entailing environment. This makes the surface scope interpretation available. Having introduced the linguistic construction under investigation, we can now turn to the experiment.

## 2. *The Italian indefinite qualche ('some') and negation in the two arguments of the universal quantifier ogni ('every')*

In this section we illustrate the design and results of an experiment investigating children's interpretation of the indefinite *qualche* ('some') with respect to negation in the two arguments of the Italian universal quantifier *ogni* ('every'). The experiment employs the Truth Value Judgment task (Crain and Thornton 1998). In a Truth Value Judgment task, an experimenter acts out short stories in front of the child using small toys and props. The second experimenter plays the role of a puppet who watches the stories alongside the child. At the end of the story, the puppet offers a description about the story, and the child's task is to determine whether the puppet is 'right' or 'wrong.' The experiment included two conditions. Condition I focused on the first argument of the universal quantifier and Condition II focused on the second argument of the universal quantifier. In each condition, children were presented with four target trials preceded by one warm-up trial and interspersed with filler trials to balance the number of 'yes' and 'no' responses.

The properties of the first argument of the Italian universal quantifier *ogni* ('every') were investigated in Condition I of the experiment. As we have observed, previous research has shown that some children resort to the isomorphic interpretation of *some* in the scope of negation in particular experimental contexts. In the present case, the research question was whether *all* children resort to the isomorphic interpretation of negation and the Italian indefinite *qualche* ('some') when those elements occur in the first argument of the universal quantifier *ogni* ('every'). In addition, the results from the present experimental condition provide us with a baseline for the interpretation of the findings from Condition II, which investigates the second argument of the universal quantifier.

Ten children participated in Condition I of the experiment (ages from 3;05 to 5;07 - mean: 4;07). Let us illustrate a typical trial.

- (8) "This is a story about five farmers and their boss, the Indian. The Indian says: "Guys, it is time to get to work. I think you should start by cleaning the animals, because they are very dirty" and he points to five

pigs, five horses and five chicks. Then, he adds: “I think each one of you has to clean three animals: one pig, one horse and one chick.” The first farmer says: “Ok, I think he is right, these animals are very dirty” and he cleans the pig, the horse and the chick that the Indian has brought in front of him.” The second farmer says: “Ok, it is my turn now” and he cleans the horse and the chick. Then, the second farmer looks at the pig that the Indian has brought in front of him and says: “Why should I clean the pig? I bet it is gonna get all muddy anyway. I am sorry Indian, but I do not want to clean the pig.” The remaining three farmers look at the animals that the Indian has brought in front of them and start complaining about how useless it is to clean the animals and one of them says: “I am sorry, but we are tired of this. We clean the animals, and as soon as we are finished they get dirty again. We don’t wanna do this!” Then, the Indian says: “Well, let me see if you did what I asked you to do. The Indian sees that the first farmer cleaned what he asked him to. When he gets to the second farmer, he says: “Well, you cleaned the horse and the chick but you did not clean the pig. You have been a bit lazy. Maybe I’ll find something else for you to do!” Then he gets to the last three farmers and says “I am very disappointed, the animals are so dirty! Why didn’t you guys clean them? I think this is not fair. Since you did not want to clean the animals, you should at least clean the barn” and he gives a broom to each one of the three farmers. Then, the Indian considers giving a broom to the farmer who did not clean the pig but decides against it.”

At the end of the story, children were asked to evaluate (9).

- (9) *Ogni contadino che non ha pulito qualche animale ha una scopa.*  
(Italian)  
“Every farmer who didn’t clean some animal has a broom.”

Our interest was whether children could consistently access the isomorphic interpretation paraphrased in (10), which makes sentence (9) true in the context.

- (10) Every farmer who didn’t clean any animal has a broom.

In particular, we wanted to distinguish the interpretation paraphrased in (10) from another logically plausible interpretation in which *some* is interpreted outside the scope of negation and which makes (9) false in the context. This is the non-isomorphic interpretation paraphrased in (11).

- (11) Every farmer for whom there is some animal that he did not clean has a broom.

Given the logical properties of the first argument of the universal quantifier, the isomorphic interpretation of negation and *some* is available. Furthermore, given children's putative preference for surface scope interpretations, the experimental hypothesis was that children would accept the target sentence. This is exactly what happened. Children accepted the target sentence 32 times out of 40 trials (80%). Thus, when the string [*non ... qualche*] ('not ... some') occurs in the first argument of the universal quantifier *every*, children consistently access its isomorphic interpretation.

Even though, our focus is on the relative interpretation indefinites and negation, those elements occur in the first argument of the universal quantifier. Thus, it is useful to discuss the relevance of the findings for previous research on children's understanding of the universal quantifier. Previous research has documented that young children occasionally give non-adult responses to universally quantified sentences. In particular, children have been reported to reject sentences like (12) in a context in which every boy is riding an elephant, but there is also an elephant that is not being ridden by any boy.

- (12) Every boy is riding an elephant.

In brief, children have been argued to demand symmetry between the subject noun phrase and the object noun phrase (see Philip 1995). In recent years, a great deal of work has been devoted to children's non adult responses (see Meroni, Gualmini & Crain 2006 for review). One line of research has argued that children's non-adult responses call for a grammatical explanation (see Philip 1995). Other researchers have challenged this conclusion on empirical and theoretical grounds. Among the empirical arguments against the grammatical account of children's mistakes, Crain et al. (1996) have pointed out that children's non-adult responses only occur in limited circumstances. The present experimental findings confirm this claim. There was no sign of any symmetrical response: the children who participated in our experiment never rejected the target sentence on the grounds that some brooms had not been given to any farmer. Thus, the findings provide us with yet another context in which the so-called symmetrical response does not occur, thereby lending support to the view proposed by Crain et al. (1996).<sup>2</sup>

---

<sup>2</sup> One reviewer argues that the account proposed by Philip (1995) also predicts that children will perform like adults under certain experimental conditions. Our own understanding of Philip's account is different. Specifically, Philip (1995: 48) writes that "the typical acquisition order would be predicted to be: exhaustive interpretation > symmetrical interpretation > adult interpretation." If this is the sequence that children are expected to go through, then we should

Condition II focused on the second argument of the Italian universal quantifier *ogni* ('every'). In particular, we wanted to determine whether children access the non-isomorphic interpretation of negation and the indefinite *qualche* ('some'), when those elements occur in the second argument of the universal quantifier. Thus, the data will allow us to determine if the pattern uncovered by Gualmini (2004) is affected by the presence of a third scope-bearing element.

Ten children were tested in Condition II of the experiment (ages: 4;01 to 5;08 - mean age: 5;00). Here is an illustrative trial.

- (13) "This is a story about three farmers and their boss, the Indian. The Indian says: "Guys, it is time to get to work. I think you should start by cleaning the animals, because they are very dirty" and he points to three pigs, three horses and three chicks. Then, he adds: "I think each one of you has to clean three animals: one pig, one horse and one chick." The farmers get to work, and each farmer cleans the particular horse that the Indian brought in front of him. Then, one of the farmers says: "Ok, I think we are done now!" The Indian says: "I don't think so! Now, you must clean the pigs and the chicks." The farmers get to work again. Each farmer cleans the chick that the Indian brought in front of him and then one of farmers says: "Ok, now we are done!" The Indian protests and reminds them that they are supposed to clean all the animals. The farmers consider cleaning the pigs, but conclude that it would be useless."

Children were asked to evaluate the target sentence in (14).

- (14) *Ogni contadino non ha pulito qualche animale.* (Italian)  
 "Every farmer didn't clean some animal."

It is important to observe that if children can only access the surface scope interpretation of the string [*not ... some N*], they should interpret (14) as in (15) and reject it, on the grounds that every farmer *did* indeed clean some animals.

---

expect children in the first two stages to be incapable of the adult interpretation across all experimental conditions. Furthermore, we should take children's ability to access the adult interpretation on any given task as evidence for the fact that they have left the stage at which only the symmetrical interpretation is available. If we allow more than one reading to be available to the child at any given time, it is difficult to explain how the child could move along the developmental path envisioned by Philip (1995). Even the models of acquisition that grant children access to multiple grammars at the same time demand that the grammar selected by the child at any given point be determined by the probability associated with that grammar (see Yang 2002). There is no reason to expect task demands to determine which grammar the child should access.

- (15) Every farmer didn't clean any animal.

Based on Gualmini (2004) the experimental hypothesis was that children's responses would not be limited to surface scope. Here are the results: children accepted the target sentence 34 times out of 40 trials (85%). Thus, when the surface string [*non ... qualche*] ('not ... some') occurs in the second argument of the universal quantifier and the sentence is used to point out a discrepancy between the expected outcome and the actual outcome, children access its non-isomorphic interpretation.

As the reader may have noticed, in both experimental conditions, the experimental hypothesis was associated with the affirmative answer. This was not simply a matter of choice, however: it was dictated by the entailment relations of the two arguments. In addition to being the only option, the experimental design can be defended on further grounds. The main reason why the response associated with the experimental hypothesis should be a negative answer is that children usually respond affirmatively if they are confused about the experiment (see Grimshaw & Rosen 1990). In the particular case at hand, however, the findings of previous research on the structures under consideration have not conformed to this assumption. As we saw, children have been reported to unexpectedly *reject* some sentences containing negation and the indefinite *some* to a larger extent than adults (see Musolino 1998). The findings documented in the literature seem to demonstrate that it is neither sufficient nor necessary to make a specific interpretation true in the experimental context for children to access that interpretation. Nevertheless, given that the experimental hypothesis was associated with the affirmative answer, we decided to further probe children's interpretations. Upon accepting the puppet's statement, children were asked to point to what made the puppet right. Children's pointing suggested that their response was not simply the result of confusion, but rather came as a result of one scope assignment. For example, in the case of Condition II, children's pointing suggests that their response followed from a non-isomorphic interpretation of the target sentence, as in, for instance, the context depicted above, when children pointed to the animals that the farmer had not cleaned, namely the pigs.

The findings of Condition II support the results documented by Gualmini (2004, 2005). Children consistently access the non-isomorphic interpretation of sentences like (14) as long as the context conveys an expectation that goes unfulfilled. By contrast, the findings are unexplained under Musolino's Observation of Isomorphism.

Before we turn to a discussion of the current view of scope resolution in child language, we would like to address some methodological concerns raised by one reviewer. First, this reviewer claims that the sample size of the experiment is 'pitifully small.' A discussion of the use of statistics for research

in language acquisition is beyond the scope of the present paper. Nevertheless, eyeball statistics suggest that the findings contrast with the picture sketched by previous research. This is most obvious for Condition II. Furthermore, as the reader can calculate, the sample size is indeed large enough to show that children's behavior is significantly different from chance on a binomial test. The second concern offered by the reviewer relates to the lack of adult controls. In our view, a group of adult control is not necessary. The claim under consideration is how *children* resolve scope ambiguities. Comparing children with adults only makes sense if we can assume that they have access to the same range of interpretations. Under that assumption, one can consider whether children and adults resolve the ambiguity in the same way. In the present case, however, previous research demonstrates that children often posit an ambiguity for sentences that are unambiguous for adults. Finally, the reviewer claims that the act-out version of the Truth Value Judgement task introduces unnecessary memory demands. To the best of our knowledge, there is no support for this claim. Furthermore, even if it were true that the act-out version of the Truth Value Judgement task places unnecessary memory demands, these should be assumed to be consistent across studies. As it turns out, we now have a great number of experiments showing that children's behavior can differ across studies. Crucially, all of these experiments make use of the act-out version of the Truth Value Judgement task.

### 3. *Scope Resolution in Child Language: the Current Picture*

The experimental evidence presented in the last section allows us to reaffirm the claim by Gualmini (2004, 2005). The findings that children can access the inverse scope interpretation of sentences containing negation, even though this ability only seems to surface in particular contexts (see also Musolino & Gualmini 2004; Musolino & Lidz 2006). The data reveal that Musolino's observation that 'children's semantic scope is limited to syntactic scope' is refutable (see also Musolino 2006). The next question is why, for any given context, children select the particular interpretation they select. One proposal comes from Musolino and Lidz (2006).

The study by Musolino and Lidz (2006) attempts to preserve the original insight of Musolino (1998), while also accounting for the experimental findings that have been collected since Musolino (1998). In short, Musolino and Lidz (2006) view isomorphism as a default *preference*. According to Musolino and Lidz (2006), isomorphism arises as a default, which can be over-ridden in particular contexts. Musolino and Lidz (2006) claim that when confronted with a scopally ambiguous sentence, the parser first computes the surface scope representation. They argue that adults exhibit a similar preference for isomorphic scope in sentences containing negation and the numeral *two*

(Musolino & Lidz 2003). They then use these findings to argue that children's preference for surface scope is an exaggerated version of adults' preference: "although children's and adults' sentence processing abilities may differ quantitatively, they do not differ qualitatively" (Musolino & Lidz 2003: 287). Their study claims that processing inverse scope is inherently more difficult for both adults and children (independently of the particular mechanism that yields inverse scope). We would like to point out a few shortcomings of that account.

First, the account offered by Musolino and Lidz (2006) is somewhat incomplete. Musolino and Lidz (2006) assume that the context can play a role for children's interpretation of sentences containing negation. However, their account simply acknowledges that there are some constraints on the felicitous use of sentences containing negation, but it does not indicate how the context can make the inverse scope reading of a sentence more prominent. This represents a weakness of their account. Once it is recognized – as Musolino and Lidz (2006) clearly do – that the context plays a role in the interpretation of scopally ambiguous sentences, it is important to explain how this happens. In absence of an explicit proposal, we need to consider the possibility that once the role of context is formalized, we might have a mechanism that makes other factors unnecessary – including the putative preference for surface scope.

Second, the relevance of the evidence presented by Musolino and Lidz (2006) as supporting their claim deserves further scrutiny. As we have said above, Musolino and Lidz (2003) show that, when confronted with a scopally ambiguous sentence in a context that makes both interpretations true, adults tend to select the surface scope interpretation. However, this does not mean that surface scope is the first interpretation to be accessed. In other words, Musolino and Lidz attempt to explain children's (putative) preference for surface scope as resulting from a failure to carry out re-analysis. In order to support this claim, it is not enough to show that adults select surface scope interpretations more often than inverse scope interpretations. What needs to be shown is that even in the cases where a subject ultimately selects the inverse scope interpretation, that subject had initially entertained the surface scope interpretation. To date, no evidence of this kind has been offered. An anonymous reviewer objects to the relevance of this kind of experiment, as children's default preference might be over-ruled too quickly to be registered in processing. If this is the reasoning however, just as a default preference for surface scope could be re-analyzed quickly and be invisible to processing, the same could happen if the parser preferred inverse scope interpretations. Notice that this objection only strengthens the relevance of our comment about Musolino and Lidz's claim: if we have no way of telling whether the earliest interpretation that we can measure is indeed the first interpretation entertained by the parser, the same is true for the *last* interpretation that we can measure, i.e., the one that dictates the subject's response.

Third, Musolino and Lidz's attempt to link children's behavior with sentences containing negation to their behavior with locally ambiguous sentences is problematic. To illustrate, let us briefly review the relevant study by Trueswell, Sekerina, Hill and Logrip (1999). These authors investigated children's interpretation of a (locally) structurally ambiguous sentence like *Put the frog on the napkin into the box*. In this kind of sentence, the Prepositional Phrase (PP) *on the napkin* is locally ambiguous between a modifier to the Noun Phrase (NP) *the frog* and a destination of the putting-event. Trueswell et al. (1999) were interested in determining whether children would interpret the PP *on the napkin* as a modifier when the visual display included a frog on a napkin and a second frog that was not on a napkin. According to Trueswell et al. (1999), the findings of an Act-Out task suggest that (a) children do not make use of contextual information for the resolution of local ambiguities in on-line sentence processing (but see Meroni and Crain (in press) for evidence that this conclusion is unwarranted) and (b) children experience a greater difficulty than adults in revising their initial parsing commitment. It is important to stress that in the context of the Trueswell et al. study, children's difficulty resulted in children's failure. In other words, children did not simply have a hard time revising their parse of the target sentence. On Musolino and Lidz's explanation, children's inability to revise their initial interpretation of a sentence like *Put the frog on the napkin into the box* stands in contrast with children's ability to revise their putative initial interpretation with scopally ambiguous sentences (e.g., in the context used in the experiment by Gualmini (2004, 2005), the context used in Condition II of the present study and the context employed by Musolino and Lidz (2006)). An anonymous reviewer expresses some concerns on the relevance of Trueswell et al.'s study. The reviewer correctly points out how attachment ambiguities differ from scope ambiguities. Furthermore, the reviewer asks for the age of the subjects who participated in the Trueswell et al. study. Two comments are in order. First, the relevance of the Trueswell et al. study was defended by Musolino and Lidz (2006) and Musolino and Lidz (2003). We simply are considering whether the connection is sound. Second, the children who participated in the experiment documented in Trueswell et al. (1999) ranged in age from 4:8 to 5:10. Therefore, children's difficulty with re-analysis seems to persist well into the stage targeted by studies on scope resolution.

Fourth, the account by Musolino and Lidz (2006) cannot explain data from Dutch-speaking children documented by Krämer (2000). Consider the Dutch example in (16).

- (16) *De jongen heeft een vis niet gevangen.* (Dutch)  
 The boy has a fish not caught  
 "There is a fish the boy hasn't caught."



Children's interpretation of sentences like (16) was investigated by Krämer (2000). The experimental results show that 38 Dutch-speaking children from 4;0 to 7;7 rejected (16) as a description of a story in which a boy had caught two fish out of the three fish available in the context, whereas adults always accepted (14). Children, unlike adults, apparently interpreted the indefinite *een vis* ('one fish') in the scope of negation. The data from Dutch-speaking children provide us with strong evidence against the view proposed by Musolino and Lidz (2006).<sup>3</sup> Upon being presented with a sentence that correctly describes the relevant context on its surface scope interpretation, Dutch-speaking children go out of their way and reject the target sentence. In the case of (16), there is no competition between the putative preference for surface scope and the desire to be charitable. Surface scope interpretation, the interpretation that children supposedly prefer, makes the sentence true. According to Musolino and Lidz (2006), there should be no reason for children to abandon the surface scope interpretation. Hence, children should accept (16), contrary to fact.

Let us now turn to an account of the findings that does not face any of the problems faced by Musolino and Lidz (2006). The relevant study is due to Hulse, Hacquard, Fox and Gualmini (2004). These authors developed a new model of scope resolution in child language that makes reference to independently motivated principles of communication. According to this model, which Hulse et al. (2004) call the Question-Answer Requirement (QAR), children select the scope assignment that allows them to address the question under discussion. In turn, according to Hulse et al. (2004), a good answer to a question is a proposition that entails an answer to that question.

On this view, what is relevant in the pizza story used by Gualmini (2004) is the troll's task. At the end of the story, one wants to know if the troll has carried out his task. This amounts to asking the 'yes/no' question in (17).

(17) Did the troll deliver all the pizzas?

Notice that either scope assignment of (18) addresses the question in (17). Thus, either scope assignment is viable as far as the Question-Answer Requirement is concerned, and children can select the interpretation that makes the sentence true.

(18) The troll didn't deliver some pizzas.

By contrast, consider (18).

---

<sup>3</sup> See Hulse, Hacquard, Fox and Gualmini (2004) for data from English sentences such as *Some pizzas were not lost* in the context discovered by Gualmini (2004) showing the same pattern.

(19) The troll didn't lose some pizzas.

In this case, only the surface scope interpretation addresses the question in (17), as shown below.

(20) Question: Did the troll deliver all the pizzas?

Felicitous Answer: Yes, he didn't lose any.

Infelicitous Answer: Yes, there are some pizzas he didn't lose.

Infelicitous Answer: No, there are some pizzas he didn't lose.

Although a full account of how children (or adults) differ in arriving at the question under discussion is still needed, the model proposed by Hulsey et al. (2004) shows that experimental findings can be explained without positing a default preference for surface scope.

One reviewer raises several questions concerning the QAR. First, the reviewer asks how the QAR account extends to sentences containing the universal quantifier. The prediction of the QAR account is that children should access the inverse scope interpretation of any (ambiguous) sentence, as long as that interpretation makes the sentence true and addresses the question under discussion. To illustrate, if the underlying question is *Did every farmer clean every animal?*, both the surface scope and the inverse scope assignment of (4) would address that question. Surface scope however would make the sentence false in the context, so a non-isomorphic interpretation is preferred. Second, the reviewer asks how the QAR account could explain the data from Dutch. Hulsey et al. (2004) claim that if a question is made salient that can be addressed by both scope assignments, then children should make use of the Maxim of Charity, which in turn will lead them to select the wide scope interpretation for the scrambled indefinite. Here is one possibility: the question conveyed by Krämer's story is *Did the boy catch some fish?* which would only be addressed by the narrow scope interpretation of the indefinite. The prediction of the QAR is that the acceptance of the target sentence should increase if the context makes prominent the following question: *Did the boy catch all the fish?* Third, the reviewer asks how the QAR can explain children's development. According to Hulsey et al., the difference between children and adults is due to the following factors: differences in willingness/ability to consider a question different from the one made salient by the context; variations in willingness to allow pragmatic principles to refine the relevant interpretations in order to address the question under consideration; and different sensitivity to the polarity properties of the relevant indefinite.

#### 4. *Conclusion*

We have presented the results of an experiment investigating children's interpretation of the Italian indefinite *qualche* and negation in the two arguments of the universal quantifier. We have found that Italian-speaking children's interpretation of *qualche* in sentences containing negation is not limited to isomorphic interpretations, and we have shown that the presence of a third scope-bearing element does not inhibit the non-isomorphic interpretation. Moreover, we have argued that the account proposed by Musolino and Lidz (2006) exhibits several shortcomings.

#### *References*

- Crain, Stephen, Rosalind Thornton, Carol Boster, Laura Conway, Diane Lillo-Martin and Elaine Woodams. 1996. "Quantification without qualification". *Language Acquisition*, 5. 83-153.
- Crain, Stephen and Rosalind Thornton. 1998. *Investigations in Universal Grammar*. Cambridge (Mass.): MIT Press.
- De Villiers, Jill and Helen Tager Flusberg. 1975. "Some facts one simply cannot deny". *Journal of Child Language*, 2. 279-286.
- Grimshaw, Jane, and Sara T. Rosen. 1990. "Knowledge and Obedience. The developmental status of the binding theory". *Linguistic Inquiry*, 21. 187-222.
- Gualmini, Andrea. 2004. "Some Knowledge Children Don't Lack". *Linguistics*, 42. 957-982.
- . 2005. *The Ups and Downs of Child Language*. New York & London: Routledge.
- Hulsey, Sarah, Valentine Hacquard, Danny Fox & Andrea Gualmini. 2004. "The Question-Answer requirement and scope assignment." *Platos' Problems: Papers in Language Acquisition*, ed. by Aniko Csirmaz, Andrea Gualmini & Andrew Nevins, 71-90. MITWPL, Cambridge (Mass.).
- Krämer, Irene. 2000 *Interpreting Indefinites. An experimental Study of Children's Language comprehension*. PhD Diss. Nijmegen.
- Ladusaw, William. 1979. *Negative Polarity Items as Inherent Scope Relations*. Ph.D. Diss., University of Texas at Austin.
- Meroni, Luisa & Stephen Crain (in press) "How Children Avoid Kindergarten Paths" *The processing and acquisition of reference*, ed. by Edward Gibson & Neal Pearlmuter. Cambridge (Mass.): MIT Press.
- Meroni, Luisa, Andrea Gualmini & Stephen Crain (2006) "Everybody knows," *Semantics in Acquisition*, ed. by Veerle van Geenhoven. 89-114. New York: Springer.

- Musolino, Julien. 1998. *Universal Grammar and the Acquisition of Semantic Knowledge*. Ph.D. Diss., University of Maryland.
- , 2006. "Structure and Meaning in the Acquisition of Scope." *Semantics in Acquisition*, ed. by Veerle van Geenhoven. 141-166. New York: Springer.
- Musolino, Julien, Stephen Crain & Rosalind Thornton. 2000. "Navigating negative quantificational space," *Linguistics*, 38. 1-32.
- Musolino, Julien & Jeff Lidz. 2003. "The Scope of Isomorphism: Turning Adults into Children." *Language Acquisition*, 11. 277-291.
- Musolino, Julien and Andrea Gualmini, 2004. "The Role of Partitivity in Child Language," *Language Acquisition*, 12, 97-107.
- Musolino, Julien & Jeffrey Lidz. 2006. "Why children are not universally successful with quantification" *Linguistics*, 44:4. 817-852.
- Philip, William. 1995. *Event quantification in the acquisition of universal quantification*. Ph.D. Diss., University of Massachusetts.
- Szabolcsi, Anna. 2004. "Positive Polarity – Negative Polarity." *Natural Language and Linguistic Theory*. 22. 409-452.
- Trueswell, John C., Sekerina, Irina, Hill, Nicole M., and Logrip, Marian L. 1999. The kindergarten-path effect: studying on-line sentence processing in young children. *Cognition* 73. 89-134.
- Yang, Charles 2002. *Knowledge and Learning in Natural Language*. Oxford University Press, New York.
- Zamparelli, Roberto 2004. "On singular existential quantifiers in Italian". Ms. University of Bergamo.



**WHEN SCOPE MEETS MODALITY**  
**THE SCOPE OF INDEFINITES IN SUBJUNCTIVE ENVIRONMENTS**

JAVIER GUTIÉRREZ-REXACH  
*The Ohio State University*

In this paper, the claim that subjunctive mood affects the referential possibilities of Spanish indefinite DPs is reexamined. A host of new data is considered with the goal of framing the issue in the context of current debates on the semantics of these terms. It is also shown that purely-semantic accounts cannot explain why relative clauses seem to behave as stronger blocking environments than other structurally-similar domains. The proper explanation lies at the syntax/semantics interface and explores how restrictions on the derivation of relative clauses prevent certain indexing possibilities.

**1. *The scope of indefinites***

Scopal interactions between nominal quantifiers and other quantificational elements (*wh*-expressions, modal operators) have been the focus of numerous studies in the linguistic and philosophical literature. A relative consensus has emerged in recent years on the fact that noun phrases do not behave uniformly with respect to their quantificational properties (Szabolcsi 1997). Indefinites in particular are well-known for their exceptional scopal behavior, as initially observed by Fodor & Sag (1982). These authors assume what can be called an “ambiguity hypothesis” for indefinites, and claim that these terms may have either a quantificational or a referential reading. The distinction between these two readings comes from the fact that indefinites do not seem to obey several restrictions satisfied by standard quantifiers. It is a well-attested fact that scopal relations between quantifiers and operators are restricted by syntactic islands (Lakoff 1970; Rodman 1976), since it can be shown that quantifiers are island-bound (in strong islands, such as complex-NP islands, adjunct islands, or coordinate structures). For example, sentence (1) lacks the interpretation in which the universal quantifier *todo pariente mío de Texas* ‘every relative of mine from Texas’, scopes over the island domain, as illustrated by the contrasting representations in (2):

- (1) *Si todo pariente mío de Texas muere, heredaré una fortuna.*  
 if every relative mine from Texas dies I-will-inherit a fortune  
 “If every relative of mine from Texas dies, I will inherit a fortune.”
- (2) a. [[if every relative of mine from Texas  $x$  [ $x$  dies]], I will inherit a fortune]  
 b. \*every relative of mine from Texas  $x$  [[if  $x$  dies], I will inherit a fortune]

The above logical forms represent the available and non-available readings. In other words, (1) only has the reading where if all of my relatives die I will inherit a fortune (2a), and lacks the reading represented in (2b), namely that with the demise of each one of my relatives I will inherit a different additional fortune. Indefinites differ from standard quantificational expressions in that, in addition to having a quantificational (island-bound) reading, they have an island-escaping interpretation. For example, sentence (3a) may be interpreted as (3b):

- (3) a. *Si un pariente mío de Texas muere, heredaré una fortuna.*  
 if a relative mine from Texas dies I-will-inherit a fortune  
 “If a relative of mine from Texas dies, I will inherit a fortune.”  
 b. There is a relative of mine from Texas  $x$ , s.t. if  $x$  dies I will inherit a fortune.

This fact leads Fodor & Sag to conclude that this type of reading is not quantificational. Rather, it has a ‘referential’ nature (sometimes called ‘specific’); in other words, the indefinite refers to a unique individual. The main problem for the referential/quantificational ambiguity hypothesis is the existence of intermediate readings, where an indefinite has wide scope with respect to one quantificational element and narrow scope with respect to another one. Consider the reading of (4a) paraphrased in (4b).

- (4) a. *Todo el mundo contó varias historias sobre un miembro de la familia.*  
 every the world told several stories about a member of the family  
 “Everyone told several stories about a member of the family.”  
 b. Everyone picked a (possibly different) member of the family and told several stories about him.

The reading (4b) corresponds to the scopal order *todo el mundo* ‘everyone’, *un* ‘a’, *varias* ‘several’. In this intermediate reading, the indefinite lacks maximal scope (i.e. it should be quantificational), but it also occupies a position inside an

island at the surface and takes logical scope over it (i.e. it should be referential). These and related facts have been recently used as arguments for an alternative approach to the semantics of indefinites, according to which they introduce choice functions in the semantic representation (Reinhart 1997; Winter 1997). More empirical evidence in related directions can be found in Ruys (1992), Abusch (1994), Kratzer (1998) and Matthewson (1999). The representation of the wide scope (specific/referential) reading of the indefinite in (5a) using choice functions is (5b).

- (5) a. *Cada estudiante admira a cierto profesor.*  
 each student admires a certain professor  
 “Each student admires a certain professor.”  
 b.  $\exists f[\text{CH}(f) \wedge \forall x [\text{student}(x) \rightarrow \text{admires}(x, f(\text{professor}))]]$

What (5b) states is that there is a choice function  $f$  such that for every student  $x$ ,  $x$  admires  $f(\text{professor})$ , i.e. the professor selected by the choice function  $f$  (technically, the value of the function  $f$  applied to the set denoted by *professor* is the individual selected from that set). The use of choice functions can solve several problems in the semantics of indefinites. Consider now a sentence with a cardinal quantifier expression (*tres familiares míos* ‘three relatives of mine’) occurring inside a conditional antecedent:

- (6) *Si tres familiares míos mueren, heredaré una fortuna.*  
 if three relatives mine die I-will-inherit a fortune  
 “If three relatives of mine die, I will inherit a fortune.”

The representation in (7a) would be the LF of the wide scope reading of the plural indefinite in (6), and the corresponding semantic representation is (7b):

- (7) a. [three relatives]<sub>i</sub>[if  $h_i$  die, I will inherit a fortune]  
 b.  $\exists x[\text{relatives}(x) \wedge \text{die}(x) \rightarrow \text{I will inherit a fortune}]$

Ruys (1992) observes that this reading is not adequate. It would make the sentence true in situations where, if only one of my three relatives dies, I inherit a fortune. Again, the proper meaning of (6) is that there is a group of three relatives of mine such that, if all of them die, I will inherit a fortune. Using choice functions, the proper semantic representation can be derived (Reinhart 1997):

- (8)  $\exists f [\text{CH}(f) \wedge [f(\text{three of my relatives}) \text{ die} \rightarrow \text{I will inherit a fortune}]]$

Choice functions also seem to provide a better understanding of the semantics of intermediate readings. For example, in the intermediate reading of (9),



represented in (10), students vary with every professor under consideration.

- (9) *Cada profesor oyó el rumor de que tres estudiantes (suyos) suspendieron.*  
 each prof. heard the rumor of that three student (of his) failed  
 “Each professor heard the rumor that three of his students failed.”
- (10)  $\exists f[\text{CH}(f) \wedge \forall x[\text{professor}(x) \rightarrow \text{heard the rumor}(x, f_x(\text{three students failed}))]]$

This is consistent with a model of grammar in which indefinites are not subject to QR. Following Reinhart (1997), the emergence of wide-scope, narrow scope or intermediate readings is explained by the differential association of the choice function.<sup>1</sup> In Spanish, there are two indefinite determiners: *un* and *algún*. The determiner *algún* (and its plural variant *algunos*) is a presuppositional, topic-oriented determiner and tends to have systematic wide scope behavior (cf. Gutiérrez-Rexach 2001, 2003; Martí 2005). Thus, in this paper we will restrict our observations to the more flexible non-presuppositional indefinite *un/unos*.

## 2. *Modal anchoring*

If we consider the scope of indefinites in modal contexts, not only dependencies with respect to other quantifiers have to be factored in, but also dependencies in-intension with respect to propositional attitude/intensional verbs and modal operators. These dependencies have been considered as evidence in favor of a theory based on evaluation indices (Farkas 1993, 1996, 1997), where scope relations are reducible to dependency relations between indices. In the following structures, constituents are indexed to the world in which they are evaluated: the real world ( $w_r$ ) or the dream world ( $w_s$ ).

- (11) [<sub>w<sub>r</sub></sub> [<sub>w<sub>r</sub></sub> *Un hombre*] *se fue*]  
 a man REFL left  
 “A man left.”
- (12) a. [<sub>w<sub>r</sub></sub> *Juan soñó*] [<sub>w<sub>s</sub></sub> *que*] [<sub>w<sub>r</sub></sub> *un hombre*] *se fue*]  
 Juan dreamed that a man REFL left  
 “Juan dreamed that a man left.”  
 b. [<sub>w<sub>r</sub></sub> *Juan soñó*] [<sub>w<sub>s</sub></sub> *que*] [<sub>w<sub>s</sub></sub> *un hombre*] *se fue*]

<sup>1</sup> For Reinhart (1997) and Winter (1997) all indefinites introduce choice-function variables, which are existentially closed at different levels, yielding the contrast between ‘wide’ and ‘narrow’ scope interpretations. On the other hand, for Kratzer (1998) and Matthewson (1999), only wide-scope or specific indefinites are associated with choice functions. Following Reinhart and Winter, I will assume that indefinites systematically introduce choice functions.

In (11), the evaluation index of the indefinite and the main predicate is the same. On the other hand, in (12) two different possible worlds have to be considered: the real (actual) world  $w_r$ , in which Juan exists, and the dream worlds associated with the verb *soñar* ‘dream’ (the set  $W_s$ ). The indefinite *un hombre* ‘a man’ and the verb *se fue* ‘left’ can be indexed to the actual world  $w_r$  (12a) or to one of the dream worlds  $w_s$  (12b). Following Beghelli (1998), in what follows world-indexed choice functions will be used, so (11) has the semantic representation (13):

- (13)  $\exists f[\text{CH}(f) \wedge [_{w_r} \text{left} (f_{w_r}(\text{man})) ] ] ]$   
 “There is a ch.funct.  $f$  s.t the man selected by  $f$  in the real world ( $w_r$ ) left.”

The choice function is indexed to the modal anchor  $w_r$ . Thus, the value of the function (the individual chosen from the set denoted by *hombre* ‘man’) is an individual existing in  $w_r$ , in other words, a real individual. On the other hand, the two readings of (12) are represented in (14):

- (14) a.  $\exists f[\text{CH}(f) \wedge [_{w_r} \text{Juan dreamed} [_{w_s} \text{that left} (f_{w_r}(\text{man})) ] ] ] ]$   
 b.  $\exists f[\text{CH}(f) \wedge [_{w_r} \text{Juan dreamed} [_{w_s} \text{that left} (f_{w_s}(\text{man})) ] ] ] ]$

In (14a) *un hombre* ‘a man’ is anchored to the real-world index  $w_r$ . In the alternative reading (14b), *un hombre* depends on the index contributed by the verb *soñar* ‘dream’ (one member of the set of worlds  $W_s$ ), so it denotes a man existing in the dream world (or with a ‘counterpart’ in the dream world, cf. Lewis 1968). As observed by Farkas (1996, 1997), indefinites contrast with quantificational expressions in that the scope (or modal-anchoring) of the former is unrestricted with respect to modal/intensional verbs or operators. On the other hand, universal quantifiers cannot scope (covertly) over modal verbs. For example, sentence (15) is not ambiguous.

- (15) *Es posible que todo candidato ganara las elecciones del 2004.*  
 is possible that every candidate won[SUBJ] the elections of-the 2004  
 “It is possible that every candidate won the 2004 elections.”

The only reading available is the contradictory one in which the universal quantifier has narrow scope, i.e. in an epistemically-accessible world all the candidates won. The reading consistent with the actual world, in which only one candidate won, is expressed by (16).

- (16) *A todo candidato le fue posible ganar las elecciones del 2004*  
 to every candidate to him was possible win the elections of-the 2004  
 “It was possible for every candidate to win the 2004 election.”

In this sentence, the scopal order of operators matches their overt linear order and, unlike (15), it can be continued with a statement such as ... *pero X acabó imponiéndose*. ‘... but X won.’

Intermediate readings also arise in modal dependency contexts. Consider (17):

- (17) *Cada profesor soñó que un alumno suyo había ganado el premio Nobel*  
 each professor dreamed that a student of-his had won the prize Nobel  
 “Every professor had the dream that a student of his had won the Nobel Prize.”

The above sentence has two readings, represented in (18):

- (18) a.  $\exists f[\text{CH}(f) \wedge \forall x[_{wr} \text{prof}(x) \rightarrow x \text{ dreamed } [_{ws} f_{x,wr}(\text{student of } x) \text{ won NP} ] ]]$   
 “There is a ch.function  $f$  s.t. each professor  $x$  dreamed that a student of  $x$  selected by  $f$  in  $w_r$  (the real/utterance world) had won the Nobel prize.”
- b.  $\exists f[\text{CH}(f) \wedge \forall x[_{wr} \text{prof}(x) \rightarrow x \text{ dreamed } [_{ws} f_{x,ws}(\text{student of } x) \text{ won NP} ] ]]$   
 “There is a ch.function  $f$  s.t. each professor  $x$  dreamed that a student of  $x$  selected by  $f$  in  $w_s$  (a dream world) had won the Nobel prize.”

In (18a), the student in the professor’s dream exists in the actual world (the indefinite is anchored to  $w_r$ ). In (18b), the student exists only in the professor’s dream (the indefinite is anchored to a world  $w_s$  in the set of worlds associated with the dream  $W_s$ ).

### 3. *Subjunctive mood*

#### 3.1 *Mood and structural domains*

The relevance of subjunctive mood in the interpretation of indefinites, more concretely in the emergence of non-specific readings, has been highlighted in numerous studies from Rivero (1979) to Quer (1998). The critical observation is that subjunctive mood triggers referential opacity or, in other terms, the obligatory non-specific reading of the modified indefinite. Technically, certain modal-anchoring effects become blocked in the presence of the subjunctive. There are two structural contexts that will be shown to have an impact on this opacity effect: When indefinites are modified by subjunctive relative clauses, and when they occur inside a subjunctive clause. Let us consider the case of subjunctive modification first, as illustrated in (19):

- (19) a. *Luisa espera a un reportero que la entrevistará. Su nombre es Juan*  
 Luisa waits ANIM a reporter that her will-interv.[IND] his name is Juan  
 “Luisa is waiting for a reporter who will interview her. His name is Juan”
- b. *Luisa espera a un reportero que la entreviste. ??Su nombre es Juan*  
 Luisa waits ANIM a reporter that her interv.[SUBJ] his name is Juan  
 Juan  
 “Luisa is waiting for a reporter who would interview her.??His name is Juan.”

Indicative clauses, such as (19a), determine the referential or specific interpretation of the indefinite (matrix anchoring). The subjunctive clause in (19b) is incompatible with the referential interpretation of the indefinite, invalidating a continuation such as *His name is...* where the specific individual referred to by the indefinite is identified. Subjunctive mood is also incompatible with adjectives like *determinado* “certain”, which also determine or coerce the specific reading of the indefinite (Quer 1998).

- (20) \**Luisa espera a un determinado reportero que la entreviste.*  
 Luisa waits ANIM a certain reporter that her interview [SUBJ]  
 “Luisa is waiting for a certain reporter who will interview her.”

Let us consider now indefinites in subjunctive clauses selected as complements of propositional attitude verbs. In this case, the non-specific reading is not always obligatory. The content of the propositional-attitude verb occurring in the matrix clause matters, as shown by Beghelli (1998): Indefinites selected by mandatory verbs (*ordenar* ‘order’, *mandar* ‘command’, *imponer* ‘impose’) and certain ‘wish’-verbs (*querer* ‘wish’, *esperar* ‘hope’, *añorar* ‘miss’, etc.) do not block the specific reading of the indefinite:

- (21) *El coronel ordenó que un cabo sea condecorado, i.e., López.*  
 the colonel ordered that a corporal is[SUBJ] rewarded, i.e. López  
 “The colonel ordered that a corporal be awarded a medal, i.e. López.”

### 3.2 Subjunctive mood and islandhood effects

When indefinites are modified by subjunctive relative clauses, this structural domain becomes an island for another indefinite occurring inside it. In (22a), the embedded indefinite cannot scope over the relative clause (satisfying the

complex-NP constraint). This contrasts with (22b), where the modifying relative clause is in the indicative and the embedded indefinite *un profesor* ‘a professor’ can ‘escape’ the island and receive a specific/wide scope reading.

- (22) a. *Luisa quería un libro que perteneciera a un profesor, (??ie, Luisa wanted a book that belonged[SUBJ] to a professor, (??ie, a Juan to Juan)*  
 “Luisa wanted a book that belonged to a professor, (??ie, to Juan).”  
 b. *Luisa quería un libro que perteneció a un profesor, ie, a Luisa wanted a book that belonged[IND] to a professor, ie, a Juan.*  
 Juan  
 “Luisa wanted a book that belonged to a professor, (ie, to Juan).”

If the determiner heading the complex DP is a definite, the wide scope (referential/specific) reading of the indefinite embedded in a subjunctive clause is still blocked.<sup>2</sup> Compare (23) and (24) in this respect:

- (23) *Luisa rechazará el libro que tenga/tenía un párrafo incompleto.*  
 Luisa will-reject the book that has[SUBJ]/[IND] a paragraph incomplete  
 “Luisa will reject any book with an incomplete paragraph.”  
 (24) *Luisa rechazará el libro que tenga cualquier párrafo incompleto.*  
 Luisa will-reject the book that has[SUBJ] any paragraph incomplete  
 “Luisa will reject the book with any incomplete paragraph.”

The subjunctive variant of (23) is equivalent to (24). Both the subjunctive and the free-choice determiner *cualquier* “any” coerce the non-specific reading of *párrafo* ‘paragraph’ (any incomplete paragraph will cause Luisa’s rejection of the book).

When an indefinite occurs inside a subjunctive complement clause, it can escape it when the relevant environment is an instance of a complex-NP island configuration. This is the case both with nouns that obligatorily select the subjunctive (*propuesta* ‘proposal’, *posibilidad* ‘possibility’) and those that only do so optionally (*hecho* ‘fact’):

---

<sup>2</sup> The same generalization applies to determiners belonging to other semantic classes, such as universal, proportional or partitive determiners. What this seems to indicate is that the scopal behavior of indefinites is not determined by the properties of the c-commanding quantifiers.

- (25) *El presidente rechazará la propuesta de que un ministro sea expulsado, (es decir, Juan López).*  
 the president will-reject the proposal of that a cabinet-member be expelled, (is say, Juan López)  
 “The president will reject the proposal that a cabinet member be expelled (namely, Juan López).”

Indefinites also escape complex-NP islands headed by world-creating nouns (Farkas 1992), such as *sueño* ‘dream’, *ilusión* ‘illusion’, *espejismo* ‘mirage’, etc. These nouns normally refer to a set of worlds different from the actual world:

- (26) *Juan se arrepentirá de la fantasía de que cierto/un vecino le agreda.*  
 Juan SE will-regret of the fantasy of that a-certain/a neighbor to-him attack  
 “Juan will regret the fantasy that a certain/a neighbor attacked him.”

This is also the case when the matrix DP is headed by an indefinite. For example, (27) has an interpretation in which the indefinite has scope over the noun *posibilidad* ‘possibility’ and its modal index is anchored to the actual world. This is what makes a continuation such as *His name is Luis Sánchez* possible.

- (27) *Hay una posibilidad de que un interventor sea presidente.*  
 there-is a possibility of that an inspector become[SUBJ] president  
 “There is a possibility that an inspector be appointed president.”

Considering now the issue of intermediate readings, as was previously described, an indefinite may take intermediate scope with respect to a quantificational matrix element. Subjunctive mood does not block these readings:

- (28) *Todo profesor sospecha del rumor de que un estudiante haya suspendido*  
 every professor suspects of-the rumor of that a student has[SUBJ] failed  
 “Every professor suspects the rumor that a student of his has failed.”

Note that when world-creating nouns are modified by a relative clause in the subjunctive, an indefinite is not allowed to scope over the relative clause. Compare (29a), where the indefinite can be anchored to the actual world  $w_r$ , with (29b), where *un policía* ‘a policeman’ is anchored to one of the possible worlds determined by the dream.

- (29) a. *Juan se tomó a broma el sueño en que un policía lo asesinaba.*  
 Juan REFL took to joke the dream in that a policeman him killed[IND]  
 “Juan took lightly the dream in which a policeman killed him.”
- b. *Juan se traumatizaría por el sueño en que un policía lo asesinase.*  
 Juan se traumatized by the dream in that a policeman him killed[SUBJ]  
 “Juan would be traumatized by the dream in which a policeman killed him.”

Additionally, indefinites in adjunct islands can uniformly scope over them, independently of mood choice (indicative, subjunctive), as the semantic representations in (31) of the sentences in (30) show:

- (30) a. *Si un pariente mío muriera, me alegraría.*  
 if a relative mine die[SUBJ], REFL would-be-happy  
 “If a relative of mine would die, I would be happy.”
- b. *Juan ha comprado un juguete para que un hijo suyo se entretenga*  
 Juan has bought a toy to that a son of-his REFL entertain[SUBJ]  
 “Juan has bought a toy to entertain a son of his.”
- (31) a. There is a relative of mine  $x$  such that if  $x$  died I would be happy.  
 b. There is a son of Juan  $x$  such that Juan has bought a toy to entertain  $x$ .

From the empirical evidence that we have just considered, two main issues emerge: (1) Why does subjunctive mood condition scope and modal anchoring possibilities?; and (2) Why are relative clauses different in blocking wide scope (referential) readings and not allowing the island-escaping behavior of indefinites? These issues are somewhat problematic for strictly semantic (non-structural) explanations. For example, for Farkas (1992) intensional verbs would block the anchoring of the indefinite to the actual world, eliminating (33b) as a potential representation for (32).

- (32) *La baronesa necesita un sirviente que sea inglés.*  
 the baronesa needs a servant that is[SUBJ] English  
 “The baronesa needs a servant who is of English origin.”
- (33) a.  $\exists f[\text{CH}(f) \wedge [\text{wr the baronesa needs } [\text{wn } f_{\text{wn}}(\text{servant who is English}) ] ] ]$   
 b.  $\exists f[\text{CH}(f) \wedge [\text{wr the baronesa needs } [\text{wn } f_{\text{wr}}(\text{servant who is English}) ] ] ]$

Nevertheless, this proposal cannot capture the asymmetries described in this

section. For another relatively recent semantic proposal (Giannakidou 1998), mood selection in the modal environment associated with a non-veridical verb or operator determines the frame in which the descriptive content of a relative clause has to be evaluated (cf. also Quer 1998). This account would also leave the structural facts presented above unexplained.

#### 4. *The subjunctive as a modal polarity item*

In order to provide an answer to the empirical problem introduced in the preceding section, we will adopt the proposal by Brugger & D'Angelo (1995) and Beghelli (1998) that subjunctive mood should be treated as a (modal) polarity item (cf. also Bosque 1998 on modal polarity in general).<sup>3</sup> Let us consider some evidence in this direction. Kadmon & Ladman (1993) claimed that the difference between the negative polarity and free-choice readings of *any/ningún* 'no' is explained by additional features related to widening and strengthening (cf. Chierchia 2005 for a reconsideration of these properties). For example, the presence of *ninguna* 'no-fem.sg.' in *No me gusta ninguna (clase de) patatas* 'I don't like any potatoes.' widens /strengthens the statement *No me gustan las patatas* 'I don't like potatoes.' Subjunctive mood exhibits similar properties. With respect to widening, if we compare the sentences in (34), it is apparent that they are similar in meaning.

- (34) a. *Me gustan los libros de terror.*  
REFL like the books of terror  
"I like horror books."  
b. *Me gusta(n) cualquier libro de terror/ los libros que sean de terror*  
REFL like any book of terror/ the books that are[SUBJ] of terror  
"I like any horror book/ the books that belong to the horror genre."

Sentence (34a) is a generalization on horror books but not a universal statement, since it allows exceptions such as *...pero no los escritos por Stephen King* '...but not those written by Stephen King.' On the other hand, the first variant of (34b) is a stronger generalization with no exceptions. The quantificational strength of *cualquier* 'any' is universal, not generic. Similarly, the effect of subjunctive mood in the second variant of (34b) is to widen the scope of the generalization (i.e., it admits no exceptions).<sup>4</sup>

<sup>3</sup> In the literature, a distinction is made (Stowell 1993) between intensional subjunctives (triggered by intensional predicates and operators) and polarity subjunctives (triggered by operators such as negation). It is a matter of debate whether the notion of modal polarity could be generalized to the intensional subjunctive (cf. Quer 1998).

<sup>4</sup> A reviewer suggests comparing the widening effect of the subjunctive with the analysis of German *irgendein* and Spanish *alguno* in Kratzer & Shimoyama (2002) and Alonso-Ovalle & Menéndez-Benito (2003), which explicitly use domain widening to derive their properties. These



The strengthening effect of the subjunctive (only observed when the subjunctive is under negation) is also apparent in sentences such as (35), where the indicative counterpart refers to a specific individual and the subjunctive variant strengthens or extends the scope of the negative statement to any individual who is a linguistics professor.

- (35) *No he visto a un profesor que enseña / enseñe lingüística*  
 not have-I seen ANIM a professor that teaches[IND]/teaches[SUBJ]  
 linguistics  
 “I have not seen a professor who teaches linguistics.”

Finally, note that an NPI such as *alguno* ‘any’ cannot be licensed by non-local (matrix) negation, in an indicative environment, whereas subjunctive mood seems to act as a licenser:

- (36) *No conozco a persona que \*tiene/tenga interés alguno en eso.*  
 not know ANIM person that has[IND]/[SUBJ] interest any in that  
 “I don=t know a person who has any interest in that.”

Research on the syntax of polarity items during the nineties hypothesized that polarity relations derive from spec-head agreement relations at LF (cf. Bosque’s (1994) treatment of NPI licensing, and Sportiche (1998) for a more general perspective).<sup>5</sup> In this vein, it follows that the subjunctive feature encoded in the verb has to be checked against a modal operator under ModP (a similar hypothesis is proposed by Giorgi and Pianesi 1997 and Manzini 2000).<sup>6</sup> Thus, we can formulate the following Modal Agreement Hypothesis: The modal feature [+subj] in a relative clause is attracted by a modal operator and, in turn, it triggers agreement of the modal index of the indefinite. Agreement can be understood here as matching or identity in feature valuation, as in recent versions of the Minimalist Program (Chomsky 2001; Lasnik, Uriagereka & Boeckx 2005). The relevant configuration at LF is the following one:

---

authors argue that domain widening can be used for other effects that strengthening, such as avoidance of a false exhaustivity inference. The problem is that domain widening will not lead to strengthening in an upward entailing environment such as modal/subjunctive ones.

<sup>5</sup> On the other hand, see Szabolcsi (2004) for a critical analysis of the spec-head agreement position. It runs into problems with the observation that interveners for NPI licensing are also interveners for PPI anti-licensing.

<sup>6</sup> The discussion of whether there is only one ModP, several modal projections -as defended by Cinque (1999)-, or if modal features are checked along others under a ‘syncretic’ category -as argued by Giorgi & Pianesi (1997)- goes beyond the scope of this paper. Similarly, we are neutral with respect to minimalist implementations of spec-head agreement (whether it involves actual feature movement or just the application of the Agree operation).

(37)  $\text{Mod}_\alpha [\dots V[\text{SUBJ}]_\alpha \dots \text{INDEF}_\alpha \dots ]$ .

Evidence for modal polarity licensing at LF was provided by Uribe-Echebarría (1994), who discussed the English contrast in (38). We will focus on the Spanish contrast in (39), in which the presence of the subjunctive brings in similar properties.

- (38) a. That anybody would leave the company wasn't mentioned in the meeting.  
 b. \*That anybody will leave the company wasn't mentioned in the meeting.

(39) *Que el jefe tuviera/\*tendrá que despedir a nadie no fue mencionado.*  
 that the boss had[SUBJ]/will-have-to that fire nobody not was mentioned  
 "That the boss had/will have to fire anybody was not mentioned."

As is well-known, it has been argued that the negative words *anybody* and (object) *nadie* 'nobody' require a c-commanding negation at Spell-Out (Laka 1990), as the ungrammaticality of (40) shows:

(40) \**La compañía tuvo que despedir a nadie.*  
 the company had that fire ANIM nobody  
 "The company had to fire anybody."

In this respect, all the sentences in (38) and (39) should be ungrammatical. Nevertheless, the contrasts are due to the nature of the modal auxiliary: *would* vs. *will* (Eng.) and subjunctive vs. indicative (Sp.). Ogihara (1989) claims that *would* has to be in the scope of [+past] tense of the matrix clause at LF whereas *will* has to satisfy the opposite requirement (not in the scope of [+past] tense of the matrix clause). The temporal requirement on *will* prevents the reconstruction of the CP as the complement of (*it*) *wasn't mentioned at the meeting*. Thus, *anybody* is in a position outside the scope of negation and the sentence becomes ungrammatical. In (38b), *would* is not subject to an anti-reconstruction requirement, and the NPI ends up in the scope of matrix negation. In Spanish, the presence of the future form *tendrá* 'will have to' prevents the reconstruction of the CP as complement of *fue mencionado* 'was mentioned', so *nadie* 'nobody' is not in the scope of negation. Following Ogihara's and Uribe-Etxebarria's logic, a subjunctive CP (or, more likely, just its modal feature) has to raise in order to check the modal feature of the verb. Nevertheless, the ulterior reconstruction of this feature/CP to a position where *nadie* 'nobody' is c-commanded by negation is not blocked:

(41)  $t_{\text{CP}} \text{ no fue mencionado } [_{\text{CP}} \text{ que el jefe tuviera que despedir a nadie }]$

### 5. *Derivational restrictions on relative clauses*

Let us go back to our open problem: Why does subjunctive mood block the wide scope/specific reading of indefinites only in relative clauses, given that the modal anchoring of the descriptive content of an indefinite is unrestricted? The proposal that will be defended here is that there are certain derivational conditions on relative clauses that block modal anchoring.

Within the raising analysis of relative clauses, the head noun originates in a clause-internal position and raises to a higher position in the matrix DP (Vergnaud 1974; Kayne 1994; Bianchi 1999). Recall that our proposed treatment of the subjunctive as a modal ‘polarity’ element requires that it trigger agreement or identity of valuation between the modal indices in its scope. For example, the initial configuration for (42a) would be (42b).

- (42) a. *La baronesa necesita un sirviente que sea inglés.*  
 the baroness needs a servant that is[SUBJ] English  
 “The baroness needs a servant who is of English origin.”
- b. *La baronesa necesita un que sea [SC sirviente inglés]*  
 the baroness needs a that is[SUBJ] servant English

The nominal restriction *sirviente* “servant” is the subject of the postcopular adjectival small clause (SC = AP) (cf. Moro 1997). It is in the scope of the subjunctive, and inherits the same modal index. After reconstruction of the nominal head to its base position, the relevant semantic representation is:

- (43)  $\exists f[\text{CH}(f) \wedge [_{w_r} \text{the baron. needs } [_{w_n} \text{ a } t_i \text{ that is[SUBJ]} f_{w_n}(\text{servant}_i \text{ English})]]]$

Co-valuation or “agreement” between the modal index of the subjunctive and the indefinite at LF determines that the individual picked by the choice function is in the world  $w_n$ , which is a member of the worlds associated with the intensional verb *necesitar* “need” (the set  $W_n$ ).

- (44) ... *necesita* ...  $[_{w_n} \text{ V}_{\text{subj}=w_n} \dots f_{w_n=\text{subj}}(\dots) \dots ] \dots$

Consequently, a relative clause becomes a Amodal island@ in the sense that the syntactic derivation must preserve co-valuation between modal indices and the indefinite becomes ‘trapped’ inside the relative construction (cf. Drubig 2001; and von Stechow & Iatridou 2003 for a similar generalization stemming from epistemic modals). In (44), the modal index  $w_n$  is determined by the verb *necesitar* ‘need’. On the other hand, transparent or extensional verbs do not impose modal agreement and do not block the modal anchoring of the indefinite, so this term may be anchored to the actual world or to higher indices.

When indefinites occur inside a modifying subjunctive relative clause, the indefinite is obligatorily non-specific.

- (45) *No hablaré con el hombre que lleve un traje gris.*  
 not will-talk-I with the man that wears[SUBJ] a suit grey  
 “I will not talk to the man wearing a grey suit.”

Modal agreement with the subjunctive, after reconstruction, determines that the index of the descriptive content of the indefinite’s restriction is anchored to the same world as the subjunctive ( $w_{subj}$ ):

- (46)  $\exists f[\text{CH}(f) \wedge_{[wr]} \text{I will not talk to the man wearing } [w_{subj} f_{w_{subj}}(\text{grey suit})]]$

Going back to example (22a), repeated below, we see that in this case both indefinites (*libro* ‘book’ and *profesor* ‘professor’) are interpreted non-specifically:

- (22a) *Luisa quería un libro que perteneciera a un profesor.*  
 Luisa wanted a book that belonged[SUBJ] to a professor  
 “Luisa wanted a book that belonged to a professor.”

The first indefinite is reconstructed inside the subjunctive clause and the second one is also trapped inside the ‘subjunctive relative island’.<sup>7</sup> On the other hand, sentential complements of a noun do not act as modal islands. In other words, modal-index assignment to the indefinite is not blocked by the subjunctive environment:

- (47) *No he oído el rumor de que un trabajador tuyo haya sido despedido*  
 not have-I heard the rumor of that a worker yours has[SUBJ] been fired  
 “I have not heard the rumor that a student of yours has been fired.”

In (47), the indefinite may take wide or narrow scope with respect to the verb: It may be anchored to the actual world ( $w_r$ ) or to the modal index associated to the world-creating predicate/noun *rumor* ‘rumor’ ( $w_{rum}$ ):

- (48) a.  $\exists f[\text{CH}(f) \wedge_{[wr]} \text{I have not heard the rumor } [w_{rum} \text{ that } f_{wr}(\text{worker of yours}) \text{ has[SUBJ] been fired}]]]$   
 b.  $\exists f[\text{CH}(f) \wedge_{[wr]} \text{I have not heard the rumor } [w_{rum} \text{ that } f_{w_{rum}}(\text{worker of yours}) \text{ has[SUBJ] been fired}]]]$

<sup>7</sup> There are no subject/object or argument/adjunct asymmetries with respect to this property. The non-specific interpretation of the indefinite is obligatory when it occurs inside a relative clause, independently of its syntactic position.

The modal index of the subjunctive in (48b) is determined by *rumor*, given that the modal feature of the subjunctive has to be checked by a modal operator and this triggers identity of feature valuation. Given that reconstruction is not forced, the indefinite *un trabajador tuyo* ‘a worker of yours’ is not within the scope of the subjunctive, so its modal index is determined according to Farkas’ generalization (wide, narrow and intermediate scope readings are possible). When an indefinite occurs inside a strong island (not inside a relative clause) and it is within the surface scope of subjunctive mood, it still preserves its modal-anchoring freedom. Consider (49):

- (49) *No he oído el rumor de que Juan haya robado un libro tuyo.*  
 not have-I heard the rumor of that Juan has[SUBJ] stolen a book yours  
 “I have not heard the rumor that Juan has stolen a book of yours.”

If additional structural factors were not into play, the indefinite *un libro tuyo* ‘a book of yours’ should inherit its modal index from the subjunctive, making the wide-scope reading impossible (preventing anchoring to the actual world). Nevertheless, assuming that modal indexing takes place at LF, the data shows that only the subjunctive operator has to inherit its modal index from *rumor* (a world index in the set  $W_{rum}$ ). The modal index of the indefinite is determined independently by the modal index  $w_x$  of the choice function:

- (50) CH(f)<sub>[wr]</sub> I haven’t heard the rumor [<sub>[w<sub>rum</sub>]</sub> that J.has stolen f<sub>wx</sub>(book of y.)]]]

The main difference with the representation of subjunctive relative clauses is that, as we argued above, in this latter case the subjunctive determines the index of the descriptive content of the indefinite no matter whether this element is within its scope originally or after the reconstruction operation has applied. In (50) on the other hand, the index of the descriptive content of the indefinite may differ from the one associated with the subjunctive. Summarizing, there is a significant difference between relative clauses and the rest of the environments that qualify as structural islands (but do not behave as modal islands). Only subjunctive relative clauses force the external indefinite head to remain under the scope of the subjunctive after reconstruction and prevent the external anchoring of those indefinites occurring inside it. Clearly, we cannot explain this property by extending the reconstruction hypothesis, since the indefinite in (50) is not in a reconstructed position.

In section 4, we have stated a modal agreement mechanism that triggers identity of valuation in the subjunctive index, the indefinites and the modal operator licensing the subjunctive. The critical question is why other environments do not trigger obligatory modal agreement. Let us continue pursuing the connection between this asymmetry and the specific properties of the raising

/reconstruction of the head noun in relative clauses. In Gutiérrez-Rexach (1999) it is argued that, in certain constructions, raising of the noun is triggered to check agreement features related to degree properties and to activate the wide scope of a degree operator. Recently, Yalcin (2006) and Papafragou (2006) have proposed analyses of modal operators based on exploiting several denotational properties that are similar to those of degree expressions. If we assume that noun raising and checking of a degree/modal feature trigger obligatory wide scope of the associated operator (and the corresponding index), we can conclude that all other quantificational elements will be in the scopal domain of this operator. If the modal agreement principle has applied, this requirement will force the obligatory non-specific or dependent reading of the indefinites. On the other hand, in sentential complements of nouns and other structures, there is no raising process that checks agreement features and activates the wide scope of the modal or degree element. Thus, indefinites within these environments (or modified by them) are free to anchor to other available indices or to the real-world index.

## 6. Conclusion

In this paper, new data on the scopal behavior of indefinites in subjunctive environments has been examined. Although results are still preliminary, the evidence seems to point in the direction of a conspiracy of syntactic and semantic factors in the determination of the relevant interpretive patterns. More concretely, the attested scopal freedom of indefinites is constrained by structural factors related to derivational reconstruction and degree agreement in relative clauses. This interplay allows us to give a simpler and more elegant explanation of an apparently unexpected asymmetry.

## References

- Abusch, Dorit. 1994. "The Scope of Indefinites". *Natural Language Semantics* 2. 83-135.
- Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2003. "Some Epistemic Indefinites". *Proceedings NELS*, ed. by Makoto Kadowaki, 1-12. Amherst: UMass.
- Beghelli, Filippo. 1998. "Mood and the Interpretation of Indefinites". *The Linguistic Review* 15. 277-300.
- Bianchi, Valentina. 1999. *Consequences of Antisymmetry*. Berlin: Mouton de Gruyter.
- Bosque, Ignacio. 1994. "La negación y el PCV". *Gramática del español*, 67-201.
- . 1998. "Sobre la gramática de los contextos modales. Entornos modales y expresiones inespecíficas en española. *Actas del XI Congreso de Alfal*.
- Brugger, Gerhard & Mario D'Angelo. 1995. "Movement at LF Triggered by Mood and Tense". *Folia Linguistica* 29, 195-221.
- Chierchia, Gennaro. 2005. "Broaden Your Views. Implicatures of Domain

- Widening and the ‘Logicality’ of Language”. Ms.
- Chomsky, Noam. 2001. “Derivation by Phase”. *K. Hale: A Life in Language*, ed. by M. Kenstowicz, 1-52. Cambridge (Mass.): MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and Functional Heads. A Cross-Linguistic Perspective*. Oxford: Oxford University Press.
- Drubig, H. B. 2001. “On the syntactic form of epistemic modality”. Ms.
- Farkas, Donka. 1992. “Two Types of World-Creating Predicates”. *The Joy of Grammar* ed. by Diana Brentari, 35-63. Amsterdam & Philadelphia: John Benjamins.
- 1993. *Modal Anchoring and NP Scope*. (= Linguistics Research Center 93-08). Santa Cruz: University of California.
- 1996. *Dependent Indefinites*. (= Linguistics Research Center 96-04). Santa Cruz: University of California.
- 1997. “Evaluation Indices and Scope”. *Ways of Scope Taking* ed. by Anna Szabolcsi, 183-215. Dordrecht: Kluwer.
- Fintel, Kai von & Sabine Iatridou. 2003. “Epistemic containment”. *Linguistic Inquiry*, 34. 73-198.
- Fodor, Janet & Ivan Sag. 1982. “Referential and Quantificational Indefinites”. *Linguistics and Philosophy* 5. 355-398.
- Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)-Veridical Dependency*. (Linguistik aktuell; 23). Amsterdam & Philadelphia: John Benjamins.
- Giorgi, Alessandra & Fabio Pianesi. 1997. *Tense and Aspect. From Semantics to Morphosyntax*. Oxford: Oxford University Press.
- Gutiérrez-Rexach, Javier. 1999. “The structure and interpretation of Spanish Degree Neuter Constructions”. *Lingua* 109. 35-63
- 2001. “The Semantics of Spanish Plural Existential Determiners and the Dynamics of Judgment Types”. *Probus* 13. 113-154.
- 2003. *La semántica de los indefinidos*. Madrid: Visor Libros.
- Kadmon, Nirit & Fred Landman. 1993. “Any”. *Linguistics & Philosophy* 16. 353-442.
- Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge (Mass.): MIT Press.
- Kratzer, Angelika. 1998. “Scope or Pseudo-Scope? Are There Wide-Scope Indefinites?”. *Events and Grammar* ed. by Susan Rothstein, 163-196. Dordrecht: Kluwer.
- Kratzer, Angelika & Junko Shimoyama. 2002. “Indeterminate Pronouns: The View from Japanese”. *Proceedings of the Third Tokyo Conference on Psycholinguistics* ed. by Yokio Utso, 1-25. Tokyo: Hituzi Syobo.
- Laka, Itziar. 1990. *Negation in Syntax. On the Nature of Functional Categories and Projections*. PhD diss, MIT.
- Lakoff, George. 1970. “Repartee”. *Foundations of Language* 6. 389-422.

- Lasnik, Howard, Juan Uriagereka & Cedric Boeckx. 2005. *A Course in Minimalist Syntax*. Oxford: Blackwell.
- Lewis, David. 1968. "Counterpart Theory and Quantified Modal Logic". *Journal of Philosophy* 65. 113-126.
- Manzini, Rita. 2000. "Sentential complementation: The subjunctive". *Lexical Specification and Insertion*, ed. by P. Coopmans, 241-268. Amsterdam & Philadelphia, John Benjamins.
- Marti, Luisa. 2005. "Spanish *Algunos* and the Syntactic Sensitivity of Indefinites". Ms.
- Matthewson, Lisa. 1999. "On the Interpretation of Wide-Scope Indefinites". *Natural Language Semantics* 7. 79-134.
- Moro, Andrea. 1997. *The Raising of Predicates*. Cambridge: Cambridge University Press.
- Ogihara, T. 1989. *Temporal Reference in English and Japanese*. PhD diss, UTexas.
- Papafragou, Anna. 2006. "Epistemic Modality and Truth Conditions". *Lingua* 116. 1688-1702.
- Quer, Josep. 1998. *Mood at the Interface*. PhD diss, Utrecht University.
- Reinhart, Tanya. 1997. "Quantifier Scope: How Labor is Divided between QR and Choice Functions". *Linguistics and Philosophy* 20. 335-397.
- Rivero, Maria L. 1979. "Referencia y especificidad." *Estudios de Gramática Generativa del Español*, 123-161. Madrid: Cátedra.
- Rodman, Robert. 1976. "Scope Phenomena, Movement Transformations, and Relative Clauses". *Montague Grammar*, 165-176. New York: Academic Press.
- Ruys, Eddy. 1992. *The Scope of Indefinites*. PhD Diss., Utrecht University
- Sportiche, Dominique. 1998. *Partitions and Atoms of Clause Structure*, London & New York: Routledge.
- Stowell, Tim. 1993. "Syntax of Tense". Ms. UCLA.
- Szabolcsi, Anna. 1997. *Ways of Scope Taking*. Dordrecht: Kluwer.
- Szabolcsi, Anna. 2004. "Positive Polarity-Negative Polarity". *Natural Language & Linguistic Theory* 22. 409-452.
- Uribe-Etxebarria, Miriam. 1994. *Interface Licensing Conditions on NPIs: A Theory of Polarity and Tense Interactions*. PhD Diss., UConn.
- Vergnaud, Jean R. 1974. *French Relative Clauses*. PhD Diss., MIT.
- Winter, Yoad. 1997. "Choice Functions and the Scopal Semantics of Indefinites". *Linguistics and Philosophy* 20. 399-467.
- Yalcin, Seth. 2006. "A Paradox of Epistemic Modals". Talk at *Sinn Und Bedeutung* 11. Barcelona.





# LISTEN TO THE SOUND OF SALIENCE MULTICHANNEL SYNTAX OF Q PARTICLES\*

MÉLANIE JOUITTEAU  
*University of Leiden*

I claim that the linguistic message that realizes syntax is multichannel. The syntax-PF interface is the interface of syntax with all the sensorimotor systems available to humans, including, for oral languages, minimal vocalic productions, intonation, hand movement and body gestures. I show that the realization of syntactic structure consists of (i) segmental oral morphemes, (ii) non-segmental oral morphemes (intonation), and (iii) non-oral morphemes (segmental or not; hand movements, upper body gestures and face movements). In particular, the latter predicts the use of non-oral morphemes in *oral* languages, since the speakers of oral languages have it available in their sensorimotor system. I focus on the CP domain of oral languages, and show that its functional projections can be realized by either (i), (ii) and (iii). The empirical body of this article concentrates on the multichannel Q particles in French, Atlantic French and British English.

## 0. *Introduction*

Chomsky (1995:131) defines PF as ‘the interface with the sensorimotor systems’. The very existence of sign languages demonstrates that sensorimotor systems available to humans are not *stricto sensu* restricted to the production of phonological material. A terminological problem therefore arises: the Phonological Form in the Minimalist Program is broader than its label assumes (φωνή; voice, noise, sound) and it is common to refer to the *phonology* of signed languages (Brentari 1998). The minimalist notion of PF has to be understood in such a way as to account for all possible realizations of syntactic structure: oral morphemes, intonation, gestures (hand movements, upper body gestures and face movements), whatever the selected sensorimotor subsystems of realization (henceforth channels). A standard assumption is that a given language selects one channel and keeps to it (henceforth mono-channel hypothesis). The mono-channel hypothesis is seldom formally defined, hardly motivated, and empirically incorrect<sup>1</sup>. Since the 1990’s, the field of signed

---

\* Thanks are due to Johan Rooryck, Milan Rezac and to an anonymous reviewer for useful comments and suggestions. The usual disclaimers apply.

languages has extensively studied the multichannality of the linguistic message (see Aarons 1994:chap.3 and references therein, Bahan 1996, Sutton-Spence & Bencie Woll 1999, Neidle & al. 2000, among others). A bi-channel hypothesis emerges from this field: Sandler (1999), Wilbur (2000), Pfau (2002, under press) and Pfau & Zeshan (2004) propose that in signed languages, non-manual marking is to manual marking what intonation is to the oral segmental message in oral languages. I strengthen the claim in (1), which states that the marked case is indeed not multichannality, but the suppression of a given sensorimotor subsystem in a given language.

- (1) Full use of available sensorimotor systems is the unmarked case for the human language faculty.

The case of deaf-mute speakers illustrates (1) rather clearly in that they make full use of the available sensorimotor systems -manual and non-manual marking- giving rise to so-called sign languages (Kegl et al. 1999). Full use of available sensorimotor systems is less clear for oral languages; the standard assumption being that they resort *exclusively* to oral morphemes. In contrast to this assumption, I pursue the hypothesis that (1) is empirically correct. In particular, I assume that the visual-gestural system can realize functional projections in oral languages. In previous work, I have shown that the lexicon of Atlantic French<sup>2</sup> contains morphemes realized by gestural morphology Jouitteau (2004, 2005:chap 6). The C head in (2) is imposed as an expletive strategy in subject-drop environments and can be realized by any ostensible sound or gesture in the preverbal area. The Q particle in (3) can be realized by a closed set of ostensible gestures (raising of the head, raising of one or both eyebrows, opening movement of the hand). In (2) and (3), the crucial observation is that if

---

<sup>1</sup> The recurrent presupposition seems to be, for the syntax of oral languages, that intonation is not part of PF, despite the contradictions this triggers. As it is difficult to point out unspecified assumptions without illustration, I will take a concrete example (chosen only to illustrate the usage of an entire field; let the following authors be assured of the reader's empathy and forgive me for their appearance as the bad example). Roberts and Roussou (1999:11) present a standard typology of the realisations of Q particles. For Colloquial French, they note that in the yes/no question *Il a vu Marie?* (-he has seen Marie?-), "Q is silent" and "has no PF-realisation". Furthermore, they propose that the "interrogative clause-typing is not grammaticalized and is marked purely by intonation." The contradictions are numerous. In my perspective, Q in this example indeed has a PF-realisation, precisely because it is marked by intonation. I also consider that a rising intonation contour, if it can be shown to realise functional material, is fully grammaticalized. Notice further that my analysis allows for 'really silent' Q particles that do have a PF-realisation: Q particles realised by gestures are certainly silent, but they have a PF realization. Again, the realization of a Q particle by a given gesture shows that it is fully grammaticalized.

<sup>2</sup> The paradigm characteristic of Atlantic French is productive along the Atlantic coast, excluding the Breton speaking area.

no other ostensible gesture or sound is inserted in the preverbal area, the sentence becomes *strongly ungrammatical*<sup>3</sup>.

- (2) \* (SHOULDER RAISING) *pars en février de toute façon.* (Atlantic French)  
 C Ø leave in February anyway.  
 “I leave in February anyway.”

- (3) \_\_\_\_\_ EYEBROW RAISING \_\_ (\_\_\_\_\_)  
*pars en février de toute façon*  
 Q Ø leave in February anyway  
 “Do you leave in February anyway?” / \* assertive / \* imperative

The preverbal gestured morpheme is thus fully a part of grammar. It is also restricted to the preverbal position of matrix sentences, and permits otherwise ungrammatical subject-drop (Jouitteau 2004, 2005). In this article, I concentrate on clause typing realized by intonation or gestures in oral languages, as in (3). The article is organized into four sections. In section 1, I present a brief typology of question marking strategies, and the principal syntactic analyses proposed. I show, following Cheng and Rooryck (2000), that Q particles can be realised by intonational markers. In section 2, I show that gestures can also realise Q particles, and consequently that gestures can realise syntactic functional projections. In section 3, I discuss the implications of my proposal, and sketch the lines of a research program on multichannality. Section 4 concludes.

### 1. *The least it takes to be a question*

I illustrate below the different PF alternatives for the formation of questions across languages. The first alternative is the *wh* movement of an XP into the CP area, as illustrated in (4). The second alternative is to generate a phrasal *wh* XP in the CP area. This is illustrated for German in (5), where the generated *wh* XP *was* is a scope marker, and the questioned element *wen* raises to the *wh* specifier of the embedded sentence.

- (4) **Who** did you say would come early? (English)

- (5) **Was** glaubt Uta [<sub>CP</sub> *wen* Karl gesehen hat ?] (German)  
*wh* scope marker believes Uta who Karl seen has  
 “Who does Uta believe that Karl saw?”

<sup>3</sup> The dropped subject is identified by a null topic. In ‘out of the blue’ contexts, the gesture obligatorily steps in for the lack of features in the null topic: the required gesture is thus a pointing gesture and provides the features required for subject identification. See Jouitteau (2004, 2005).

- |     |                          |           |
|-----|--------------------------|-----------|
| (6) | <i>Hast-du gegessen?</i> | (German)  |
|     | <i>As-tu mangé?</i>      | (French)  |
|     | <b>Have-you</b> eaten?   | (English) |

The third alternative is a special realization of the C head. In the well-known subject inversion paradigms illustrated in (6), a verbal head raises to C from the IP projection and provides phonological material for the realization of the C head. The interrogative head can also be merged directly in the CP area. This happens in (7) in a Breton yes/no question. This is a crosslinguistic common strategy, i.e. the particle *czy* in Polish, *kö* in Finnish, *ma* in Mandarin Chinese, *li* in Slavic languages, *ki* in Bengali, *ci* in Yiddish, etc. Merge of a Q particle is also the strategy to license *in situ* questions (Cheng 1991)<sup>4</sup> <sup>5</sup>. In the Chinese example in (8), the *wh* object is in its canonical (non *wh*) position and the morphosyntactic identification of the sentence as a question is ensured by the segmental realization of the Q particle *ne*.

- |     |                               |          |
|-----|-------------------------------|----------|
| (7) | <i>Hag eo gwir an dra-se?</i> | (Breton) |
|     | Q is true the thing-here      |          |
|     | “Is it true?”                 |          |

(Chinese, Cheng 1991)

- |     |                                                       |
|-----|-------------------------------------------------------|
| (8) | <i>Hufei mai-le na-yi-ben-shu ne.</i>                 |
|     | Hufei buy-ASP which-one-CL-book <b>Q<sub>wh</sub></b> |
|     | “Which book did Hufei buy?”                           |

Minimal vocalic productions can also realize Merged clause typing particles, as in Child Dutch or English. In the first acquisition stages of *wh* questions in Dutch, a preverbal /schwa/ identifies the sentence as a question (van Kampen 1997:80 and references therein).

(Child Dutch, van Kampen 1997)

- |     |                                              |
|-----|----------------------------------------------|
| (9) | <i>/schwa/ is de badkamer nou bleven?</i>    |
|     | schwa is the bathroom then gone              |
|     | “(dropped-where) is the bathroom then gone?” |

<sup>4</sup> Cheng (1991,1997) proposes the generalization that all languages which show *wh in situ* also have interrogative particles. See Bruening (2004:14) for a contrasting hypothesis that most languages, if not all, have Q particles. In this article, I concentrate on the *minimal* PF material necessary for a question to be well-formed.

<sup>5</sup> Merge of a *wh* marker also serves as scope marking in the split-DP constructions of French

- |     |                                                 |                           |
|-----|-------------------------------------------------|---------------------------|
| (i) | <b>Combien</b> (de livres) as-tu lu (de livres) | (Butler and Mathieu 2005) |
|     | how.many (of books) have-you read (of books)    |                           |
|     | ‘How many books have you read?’                 |                           |

To sum up, the range of possible morphological manifestations of the interrogative element is rather varied; the valid generalization for the formation of questions seems to be that a morphosyntactic interrogative element must be realized at least in the CP area. This element is a head X or a phrasal XP. It is generated *in situ* or derived from the IP domain.

### 1.1 *Implementations*

Cheng (1991, 1997 :22) proposes that the morphosyntactic identification of a given sentence as an assertion or as a question is obligatory (Chomsky & Lasnik 1977, May 1985). She develops the *Clause Typing Hypothesis*: for a question to be well-formed, either a *wh* complementizer appears in the high periphery, or a *wh* phrase raises to the specifier of the same projection. This accounts for the complementarity of *wh* + movement strategy *vs.* the Q + *in situ* strategy, and obtains the generalization that the languages with *wh in situ* also have interrogative particles. The same intuition is embodied by proposals like Rizzi's (1996) *wh* criterion illustrated in (10).

- (10) a. A *wh* operator must be in a specifier-head relation with a *wh* head.  
 b. A *wh* head must be in a specifier-head relation with a *wh* operator .

The *wh* criterion differs from the Clause Typing Hypothesis in generalizing *wh* movement in that said movement also applies in *wh in situ* languages, but at LF. Is there a minimal material required at PF to identify a question? Platzack (1998) adds to (10) the Visibility Condition, which states that each CP projection of the CP area must have at least either its specifier or its head phonologically realized, and thus he obtains the generalization of Cheng (1991,1997) that a clause must be typed by the morphosyntactic realization of either a CP specifier or a C head. However, with the proliferation of the CP domain functional projections (Rizzi 1997), the Visibility Condition would inaccurately predict a proportional proliferation of realized elements in the CP domain. Vangsnes (1999, 2004) proposes the weaker Identification Condition: adequate material must be realized in the projection of a head for this head to be identified and its properties activated (only identified heads can be interpreted). Under the Identification Condition, the minimum amount of initial sentence material needed for a question to be well formed is a realized element  $\alpha$  in the CP area. This  $\alpha$  element can be either a head X or a phrasal XP, it can be generated in the CP zone or derived from lower in the structure; the only requirement being that it must be realized in the CP area.

In minimalist developments, a feature-checking relation easily yields the lack of sensitivity to the syntactic X/XP status of the required element. A head, as well as an XP, is a potential satisfier for a feature-checking relation. For example, Miyagawa (2001) postulates an EPP feature on C that has to be erased

by either an adjoined Q-head (in *wh in situ* languages) or a merged specifier (in *wh* movement languages)<sup>6</sup>. For the purposes of this article, I will adopt the Identification Condition as it elegantly accounts for the minimum material required in the data from (4) to (8). The Identification Condition is falsifiable in questions where no marker at all is realized in the CP area. I will now illustrate cases where only a rising intonation or a rising gesture realizes the question marker in the absence of a segmental morpheme realized by the vocal channel.

### 1.2 *Counter-examples (?)*

The question marker in (11) is realized by an oral Q morpheme that seems at first sight optional<sup>7</sup>. I will argue that (11) is no counter-example to the Identification Condition: the optionality vanishes once we take into account the missing dimensions of the data. When the particle *Esk* or *Do* does not appear, the sentence is more accurately represented as in (12), where ‘↑’ represents the direction of intonation in the entire sentence<sup>8</sup>.

- (11) a. [CP (*Esk*) [IP *tu veux passer en premier ?* (French)  
 b. [CP (*Do*) [IP *you wanna go first ?* (English)

- (12) a. [CP ↑ [IP *Tu veux passer en premier ?* (French)  
 b. [CP ↑ [IP *You wanna go first ?* (English)

Two analyses are available for the examples in (12). The first one which I will adopt is to suppose that the clause typing information is here provided by intonation because the acceptability of sentences depends on it<sup>9</sup>. The fact that ‘↑’ extends over the entire sentence suggests that it realizes a syntactic element at the edge of the sentence.

The second option is to maintain the mono-channel hypothesis: it is exclusively the segmental oral channel that can realize morphosyntactic *wh* features. I outline the cost of such an option before I develop the syntactic implementation of my hypothesis in the coming section. The first challenge for the mono-channel hypothesis is to account for the grammaticality of the sentences in (12) in spite of the Identification Condition. This calls for a complete reanalysis of the proposals and generalizations made by the literature

<sup>6</sup> See also Roberts & Roussou (1999:9) who propose to mark F\* the functional projections whose PF-realization is forced for interface interpretability.

<sup>7</sup> The French lexicon contains a morphemic particle ‘*Esk*’ formed on ‘*Est-ce que*’ (*Is-this that...*), reanalyzed as a simplex interrogative morpheme.

<sup>8</sup> Both *Esk* and ‘↑’ can occur in the same sentence, as discussed later, see example (16).

<sup>9</sup> See also Deguchi and Kitagawa (2002) and Kitagawa and Fodor (2003) for similar arguments on different data. Their conclusion is that “syntactic theory can not escape prosody, [...] because the acceptability of sentences can depend on them”.

on question formation since the generalization of Cheng (1991). Moreover, sentences as in (12) are far from being exceptional. According to the typological estimations of Ultan (1978), the morphosyntactic marking of yes/no questions by a (rising) intonation is the strategy represented by 95% of the languages of the world. If we maintain that intonation cannot achieve the realization of morphosyntactic *wh* features, the typologically over-represented rising intonation strategy needs an explanation. The second challenge is to motivate the restriction to a given linguistic channel. As seen in the introduction, the linguistic message is multichannel in sign languages. What could thus motivate the assumption that multichannality is not an available option in oral languages? The third challenge lies in the lack of motivation for the specific election of the segmental oral system.

In contrast, I propose that intonation realizes the same morphosyntactic *wh* features an oral segmental particle does, and that the Identification Condition accurately predicts that (12) illustrates well-formed yes/no questions. I leave the typological over-representation of intonational Q heads unexplained, but the Identification Condition together with (1) accurately predicts this strategy to be available. Intonation can be the unique morphosyntactic trigger for a yes/no question reading. The sentence in (13) a. is obligatorily typed as a question, and the assertion reading is ungrammatical. Consistently, modification of the rising intonation contour leads to the obligatory interpretation of the sentence as an assertion or command, as in (13) b., reinforcing the conclusion that rising intonation was a clause-typing morpheme in (13) a.<sup>10</sup>

- (13) a. Ø *Tu prends du café sans lait* ↑  
 (French)  
 you take DET coffee without milk  
 \*“You take coffee without milk.”/ √ “Do you take coffee without milk?”
- b. Ø *Tu prends du café sans lait* ↗ / ↓  
 you take DET coffee without milk  
 √ “You take coffee without milk.” / √ “Take coffee without milk.”  
 \* “Do you take coffee without milk?”

Intonation can realize a Q particle even when there is segmental material that could seem to provide clause typing information. The yes/no colloquial French construction in (14) is characterized by the tag *ou bien* (presumably ellipsis), and a rising contour. Clause typing cannot arise from the tag alone: non-rising

<sup>10</sup> The same phenomena arise in many languages: see Haspelmath (2001:1013) for Italian, or Jouitteau (2005) for Breton, among many others.



intonation is rescued in (14)c. by the merge of a segmental Q particle. I conclude that in (14) a., ‘**ʃ**’ realizes a Q particle licensing the tag.

- (14) a. *Tu prends du café sans lait, ou bien ʃ ?* French  
 you take DET coffee without milk or ADV  
 “You take coffee without milk, don’t you ?”  
 b. \*/? *Tu prends du café sans lait, ou bien ↘ / ↙ ?*  
 c. √ *Esk tu prends du café sans lait, ou bien ↘ / ↙ ?*

Cheng and Rooryck (2000) also note that rising intonation is obligatory in *in situ* questions in French (15)<sup>11</sup>. Ishihara (2003) discusses on the scope marking realized by intonation patterns in Japanese.

- (15) \*(**ʃ**) *Manaly a dessiné quoi?* (French)  
 Manaly has drawn what  
 “What did Manaly draw?”

I follow Cheng and Rooryck (2000) in analyzing rising intonation as the realization of a Q particle. Under this hypothesis, the left periphery of the above grammatical questions in French is never empty at the relevant syntactic level. Satisfaction of the Identification Condition is achieved via Merge or Move of either a head or a phrasal XP. The particular choice for the realization of the morphosyntactic *wh* element depends on the lexical inventory of a given language. I assume that the French has two Q particles (i) a Q morpheme ‘**ʃ**’ licensing *wh in situ* as in (15) and (ii), a yes/no Q particle with two allomorphs: *esk* and rising intonation ‘**ʃ**’<sup>12</sup>.

The hypothesis that *esk* and ‘**ʃ**’ are allomorphs of the yes/no Q morpheme is supported by their mutual exclusivity. In (16), non-rising intonation is obligatorily sent to the pragmatic module.

<sup>11</sup> Atlantic French has *in situ* questions without an obligatory presuppositional context (contra Cheng 1997:42). For a similar argument for standard French, and further discussion on the contexts licensing *wh in situ*, see Butler and Mathieu (2005). Atlantic French contrasts with the variety of French studied by Boeckx (1999b) and Vergnaud and Zubizarreta (2001). Cheng and Rooryck (2000) draw a parallel between *in situ* questions and yes/no questions in French, both having a Q clause-typing particle realized by intonation, and both being restricted by presuppositional contexts. Atlantic French shows the same parallel: yes/no questions also have no obligatory presuppositional context.

<sup>12</sup> In Japanese, existence of a segmental Q head has no bearing on the distribution of a non-segmental one: the ‘**ʃ**’ Q particle is banned from embedded sentences, whereas the segmental *ka* is not (Yoshida & Yoshida 1996, Hoshi 2004).



segmental Q particle nor a rising intonation. Yet the sentence receives an answer.

- (18) *Zoe*: \_\_\_\_\_ [ RAISED EYEBROWS]  
 Really ? But she used to have an accent ↓.  
 ‘Really ? But did she use to have an accent ?’

*Michelle* : Yeah and she still says things now like ‘All right pet’.

Zoe raises eyebrows on *really* and keeps them high during the entire following sentence. The eyebrows fall after the end of the interrogative sentence. I claim that a Q head is realized by the raising eyebrow and satisfies the Identification Condition. On the opposite hypothesis, again, the sentence in (18) is a counterexample to the Identification Condition. I conclude, therefore, that the lexicon of British English contains a Q particle whose realization is gestural in nature.

The lexicon of French also contains Q particles realized by the gestural channel<sup>13</sup>. This is clearly the case in Atlantic French, where a Q particle licenses exceptional subject-drop (Jouitteau 2004, 2005). In the grammatical (19) b, (19) c and (19) d, no oral *wh* morpheme is present, but the linguistic message contains ostensible facial movements. The sentence can only be interpreted as a question. In (19) e, no ostensible facial movement is produced, and consequently, the sentence cannot be interpreted as a question.

- |      |    |                           |       |                      |
|------|----|---------------------------|-------|----------------------|
| (19) | a. | [CP ↘ / ↓ <i>Esk</i>      | [IP ∅ | peux finir mon thé ? |
|      | b. | [CP ↘ / ↓ raised head     | [IP ∅ | peux finir mon thé ? |
|      | c. | [CP ↘ / ↓ raised eyebrow  | [IP ∅ | peux finir mon thé ? |
|      | d. | [CP ↘ / ↓ raised eyebrows | [IP ∅ | peux finir mon thé ? |
|      | e. | * [CP ↘ / ↓               | [IP ∅ | peux finir mon thé ? |
|      |    |                           | (I)   | can finish my tea    |

The Identification Condition rules out (19)e.; reinforcing the conclusion that the gestural channel realizes a Q particle in (19) b, (19) c and (19) d. If I am wrong in this conclusion and if the gestural channel is not able to realize functional heads in oral languages, two major problems arise. First, we have to account for the fact that (19) b., (19) c. and (19) d. violate the Identification Condition (see problems developed on in section 1.2). Again, we would have to account for the surprising restriction that oral languages limit their morphology to the oral channel since we know from the study of sign languages that gestural

<sup>13</sup> Oiry (2004) and Butler & Mathieu (2005) independently note occasional non-rising intonation in French *in situ* questions. Multichannel data is not available in these works, but my hypothesis would be that a gestured Q head has satisfied the Identification Condition.

morphology is part of the human language faculty. What could prevent oral languages from making use of a realization that (i), we know is available to the speakers and (ii), that we know is available in UG (sign languages)? In (20), I show that the gestural Q particle triggers obligatory yes/no question reading, particular intonation variations being sent to pragmatics.

(Atlantic French)

- (20) [CP ↑/↘/↓ RAISED EYEBROW] [IP *Tu prends du café sans lait ?*  
 you take DET coffee without milk  
 “Do you take coffee without milk?”/ \* “You take coffee without milk.”

I conclude that the lexicon of French contains a Q morpheme, coming in three allomorphic varieties: (i) a segmental oral allomorph *Esk*, (ii) a non-segmental oral allomorph (rising intonation contour), and (iii) a non-oral allomorph (rising facial or body movement).

### 3. *Multichannel Syntax*

I have shown that oral languages can select different channels of the available sensorimotor systems to realize Q particles required by the Identification Condition. However, if (1) is on the right track, extension of the hypothesis to all functional projections is probably in order. In the CP domain, at least, it is likely that multichannel signs can realize any head. In German for example, the rise-fall contour on a constituent internal to IP is equivalent, in terms of interpretation, to the topicalization of the same constituent (see Krifka (1998) and references therein). As for FocP, the focus interpretation is crosslinguistically obtained via different channels, morphemic or intonational. The morphemic message can show Merge of a dedicated segmental morphemic marker (Wolof, Swahili) or the Movement of an XP (Celtic languages, German, Hungarian or Basque). Intonation can also realize Focus by either stress (German and most Romance languages) or phrasing (determined by segmental alternations in French, tones in Chinese, and lengthening or absence of shortening in Kimatuumbi, see Féry 2001 and references therein). Each strategy is a PF variant that realizes Foc or SpecFocP in the syntactic structure for interpretability purposes. Independently, we know from everyday experience that this typology has to be extended as to account for the fact that focus on an DP can be achieved via the body-gesture channel: a pointing gesture triggers salience in context. As illustrated in (21), a postverbal object pronoun is illicit except if it is made ostensible (Cardinaletti & Starke 1999:152). Ostension can be realized by (i) contrastive stress intonation or (ii) flat intonation and a pointing gesture.

- (21) *J'ai vu Marie puis j'ai vu \*elle / ELLE / ☞ + elle.* (French)  
 I have seen Mary then I have seen her.  
 "I saw Mary then I saw her."

- (22) *la fille là* = *cette fille* = *la fille* + ☞ (French)  
*ar plac'h-mañ* = – – = *ar plac'h* + ☞ (Breton)  
 the girl here = this girl = the girl + ☞ (English)

Pointing gestures also typically realize deictic adverbs. In (22), I illustrate the analytic [det-noun-deictic adverb] order, with the adverb realized by a pointing gesture (☞). From (21) to (22), the pointing gesture can be realized with a wide array of face and body gestures (finger, hand, head, eye, etc.) which, however, is not without restrictions (\*lips). This restriction depends on the lexicon of each given language: lip pointing realizes deictics in Thai (Anne Kelleher, p.c.). If the part of PF that realizes syntactic elements by either prosody or gestures becomes visible for syntactic theorizing (as it is for speakers), we will be able to isolate the environments where truly null elements have to be postulated, and consequently be able to measure the crosslinguistic obligatoriness of a PF realization for Focus, Topic, Q particles, *wh* scope markers, deictics, etc.

#### 4. Conclusion

If any sensorimotor system available can realize syntactic structure, a new set of fruitful questions arises. In oral languages, is the part of the lexicon realized by gestures more widely shared across oral languages than the part realized by the oral channel (i.e., rising movements for questions)? And if so on what grounds? Is there a difference in modality between functional heads realized by gestures in oral languages and the same functional heads realized by the same signs in sign languages? How come human languages show a global bias toward the oral modality, unless it is excluded by physical impairment? Why do we not find mixed systems, for example oral languages whose verbal lexical inventory or quantifier scope marking would be gestured?

I propose to represent the multichannel dimensions of languages as illustrated in table (23) where multichannel productions are the unmarked case. Suppression of a given channel is the byproduct of physical impairment (i.e. deafness, ton-deafness, blindness, facial paralysis) or of voluntary restriction (mono-channel-writing system, whistled languages).

(23)

|                      | Sign languages | Oral languages |
|----------------------|----------------|----------------|
| oral timing units    | # ?            | Channel 1      |
| hand movements       | Channel 1      | Channel 2      |
| Facial expressions   | Channel 2      |                |
| upper body movements |                |                |

The global image is that human languages are bi-channel. Following Bouchard (2002:38), two different strategies realize semantic relations in an oral language: *Juxtaposition* (A and B are ordered temporally next to one another) and *Superimposition* (B is a modulation superimposed on A). In this sense, intonation in oral languages is thus an effect of superimposition unto the oral Channel 1. I predict that Channel 1 in sign languages also expresses linguistic differentiations by superimposition (according to its availability). Very importantly, the multichannel dimension of the linguistic message calls into question the linearization process: for the moment, our models of linearization are designed as to obtain a mono-linear output which is simply inappropriate to account for the multichannality of the data. Given that two syntactic elements can occur at the same time in two different channels, linearization must be thought of as creating different lines and not just one. What are the rules of *multilinearization* and are there universals? How to represent the relations between the different syntax realization channels? Can a gestural marker, for example, cliticize on an oral one? Are there syntactic elements that have to be realised in the same line? Why? The fact that multichannality is not the key for the differences between oral and sign languages opens new insights to the inquiry.

### References

- Aarons, D. 1994. *Aspects of the Syntax of American Signed Languages*, PhD Diss., Boston University.
- Bahan, B. 1996. *Nonmanual realization of agreement in American Sign Language*. PhD Diss., Boston University.
- Bouchard, D. 2002. *Adjectives, number and interfaces, why languages vary* Elsevier.
- Brentari, D. 1998. *A Prosodic Model of Sign Language Phonology*, Cambridge (Mass.) : MIT Press.
- Bruening, B. 2004. "Wh indefinites, Question Particles and Wh-in-situ: There is no relation". Ms. University of Delaware.
- Butler, A. & E. Mathieu. 2005. "Split-DPs, generalized EPP and visibility", *MIT Working papers on Linguistics*, ed. by Martha McGinnis and Norvin Richard, 49-57.

- Cardinaletti, A. & M. Starke. 1999. "The typology of structural deficiency", *Clitics in the languages of Europe*, ed. by Van Riemsdijk, 143-233, Berlin & New York : Walter de Gruyter.
- Cheng, L. 1991. *On the Typology of wh Questions*. PhD. Diss.  
 ----- 1997. *On the Typology of wh Questions*. Garland Publishing.  
 ----- & J. Rooryck. 2000. "Licensing Wh-in-situ", *Syntax* 3.1, 1-19.
- Chomsky, N. 1995. *The Minimalist program*, Cambridge (Mass.) : MIT Press.  
 -----& H. Lasnik. 1977. "Filters and Control", *Linguistic Inquiry* 8. 425-504.
- Deguchi, M. & Y. Kitagawa. 2002. "Prosody and Wh questions", *NELS* 32, ed. by M. Hirotani, 73-92.
- Ferre, G. 2004. Relations entre discours, intonation et gestualité en anglais britannique. Ph.D. Diss., Université de la Sorbonne Nouvelle, Paris.
- Féry, C. 2001. "Focus and Phrasing in French", *Audiatur Vox Sapientiae, A festschrift vor Arnim von Stechow*, ed. by Caroline Féry and Wolfgang Sternefeld. 153-181. Berlin : Akademie-Verlag.
- Hoshi, H. 2004. "Wh-Movement: EPP or Uninterpretable Q-feature?", presentation at *WCCFL 23*, University of Davis, California, April, 23, 2004.
- Ishihara, S. 2003. *Intonation and Interface Conditions*, PhD. Diss., MIT.
- Jouitteau, Mélanie. 2004. "Gestures as Expletives, Multichannel Syntax", *Proceedings of WCCFL 23*, ed. by B. Schmeiser, V. Chand, A. Kelleher and A. Rodriguez, 422-435, Cascadilla Press.  
 ----- 2005. *La syntaxe comparée du Breton*, PhD Diss. University of Nantes/Naoned.  
 ----- & G. Ferre. 2004. "Visibility doesn't mean Hearability", (poster) presentation at *NELS 2004*, U. Connecticut.
- Kegl, Judith A., Annie Senghas & M. Coppola. 1999. "Creation through contact: Sign language emergence in sign language change in Nicaragua", *Language Creation and Change: Creolization, Diachrony and Development*, ed. by Michel DeGraff, Cambridge (Mass.): MIT Press.
- Kitagawa, Y. & J. Fodor 2003. "Default Prosody explains Neglected Syntax analysis", *Japanese/Korean Linguistics* 12, ed. by William McClure, 267-279. Stanford : CSLI Publications.
- Krifka, M. 1998. "Scope inversion under the rise fall contour in German", *Linguistic Inquiry* 29:1, 75-112.
- May, R. 1985. *Logical Form: Its structure and Derivation*, Cambridge (Mass.) : MIT Press.
- Miyagawa, S. 2001. "The EPP, scrambling, and wh-in-situ", In *Ken Hale: Life in Language*, ed. by M. Kenstowicz. 293-388. Cambridge, Mass.: MIT Press.

- Neidle C., J. Kegl, D. MacLaughlin, B. Bahan & R.G. Lee. 2000. *The Syntax of American Sign Language*. Cambridge (Mass.) : MIT Press.
- Oiry, M. 2004. "Les questions exceptionnelles en français ou <tu penses quoi qui est caché dans l'sac?>", presentation at the *Colloque international en sciences du langage : Acquisition, pratiques langagières, interactions et contacts* (APLIC).
- Pesetsky, D. & E. Torrego. 2000. "T to C movement", In *Ken Hale : A Life in Language* ed. by Michael Kenstowicz, MIT Press, Cambridge, Mass.
- Pfau, R. 2002. "Applying morphosyntactic and phonological readjustment rules in natural language negation", *Modality and structure in signed and oral languages.*, ed. by R.P. Meier, K.A. Cormier & D.G. Quinto-Pozos, 263-295. Cambridge: Cambridge University Press.
- in press. "De grammatica van het hoofdschudden: zinsontkenning in de Duitse Gebarentaal", *Gramma TTT*
- & U. Zeshan 2004. "Doing it the right way: Wh-movement in Indo-Pakistani Sign Language". Ms.
- Platzack, C. 1998. "A Visibility Condition for the C domain", *Working Papers in Scandinavian Syntax*, 61. 53-99.
- Rizzi, Luigi.1996. "Residual Verb Second and the Wh-Criterion", *Parameters and Functional Heads*, ed. by A. Beletti & L. Rizzi, Oxford University Press, New York.
- 1997. "The Fine Structure of the Left Periphery", *Elements of Grammar: Handbook of Generative Syntax*, ed. by Liliane Haegeman, 281- 337. Dordrecht: Kluwer.
- Roberts, I. & A. Roussou 1999. "A formal approach to grammaticalization". Ms.
- Sandler, W. 1999. "The medium and the message: Prosodic interpretation of linguistic content in Israeli Sign Language", *Sign Language and Linguistics* 2 :2. 187-215.
- Sutton-Spence & Bencie Woll. 1999. *The Linguistics of British Sign Language, An Introduction*. Cambridge : Cambridge University Press.
- Ultan, R. 1978. "Some general characteristics of interrogative systems", *Universals of Human language vol.4; Syntax*, ed. by Joseph H. Greenberg, 211-248. Stanford : Stanford University Press.
- Vangsnes, Ø. 1999. *The identification of Functional Architecture*, Ph.D.Diss. University of Bergen.
- 2004. "On wh-Questions and V2 across Norwegian Dialects: a survey and some speculations", *Working Papers in Scandinavian Syntax* 73. 1-59.
- Van Kampen, J. 1997. *First Steps in Wh movement*, Delft : Eburon, Netherland. [distributed by Eburon, Ponsen & Looijen, Wageningen].



- Wilbur, R.B. 2000. "Phonological and prosodic layering of nonmanuals in American Sign Language", *The signs of language revisited: Festschrift for Ursula Bellugi and Edward Klima*, ed. by K.Emmorey & H. Lane 213-244. Mahwah (New Jersey): Lawrence Erlbaum.
- Yoshida K. & T. Yoshida. 1996. "Question Marker Drop in Japanese"., *International Christian University language Research Bulletin* 11. 37-54.

# INSTABILITY AND AGE EFFECTS AT THE LEXICON-SYNTAX INTERFACE<sup>1</sup>

TIHANA KRAŠ  
*University of Cambridge*

This paper addresses the instability of the lexicon-syntax interface in bilingual L1 and L2 acquisition, as well as the effects of the age of first exposure to the L2 on the ultimate attainment of this interface. The phenomenon under scrutiny is auxiliary selection with intransitive verbs in Italian, whose orderly gradience is captured by the Auxiliary Selection Hierarchy. Child and adult Croatian advanced/near-native L2 speakers, Croatian-Italian simultaneous bilinguals and Italian L1 speakers performed an acceptability-judgment task. Bilingual L1 and L2 speakers proved to be sensitive to the gradience in auxiliary selection with intransitive verbs, but to have less determinate intuitions than monolingual L1 speakers, which is interpreted as evidence for the instability of the lexicon-syntax interface in non-monolingual development. In addition, adult L2 speakers proved to be less sensitive to the gradience than child L2 speakers, pointing to an interaction between the age of first exposure to the L2 and the acquisition of the lexicon-syntax interface.

## 1. *Introduction*

Phenomena at the interface of syntax and other linguistic/cognitive systems have been shown to be problematic in different types of language development. In particular, the distribution of pronominal subjects in null-subject languages, spanning syntax and discourse-pragmatics, has been shown to pose problems in bilingual L1 acquisition (Müller & Hulk 2001, Serratrice et al. 2004), adult L2 acquisition (Belletti et al. 2005, Sorace & Filiaci 2006) and

---

<sup>1</sup> I would like to thank Antonella Sorace, James Blevins, Henriëtte Hendriks and Teresa Parodi for useful advice and suggestions on different aspects of this study. Thanks also to Ming-Wei Ernest Lee for his help with experimental design and statistics, Damiano Beltrami for his native-speaker judgments and Sharmaine Seneviratne for a tutorial on SuperLab. The people who participated in the experiment and those who provided the necessary logistics should not be omitted. I am also most grateful to Maja Miličević, Milja Đurković, Vicky Chondrogianni and two anonymous reviewers for helpful comments on previous versions of this paper. All remaining errors are my own.

L1 attrition (Montrul 2004, Tsimplici et al. 2004), as has the realisation of surface morphology (Haznedar & Schwartz 1997, Lardiere 1998a,b, Prévost & White 2000), lying at the morphology-syntax interface, in L2 acquisition. At the same time, purely syntactic phenomena prove to be unproblematic in end-state grammars. This has led to the hypothesis that interfaces are developmentally unstable/vulnerable, as opposed to narrow syntax (Sorace 2005)<sup>2</sup>.

Turning to another issue, the age of first exposure to the L2 has been shown to be strongly negatively correlated with ultimate attainment of different aspects of the L2 (Johnson & Newport 1989). This has often been interpreted as evidence for a maturationally-determined critical period for L2 acquisition, parallel to the one that has been proposed for L1 acquisition by Penfield & Roberts (1959) and Lenneberg (1967). The critical period for L2 acquisition is not an uncontroversial notion, however. Birdsong (2005) has argued that, instead of being confined to maturation, the established age effects in L2 acquisition persist through life. In addition, some studies have shown that, although rare, native-like attainment of the L2 phonology and morphosyntax by late learners is still possible (Birdsong 1992, White & Genesee 1996).

While remaining agnostic with respect to the existence of a critical period for L2 acquisition, this paper investigates age effects in the L2 acquisition of a potentially problematic, interface domain of grammar, and relates this issue to the more general problem of interface instability in bilingual L1 and L2 acquisition. The specific domain it looks at is the lexicon-syntax interface, represented by auxiliary selection with intransitive verbs in Italian. The other language involved is Croatian.

## 2. *Auxiliary selection and related phenomena in Italian and Croatian*

Auxiliary selection with intransitive verbs is probably the best-known manifestation of the unaccusative/unergative distinction in Italian<sup>3</sup>. As shown in (1), while unaccusatives select the auxiliary *essere* ('be') in compound tenses, unergatives select *avere* ('have').

---

<sup>2</sup> However, focusing in Greek, regarded as a semantics-syntax phenomenon, has proved to be unproblematic in L2 acquisition, suggesting that not all interfaces may be (equally) unstable in language development (Tsimplici & Sorace 2006).

<sup>3</sup> Other manifestations of this distinction in Italian include *ne*-cliticisation, participial absolutes and postverbal subjects. The distinction is based on the Unaccusative Hypothesis (Perlmutter 1978, Burzio 1986), postulating two classes of intransitive verbs, unaccusative and unergative, whose only argument exhibits patient-like and agent-like properties respectively. Whether the distinction is best characterised in semantic terms, syntactic terms, or a combination of both is a debatable issue. This paper follows those approaches which place the distinction at the interface between syntax and lexical-semantics (Levin & Rappaport Hovav 1995).

- (1) a. *Paola è/\*ha arrivata a scuola in bicicletta.* (unaccusative)  
 Paola is/ has arrived at school on bike  
 “Paola has arrived at school on her bike.”
- b. *Silvio ha/\*è parlato dei suoi problemi con me.* (unergative)  
 Silvio has/is talked about his problems with me  
 “Silvio has talked about his problems with me.”

Closer observation, however, reveals that not all unaccusatives and unergatives are equally consistent in the selection of their respective auxiliaries (Sorace 1993, 2000). Among unaccusatives, verbs of change of location (e.g. *arrivare* ‘arrive’) are the most consistent in the selection of *essere*, whereas stative verbs (e.g. *appartenere* ‘belong’) are the least consistent in this respect. Similarly, among unergatives, verbs of controlled non-motional process (e.g. *parlare* ‘talk’) always select *avere*, whereas uncontrolled process verbs (e.g. *squillare* ‘ring’) sometimes select *essere*. The variable behaviour of stative and uncontrolled process verbs is illustrated in (2a) and (2b) respectively.

- (2) a. *Questa sedia è appartenuta/?ha appartenuto a mia nonna.*  
 this chair is belonged/ has belonged to my grandmother  
 “This chair belonged to my grandmother.”
- b. *Il cellulare ha / è squillato durante la lezione.*  
 the mobile phone has/is rung during the lesson  
 “The mobile phone rang during the lesson.”

According to Sorace (2000), consistency in auxiliary selection in Italian is a function of the degree of telicity and agentivity encoded in the verb meaning, with the latter two notions being inversely proportional to each other. Verbs with the highest degree of either property exhibit consistent behaviour, whereas verbs with intermediate degrees of the two properties display variability. Telicity is associated with *essere* and agentivity with *avere*. This is captured by the Auxiliary Selection Hierarchy (ASH) (Sorace, *ibid.*), given in (3).

- (3) *The Auxiliary Selection Hierarchy*
- |                                            |                            |
|--------------------------------------------|----------------------------|
| Change of location (CL)                    | Selection of <i>essere</i> |
| Change of state (CS)                       |                            |
| Continuation of a pre-existing state (CoS) |                            |
| Existence of state (ES)                    |                            |
| Uncontrolled process (UP)                  |                            |
| Controlled motional process (CMP)          |                            |
| Controlled non-motional process (CNMP)     | Selection of <i>avere</i>  |

The Hierarchy distinguishes between seven verb classes, whose consistency in auxiliary selection is reflected in their position in it: the less consistent the verbs are, the further they are from its endpoints. At the *essere* end are the most telic verbs, i.e. core unaccusatives, and at the *avere* end are the most agentive verbs, i.e. core unergatives. Between the two extremes lie peripheral verbs, which encode telicity and agentivity to variable degrees. Stative verbs are the most peripheral among unaccusatives, as are uncontrolled process verbs among unergatives.

Given that there is precise ordering in the degrees of inconsistency exhibited by different classes of intransitives, auxiliary selection in Italian has been described as gradient (Sorace, *ibid.*). This gradient is also reflected in native and non-native speakers' intuitions, whose determinacy decreases as the variability in the verb's syntactic behaviour increases (see Section 3).

Croatian does not offer auxiliary selection in compound tenses, but it reflects the unaccusative/unergative distinction (to some degree at least) in other ways. According to Gođevac (2000), under neutral intonation, unaccusatives allow broad focus interpretation only in the non-canonical word order, VS, whereas unergatives behave in the opposite way, allowing broad focus readings only in the canonical word order, SV. Different word orders with the two verb classes are shown in (4):

- (4) a. *Izašlo je sunce.* (unaccusative)  
 risen is Sun  
 "The Sun has risen."  
 b. *Dječak je trčao.* (unergative)  
 boy is run  
 "The boy has run."

In addition, Aljović (2000) claims that adjectival participles derived with the active suffix *-l*, illustrated in (5), can only be formed from (perfective) unaccusatives and not from unergatives<sup>4</sup>.

- (5) *pristigli*                      *posjetitelji*  
 arrived-PTCP.ACT.PFV visitors  
 "the visitors who have arrived"

The reliability of the two unaccusative diagnostics in Croatian and their sensitivity to the ASH have not been empirically tested yet, so it is difficult to make firm predictions with respect to L1 influence in the acquisition of

---

<sup>4</sup> Aljović (2000) also proposes *wh*-movement under left-branch extraction and scope asymmetries as diagnostics of unaccusativity in Serbo-Croatian

auxiliary selection in Italian by Croatian speakers. However, given that Croatian does not have auxiliary choice, this paper assumes that in the above case there cannot be (at least a direct) transfer from the L1.

### 3. *The acquisition of auxiliary selection and related phenomena*

Sorace (1993) investigated the knowledge of auxiliary selection with intransitive verbs in Italian by English and French adult near-native speakers. She tested the sensitivity of the two groups of speakers to an earlier version of the ASH, which instead of the three classes of unergatives contained two extra classes of unaccusatives, i.e. those with a transitive and those with an unergative alternant. She discovered that near-native intuitions exhibited orderly gradience corresponding to the ASH, but were more indeterminate than native intuitions.

The same type of gradience has also been established in native and non-native grammars of other languages and with respect to other unaccusative phenomena, such as *ne*-cliticisation in Italian (Sorace 1995), auxiliary selection and impersonal passivisation in German (Keller & Sorace 2003), quantifier floating in Japanese (Sorace & Shomura 2001) and absolutive constructions, bare plurals and passives in Spanish (Montrul 2005). This suggests that the ASH might underlie the phenomenon of unaccusativity universally.

### 4. *Aims and hypotheses of the present study*

Building on the findings of Sorace (1993), the current study investigates the acquisition of auxiliary selection with intransitive verbs in Italian by L2 speakers of a different linguistic background, L1 Croatian, and Croatian-Italian bilingual speakers. It also focuses on an additional issue, namely age differences in L2 acquisition. Considering auxiliary selection with intransitive verbs in Italian as a lexicon-syntax phenomenon, this study addresses the following questions: (1) Are phenomena at the lexicon-syntax interface unstable at the final stages of bilingual L1 and L2 acquisition? (2a) is there an interaction between the age of first exposure to the L2 and the ultimate attainment of these phenomena?; (2b) if there is such an interaction, how is it manifested?

On the basis of the findings of previous studies, it is hypothesised that: (1) phenomena at the lexicon-syntax interface are unstable at the final stages of bilingual L1 and L2 acquisition; (2a) there is an interaction between the age of first exposure to the L2 and the acquisition of these phenomena; (2b) this interaction manifests itself in reduced sensitivity to subtle lexical-semantic properties of these phenomena and may result in the inability of adult L2 speakers to make related fine-grained distinctions.

## 5. *Methods*

### 5.1 *Participants*

A total of 53 subjects participated in the study, classified as child and adult Croatian L2 speakers of Italian, Croatian-Italian simultaneous bilinguals and Italian L1 speakers. Relevant properties of the four subject groups are given in Table 1. The two groups of L2 speakers differed only with respect to the age of first exposure to the L2 since the study controlled for their L1, the length and type of exposure to the L2 and L2 proficiency. Specifically, learners from both age groups were native speakers of Croatian who had been exposed to Italian for an average of 8-9 years, in primarily naturalistic settings, and who had qualified as advanced/near-native<sup>5</sup> speakers of Italian in a cloze test<sup>6</sup>. However, child L2 speakers had been first exposed to Italian before puberty and adult L2 speakers after puberty. L1 speakers were junior-high school students and University students resident in Trieste (Italy), bilingual L1 and child L2 speakers were students from Italian elementary schools in Rijeka (Croatia) and adult L2 speakers were University students in Trieste, Padua and Rome (Italy).

| Subject group      | No. | Age  |       | Age of first exposure |       | Cloze test score |         |
|--------------------|-----|------|-------|-----------------------|-------|------------------|---------|
|                    |     | Mean | Range | Mean                  | Range | Mean             | Range   |
| L1 speakers        | 16  | 17.5 | 13-37 | 0                     | 0-0   | 31.6/39          | 24-38   |
| Bilingual speakers | 18  | 13.8 | 13-15 | 0.6                   | 0-3   | 25.4/39          | 19-35   |
| Child L2 speakers  | 10  | 13.9 | 13-14 | 5.5                   | 4-7   | 26.1/39          | 20-30.5 |
| Adult L2 speakers  | 9   | 24.6 | 20-29 | 15.2                  | 13-19 | 31.8/39          | 27-37   |

Table 1: *Information on the participants*

### 5.2 *Materials and procedure*

The experiment consisted of a self-paced acceptability judgment task, run individually on the SuperLab Pro 2.0 software. The sentences appeared on

<sup>5</sup> The proficiency measure used was not sophisticated enough to discriminate between advanced and near-native speakers.

<sup>6</sup> The author believes that lower mean scores of child L2 and bilingual L1 speakers in comparison to those of adult L2 speakers do not reflect their lower proficiency in Italian, but rather a lower degree of familiarity with the type of test used. Among L1 speakers, children also scored lower than adults in the cloze test. Child and adult L1 speakers did not differ, however, in the acceptability judgment task, and were therefore collapsed into a single control group.

the screen one by one in random order. Judgments were elicited by means of the Magnitude Estimation technique (Bard et al. 1996). The experiment was preceded by a sociolinguistic questionnaire and a cloze test.

The cloze test, containing 39 blanks, was used as an independent measure of proficiency. The test was administered to 55 potential subjects and only those who scored 50% or above were included in the experiment. Two child L2 speakers were eliminated in this way. During the administration of the acceptability judgment task, the experimenter, a Croatian near-native speaker of Italian, conversed with the subjects in Italian as an additional check on their proficiency. All L2 and bilingual L1 speakers were judged as very advanced/near native in Italian in terms of accuracy, fluency and lexical choice.

The acceptability judgment task consisted of 56 test items and 128 fillers, divided in two experimental groups. Test sentences were approximately equal in length and contained a singular subject, a verb and one or two adverbials. Each of the seven verb classes in the ASH was represented by four verbs. Each verb was used twice, once with *essere*, and once with *avere*, in identical contexts. Half of the subjects judged each verb with *essere*, and the other half with *avere*. All the verbs were relatively highly frequent. The verbs used in the task are listed in Table 2 in the Appendix, and examples of test items are given in (1) and (2) above.

## 6. Results

Figure 1 shows the mean differences between judgments on *essere* and *avere* with all verb classes for all subject groups.

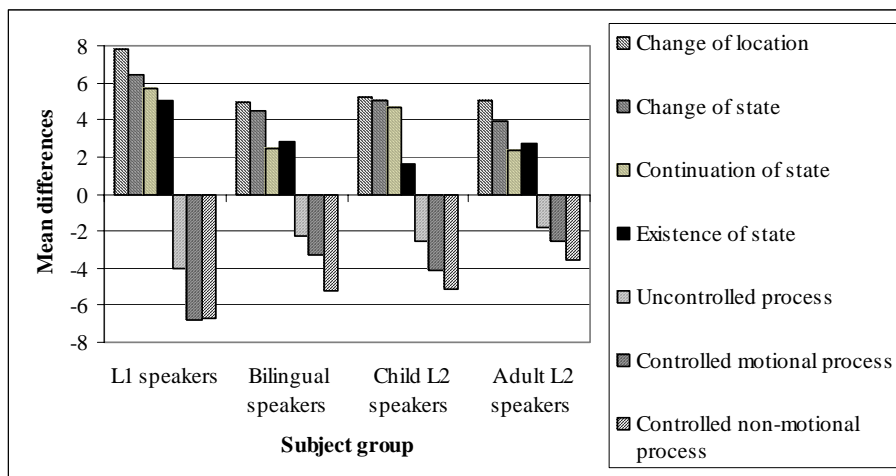


Figure 1: Mean auxiliary differences with all verb classes for all subject groups



The differences were calculated by subtracting the geometric means of the judgments on *avere* from the geometric means of the judgments on *essere*. Positive values therefore indicate a preference for *essere*, and negative ones a preference for *avere*. Higher values indicate stronger preferences.

Three observations can be drawn from the figure. Firstly, the preferences of all subject groups with all verb classes are in the expected direction: all groups prefer *essere* with the four unaccusative classes, and *avere* with the three unergative classes. Secondly, the ordering of the preferences of all subject groups corresponds to the ASH, that is, auxiliary preferences decrease in strength from the endpoints towards the middle of the ASH. The exceptions are L1 speakers' judgements on controlled motional process verbs, which are as strong as their judgements on controlled non-motional process verbs, and bilingual L1 and adult L2 speakers' judgments on stative verbs, which are stronger than their judgments on continuation of state and uncontrolled process verbs. Lastly, the auxiliary preferences of bilingual L1 and L2 speakers pattern together in terms of the overall strength, both being weaker than the preferences of L1 speakers.

A repeated-measures ANOVA, with verb class as a within-subjects factor and subject group as a between-subjects factor, was conducted on the mean differences between judgments on *essere* and *avere*. The main effect of verb class was highly significant ( $F(6,294) = 79.285, p < .001$ ), suggesting that the subjects distinguished between different verb classes. There was also a significant verb class by group interaction ( $F(18,294) = 2.362, p < .05$ ), pointing to a difference in determinacy between the monolinguals' judgments and the judgments of the other groups<sup>7</sup>. The main effect of subject group was not significant because all groups had an average around zero across verb classes.

To examine the judgments given by each subject group more closely, post-hoc Tukey tests were performed on pairwise comparisons between different verb classes for each subject group (numerical results are given in Table 3 in the Appendix). Monolingual and bilingual L1 speakers distinguished each unaccusative class from each unergative class. Bilingual speakers additionally distinguished the core unaccusative class, i.e. change of location verbs, from two peripheral unaccusative classes, i.e. continuation of state and existence of state verbs. They also distinguished the core unergative class, i.e. controlled non-motional process verbs, from the more peripheral unergative class, i.e. uncontrolled process verbs. Child L2 speakers distinguished the same classes as monolingual L1 speakers, with the exception of the two most peripheral classes, i.e. existence of state and uncontrolled process verbs. However, they did distinguish between the most peripheral unaccusative class, existence of state verbs, and the two less peripheral unaccusative classes,

---

<sup>7</sup> The analysis of individual scores excluded the possibility of this effect being due to outliers.

change of state and continuation of state verbs. Contrary to all other groups, adult L2 speakers did not distinguish between any pair of verb classes along the ASH to a statistically significant degree.

### 7. *Discussion and conclusions*

In this study, Croatian-Italian simultaneous bilinguals and child and adult Croatian L2 speakers proved to be sensitive to a hierarchy of aspectual/thematic verb classes underlying auxiliary selection with intransitive verbs in Italian. Their auxiliary preferences with different verb classes are directed and ordered in a way predicted by this hierarchy, similar to L1 speakers' preferences. However, consistent with the findings in Sorace (1993), all non-monolingual groups have less determinate intuitions about auxiliary selection than monolingual speakers, as indicated by their weaker auxiliary preferences in comparison to monolingual speakers' preferences. This suggests that a lexicon-syntax phenomenon, such as auxiliary selection with intransitive verbs in Italian, is not fully acquired even by highly proficient simultaneous bilingual and L2 speakers, and is interpreted as a manifestation of instability of the lexicon-syntax interface at the ultimate stages of bilingual L1 and L2 acquisition.

By distinguishing between a considerable number of verb classes along the ASH, in contrast with adult L2 speakers, who did not distinguish between any, child L2 speakers approached L1 speakers more closely than their adult counterparts did and showed higher sensitivity to the gradience in auxiliary selection with intransitive verbs in Italian. This difference in sensitivity is attributed to the age of their first exposure to the L2 since the two groups of L2 speakers differed only with respect to this variable. This finding suggests that there is indeed an interaction between the age of first exposure to the L2 and the ultimate attainment of the lexicon-syntax interface, and that this interaction is manifested in reduced sensitivity to subtle lexical-semantic properties of the phenomena at this interface.

### *References*

- Aljović, Nadira. 2000. "Unaccusativity and Aspect in SerBoCroatian". *ConSole VIII Proceedings* ed. by Christine Czinglar, Katharina Köhler, Erica Thrift, Erik Jan van der Torre & Malte Zimmermann, 1–15. Leiden: SOLE.
- Bard, Ellen Gurman, Dan Robertson & Antonella Sorace. 1996. "Magnitude Estimation of Linguistic Acceptability". *Language* 71.32–68.
- Belletti, Adriana, Elisa Bennati & Antonella Sorace. 2005. "Theoretical and Developmental Issues in the Syntax of Subjects: Evidence from Near-Native Italian". Ms. University of Siena & University of Edinburgh.

- Birdsong, David. 1992. "Ultimate Attainment in Second Language Acquisition". *Language* 68.706-755.
- 2005. "Interpreting Age Effects in Second Language Acquisition". *Handbook of Bilingualism. Psycholinguistic Approaches* ed. by Judith F. Kroll & Annette M. B. De Groot, 109-127. Oxford: Oxford University Press.
- Burzio, Luigi. 1986. *Italian Syntax: A Government-Binding Approach*. Dordrecht: D. Reidel.
- Gođevac, Svetlana. 2000. *Intonation, Word Order and Focus Projection in Serbo-Croatian*. Ph.D. Diss., Ohio State University.
- Haznedar, Belma & Bonnie Schwartz. 1997. "Are There Optional Infinitives in Child L2 Acquisition?". *Proceedings of the 21st Annual Boston University Conference on Language Development* ed. by Elisabeth Hughes, Mary Hughes & Annabel Greenhill, 257-268. Somerville (Mass.): Cascadilla Press.
- Johnson, Jacqueline S. & Elissa L. Newport. 1989. "Critical Period Effects in Second Language Learning: The Influence of Maturational State on the Acquisition of English as a Second Language". *Journal of Cognitive Psychology* 21.60-99.
- Keller, Frank & Antonella Sorace. 2003. "Gradient Auxiliary Selection and Impersonal Passivisation in German: An Experimental Investigation". *Journal of Linguistics* 39.57-108.
- Lardiere, Donna. 1998a. "Case and Tense in the 'Fossilized' Steady State". *Second Language Research* 14.1-26.
- Lardiere, Donna. 1998b. "Dissociating Syntax from Morphology in a Divergent L2 End-State Grammar". *Second Language Research* 14.359-375.
- Lenneberg & Eric Heinz. 1967. *Biological Foundations of Language*. New York: Wiley.
- Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the Syntax-Lexical Semantics Interface*. Cambridge (Mass.): MIT Press.
- Montrul, Silvina. 2004. "Subject and Object Expression in Spanish Heritage Speakers: A Case of Morphosyntactic Convergence". *Bilingualism: Language and Cognition* 7.125-142.
- 2005. "Second Language Acquisition and First Language Loss in Adult Early Bilinguals: Exploring Some Differences and Similarities". *Second Language Research* 21.199-249.
- Müller, Natascha & Aafke Hulk. 2001. "Crosslinguistic Influence in Bilingual Language Acquisition: Italian and French as Recipient Languages". *Bilingualism: Language and Cognition* 4.1-21.
- Penfield, Wilder & Lamar Roberts. 1959. *Speech and Brain Mechanisms*. Princeton (New Jersey): Princeton University Press.

- Perlmutter, David M. 1978. "Impersonal Passives and the Unaccusative Hypothesis". *Proceedings of the Fourth Annual Meeting of the Berkeley Linguistics Society*, 157-189. University of California: Berkeley.
- Prévost, Philippe & Lydia White. 2000. "Missing Surface Inflection or Impairment in Second Language Acquisition? Evidence from Tense and Agreement". *Second Language Research* 16.103-133.
- Serratrice, Ludovica, Antonella Sorace & Sandra Paoli. 2004. "Transfer at the Syntax-Pragmatics Interface: Subjects and Objects in Italian-English Bilingual and Monolingual Acquisition". *Bilingualism: Language and Cognition* 7.183-205.
- Sorace, Antonella. 1993. "Incomplete vs. Divergent Representations of Unaccusativity in Non-Native Grammars of Italian". *Second Language Research* 9.22-47.
- 1995. "Acquiring Linking Rules and Argument Structures in a Second Language: The Unaccusative/Unergative Distinction". *The Current State of Interlanguage* ed. by Lynn Eubank, Larry Selinker & Michael Sharwood Smith, 153-75. Amsterdam & Philadelphia: John Benjamins.
- 2000. "Gradients in Auxiliary Selection with Intransitive Verbs", *Language* 76.859-890.
- 2005. "Selective Optionality in Language Development". *Syntax and Variation. Reconciling the Biological and the Social* ed. by Leonie Cornips & Karen P. Corrigan, 55-80. Amsterdam & Philadelphia: John Benjamins.
- & Yoko Shomura. 2001. "Lexical Constraints on the Acquisition of Split Intransitivity". *Studies in Second Language Research* 23.247-78.
- & Francesca Filiaci. 2006. "Anaphora Resolution in Near-Native Speakers of Italian". *Second Language Research* 22.339-368.
- Tsimpli, Ianthi, Antonella Sorace, Caroline Heycock & Francesca Filiaci. 2004. "First Language Attrition and Syntactic Subjects: A Study of Greek and Italian Near-Native Speakers of English". *International Journal of Bilingualism* 8.257-277.
- & Antonella Sorace. 2006. "Differentiating Interfaces: L2 Performance in Syntax-Semantics and Syntax-Discourse Phenomena." *Proceedings of the 30th Annual Boston University Conference on Language Development* ed. by David Bamman, Tatiana Magnitskaia & Colleen Zaller, 653-664. Somerville (Mass.): Cascadilla Press.
- White, Lydia & Fred Genesee. 1996. "How Native is Near-Native? The Issue of Ultimate Attainment in Adult Second Language Acquisition". *Second Language Research* 12.233-65.

## APPENDIX

| Verb class                      | Class members                                                                   |
|---------------------------------|---------------------------------------------------------------------------------|
| Change of location              | venire “come”, arrivare “arrive”, ritornare “return”, cadere “fall”             |
| Change of state                 | salire “rise”, crescere “grow”, apparire “appear”, succedere “happen”           |
| Continuation of state           | restare “stay”, sopravvivere “survive”, rimanere “remain”, durare “last”        |
| Existence of state              | esistere “exist”, appartenere “belong”, sembrare “seem”, piacere “like”         |
| Uncontrolled process            | tremare “tremble”, sudare “sweat”, squillare “ring”, brillare “twinkle”         |
| Controlled motional process     | nuotare “swim”, viaggiare “travel”, camminare “walk”, passeggiare “take a walk” |
| Controlled non-motional process | giocare “play”, dormire “sleep”, lavorare “work”, parlare “talk”                |

Table 2: *Verb classes and class members used in the experiment*

| Verb class pair | t**                            |                                     |                                       |                                      |
|-----------------|--------------------------------|-------------------------------------|---------------------------------------|--------------------------------------|
|                 | L1ers<br>( $t_{crit} = 3.39$ ) | Bilinguals<br>( $t_{crit} = 3.33$ ) | Child L2ers<br>( $t_{crit} = 3.716$ ) | Adult L2ers<br>( $t_{crit} = 3.83$ ) |
| CL&CS           | 1.849                          | 1.145                               | .176                                  | .454                                 |
| CL&CoS          | 2.578                          | 3.553*                              | .624                                  | 1.360                                |
| CL&ES           | 2.839                          | 4.517*                              | 3.022                                 | 1.288                                |
| CL&UP           | 8.493*                         | 9.580*                              | 4.604*                                | 2.042                                |
| CL&CMP          | 8.799*                         | 8.168*                              | 5.876*                                | 2.054                                |
| CL&CNMP         | 8.363*                         | 8.650*                              | 7.089*                                | 2.237                                |
| CS&CoS          | .887                           | 2.577                               | .618                                  | .923                                 |
| CS&ES           | 1.806                          | 2.649                               | 4.677*                                | .598                                 |
| CS&UP           | 7.068*                         | 8.097*                              | 4.518*                                | 1.877                                |
| CS&CMP          | 8.956*                         | 6.838*                              | 6.919*                                | 1.835                                |
| CS&CNMP         | 7.944*                         | 7.573*                              | 7.801*                                | 2.521                                |
| CoS&ES          | .656                           | -.420                               | 3.802*                                | -.424                                |
| CoS&UP          | 5.708*                         | 8.504*                              | 5.124*                                | 1.687                                |
| CoS&CMP         | 7.182*                         | 6.756*                              | 7.911*                                | 1.731                                |
| CoS&CNMP        | 6.614*                         | 9.341*                              | 8.594*                                | 2.442                                |
| ES&UP           | 5.772*                         | 6.442*                              | 3.142                                 | 1.823                                |
| ES&CMP          | 6.977*                         | 6.453*                              | 5.754*                                | 1.902                                |
| ES&CNMP         | 6.936*                         | 6.566*                              | 6.868*                                | 2.347                                |
| UP&CMP          | 2.148                          | 1.448                               | 1.778                                 | .425                                 |
| UP&CNMP         | 2.600                          | 3.648*                              | 3.487                                 | 1.097                                |
| CMP&CNMP        | -.042                          | 2.973                               | 2.667                                 | .567                                 |

\*\*The critical values of  $t$  ( $t_{crit}$ ) for each subject group are given at  $\alpha = .05$ .

The starred  $t$  values are significant, i.e. bigger than  $t_{crit}$ .

Table 3: *Tukey test results*

# ON THE AMBIGUITY OF N-WORDS IN FRENCH\*

MASAKAZU KUNO

*Harvard*

This paper argues that n-words in French are ambiguous between negative quantifiers and bipolar items, which are a type of polar sensitive items that must occur in the contexts that license both negative and positive polarity items. The ambiguity thesis is basically in line with Herburger's (2001) analysis of n-words in Spanish, but diverts from it in that she argues them to be lexically ambiguous between negative quantifiers and negative polarity items. I will show that the difference between n-words in French and n-words in Spanish falls out from the difference with respect to the structural position of sentential negation. Also, I will suggest a way of deriving the semantic ambiguity of n-words from a single underlying lexical entry.

## 1. *Introduction*

The primary purpose of this paper is to show that n-words in French exhibit semantic ambiguity in a way that has never been discussed in the literature on this topic. Needless to say, the claim that n-words in Romance bear semantic ambiguity is not new. Indeed, Herburger (2001) convincingly defends the ambiguity thesis based on Spanish, according to which n-words in this language are ambiguous between Negative Quantifiers (NQs) and Negative Polarity Items (NPIs). Along the line of Herburger's analysis of n-words in Spanish yet in divergence from it in exact details, this paper argues that n-words in French are ambiguous between NQs and Bipolar Items (BPIs), a term coined by Van der Wouden (1997) to describe a type of mixed polar sensitive items that display the properties of NPIs and Positive Polarity Items (PPIs). Since it is fairly straightforward to establish that n-words in French can be interpreted as NQs, as we will see shortly, this paper devotes more space to the demonstration that they can be interpreted as BPIs. The organization of the paper is as follows. In section 2, I will first briefly show that French n-words carry the meaning of

---

\* I would like to thank Cedric Boeckx, Gennaro Chierchia, Naoki Fukui, Anastasia Giannakidou, Elena Herburger, Tanya Reinhart, and Akira Watanabe as well as two anonymous reviewers for their helpful comments, insightful suggestions and thought-provoking questions. All remaining errors are, of course, mine.

not only NQs but also existential quantifiers (EQs) under a certain restricted set of contexts. Then, I will demonstrate that French n-words, when interpreted as EQs, must be analyzed as BPIs. In doing so, I will compare French n-words with a genuine instance of BPIs observed in Serbo-Croatian. In section 3, I will take up what is called negative spread constructions, where more than one n-word occurs in the same clause and yields a single negation reading. This construction at first sight may seem to pose a problem to the claim that French n-words are ambiguous between NQs and BPIs. I will show, however, that this is an expected result in light of another instance of BPIs found in Dutch. In section 4, I will compare French n-words, which will be analyzed as ambiguous between NQs and BPIs, with Spanish n-words, which Herburger (2001) shows to be ambiguous between NQs and NPIs, and suggest a source of the parametric variation. In section 5, I will suggest a way of deriving the semantic ambiguity of n-words from a single underlying lexical entry. Section 6 concludes the discussion.

## 2. *Ambiguity of n-words in French*

### 2.1 *N-words as Negative Quantifiers*

Let us begin the discussion by showing that French n-words can be used as NQs. N-words such as *personne* are interpreted as ‘nobody’ in preverbal position. Consider (1).

- (1) a. *Personne n’est venu.*  
       n-person CL is come  
       b. *Personne est venu.*  
       n-person is come  
       “Nobody has come.”

These two instances differ in that the former contains a negative clitic *ne* while the latter doesn’t, but produce the same interpretation. The latter, which is found in colloquial French, clearly demonstrates that French n-words can be interpreted as NQs since there is no other source of negativity in this structure.<sup>1</sup>

(1a) can also be taken as evidence for the negativity of *personne*, in view of the fact that negative clitics do not have the ability to negate sentences, as illustrated in (2).

---

<sup>1</sup> One of the reviewers points out that there is no audible difference between the two examples in (1) because of liaison and suggest that some other n-words should be used, as shown in (i).

(i) *Aucun d’entre eux (ne) m’a répondu.*  
       n-det           among them   CL me-has answered  
       “None of them answered to me.”

- (2) a. *Je n'ai*           \*(*pas*) *une auto*  
 I CL have       NEG a car  
 b. *Je ai*           *pas* *une auto*  
 I have           NEG a car  
 "I don't have a car."

(2a) shows that *ne* does not make a full-fledged negative sentence in the absence of a true sentential negation marker *pas*.<sup>2</sup> On the other hand, (2b) illustrates that *ne* is omissible and *pas* can negate sentences by itself. The lack of negativity in negative clitic suggests that the n-word in (1a) must be an NQ as the sole locus for negative import.

Given that both n-words and *pas* carry the negative meaning of their own, it is predicted that when the two occur in the same clause, the resulting structure will yield a double negation reading. This prediction is borne out.

- (3) *Personne (n')est*   *pas*           *venu.*  
 n-person CL is       NEG           come  
 "Nobody has not come."

This is another piece of evidence that indicates that n-words can be analyzed as NQs.

French n-words can be interpreted as NQs in postverbal position as well. This is illustrated in (4).

- (4) a. *Il (n')a vu* *personne.*  
 he CL have seen n-person  
 "He has seen nobody."  
 b. *Il (n')a*                   *pas vu* *personne.*  
 he CL have NEG seen n-person  
 "He has not seen nobody."

(4a) demonstrates that a postverbal n-word can negate the whole sentence, irrespective of the presence or absence of negative clitic. (4b) shows that when

<sup>2</sup> This is not entirely true. Negative clitics can make full-fledged negative sentences in combination with certain (auxiliary) verbs such as *oser* 'dare', *connaître* 'know', *savoir* 'know' and *pouvoir* 'can', as shown in (i).

(i) a. *Elle n'osa (pas) tourner la tête*   b. *Je ne connais (pas) la réponse*  
 she CL-dare Neg turn the head    I CL know Neg the answer  
 "She didn't dare to turn her head."    "I don't know the answer."

This unexpected behavior of negative clitics is usually treated as a remnant of an older system, where *ne* was used as a negative adverb. See Godard (2004), Muller (1991), Schapansky (2002) for relevant discussion. I would like to thank an anonymous reviewer for bring this issue to my attention.



an n-word shows up together with clausemate sentential negation, a double negation reading results obligatorily. Both examples indicate that French n-words can be used as NQs in postverbal position.

## 2.2 *N-words as Existential Quantifiers*

French n-words can be interpreted not only as NQs but also as existential quantifiers (EQs) in a certain restricted set of contexts. These are the contexts where NPIs would be used in English, which include contexts such as questions, conditional clauses and embedded sentences under the scope of negation in the higher clause. These contexts are exemplified in (5), (6) and (7), respectively. (The data in (7) are taken from Rowlett (1998).)

- (5) a. *Est-ce que tu as vu **personne**?*  
is it that you have seen n-person  
“Did you see anybody?”
- b. *A-t-il **aucune** chance de réussir?*  
has-he n-det chance to succeed  
“Does he have any chance to succeed?”
- c. *Y a-t-il **rien** de si émouvant?*  
there has-it n-thing as this moving  
“Is there anything as moving as this?”
- d. *Avez-vous **jamais** réfléchi sur ce problème?*  
have-you n-ever reflected upon this problem  
“Have you ever considered this problem?”
- (6) a. *Si **rien** se produit, ...*  
if n-thing CL happened  
“If anything happened, ...”
- b. *S’il y a **aucun** empêchement...*  
if it there has n-det obstacle  
“If there is any obstacle, ...”
- c. *Si **jamais** vous visitez Paris, venez nous voir.*  
If n-ever you visit Paris come us see  
“If you ever visit Paris, come to see us.”
- (7) a. *Je **ne** crois **pas** que **personne** soit arrivée.*  
I CL believe NEG that n-personbe arrived  
“I don’t think anyone has arrived.”
- b. *Je **ne** crois **pas** que Pierre ait vu **personne**.*  
I CL believe NEG that Pierre have seen n-person  
“I don’t think that Pierre has seen anyone.”

- c. *Elle n'indique pas que le chien ait rien fait pour voir l' évêque*  
 It ne says NEG that the dog have n-thing done for see the bishop  
 "It doesn't say that the dog did anything to see the bishop."

A note of caution is in order here. For some reason that I cannot handle in this paper, there is a fluctuation in judgement as to the availability of EQ reading. The variation is the least prominent for the interpretation of *jamais*, but the other n-words are often preferred to be interpreted as NQs. This is presumably due to some sort of blocking effect triggered by the presence of pure instances of NPIs which can be used in place of n-words in the relevant contexts (for example, *qui que ce soit* instead of *personne*). This would explain why *jamais* allows an EQ reading so readily as there is no alternative NPI form to it.<sup>3</sup> With this note in mind, let us assume for the sake of argument that French n-words are semantically ambiguous between NQs and EQs.

A question that should be addressed now is how French n-words should be characterized when they are interpreted as EQs. As a first approximation, let us examine the possibility that French n-words are NPIs when existentially interpreted. At first, this seems to be a viable option since in all the cases where n-words produce an existential interpretation, NPIs are used in English, as shown by the translations in (5), (6) and (7). This analysis cannot be right, however, because as we saw in (4b), repeated as (8) below, n-words obligatorily yield a double negation reading in combination with clausemate negation.

- (8) *Il (n')a pas vu personne.*  
 he CL has NEG seen n-person  
 "He has not seen nobody."

The impossibility of interpreting n-words as an EQ under the scope of clausemate sentential negation indicates that they cannot be analyzed as NPIs.<sup>4</sup>

<sup>3</sup> An anonymous reviewer points out that there is an alternative form to *jamais*, *quand que ce soit* and casts a doubt on the suggested account of judgment fluctuation. According to my informants, however, this form is rarely used in colloquial French. It is thus not unreasonable to maintain that *quand que ce soit* is not natural enough to block *jamais* from being used as an NPI.

<sup>4</sup> At this point, it is noteworthy to discuss the preceding works that treated French n-words as NPIs, a representative of which is Rowlett's (1998). He argues that French n-words are inherently non-negative NPIs but they occur with a non-overt counterpart of *pas*, which moves to Spec-NegP headed by *ne* and establishes a Spec-Head Agreement relation so that *ne* will inherit the negative import, move up to AgrS and take sentential scope, thereby licensing n-words as NPIs. Under this account, the obligatory double negation reading in cases like (8) is analyzed as there being two negative operators, overt and covert, which cancel each other out. This analysis is not maintainable, however, because n-words can be interpreted as truly non-negative EQs in questions and conditional clauses, as seen in (5) and (6). If n-words always appear with a covert counterpart of *pas*, these sentences would always be interpreted negatively,

The moment the NPI analysis is rejected, it is natural to turn to the possibility that French n-words are PPIs under the existential interpretation. This option works for cases like (8). The account goes as follows. *Personne* is ambiguous between an NQ and a PPI but cannot be analyzed as a PPI in (8) due to the presence of sentential negation and thus must be analyzed as an NQ, hence resulting in double negation. This analysis can carry over to cases in (5), (6) and (7), where the NPIs can be replaced by an appropriate PPI without affecting the basic meaning of the sentences. However, the PPI analysis would wrongly predict that n-words could be interpreted as an EQ much more freely than they actually can be. For example, sentences like (1b), reproduced as (9), would be predicted to also mean “somebody has come,” an utterly false prediction.

- (9) *Personne est venu.*  
 n-person is come  
 “Nobody has come.”

Therefore, the PPI option cannot be correct either.

To sum up, the unavailability of narrow existential reading in (8) suggests that French n-words assume a PPI-like property whereas the lack of existential reading in an affirmative episodic sentence like (9) suggests that they carry an NPI-like property as well. That is to say, French n-words bear the properties of both PPIs and NPIs, and therefore they can be interpreted as EQs only in the contexts that license both PPIs and NPIs. The question that arises now is whether there exists such peculiar polarity items in human language. The answer is yes. Relevant items are attested in several languages.

An item *i(t)ko-ga* found in Serbo-Croatian is one of the most illuminating cases in point. The data in (10) are taken from Progovac (1994).

- (10) a. \**Milan voli i(t)ko-ga.*  
 Milan loves even-who  
 b. \**Milan ne voli i(t)ko-ga.*  
 Milan Neg loves even-who  
 c. *Da li Milan voli i(t)ko-ga?*  
 that Q Milan loves even-who  
 “Does Milan love any/someone?”  
 d. *Ako Milan povredi i(t)ko-ga, ...*  
 if Milan hurts even-who  
 “If Milan hurts any/someone...”

---

contrary to fact, and if n-words are allowed to enter the derivation without a covert negative operator, the obligatory double negation reading of (8) will not be explained.

- e. *Milan ne tvrdi [da Marija poznaje i(t)ko-ga]*  
 Milan Neg claims that Mary knows even-who  
 “Milan does not claim that Mary knows any/someone.”

Since this item must occur in the contexts that license both NPIs and PPIs, it is not licensed in an affirmative sentence like (10a) that does not sanction NPIs or in a negative sentence such as (10b) that offends PPI's requirements. In the other cases such as questions, conditional clauses and embedded sentences under the scope of the higher negation, shown in (10c-e), *i(t)ko-ga* is licensed and receives narrow scope existential interpretation. The structures where this item can occur all license both NPIs and PPIs, as shown in the translations, which feature the NPI-licensing contexts except the one created by local sentential negation (i.e., decreasing but not antimorphic in terms of Boolean properties). The type of polar sensitive items with the mixed properties of NPIs and PPIs is named Bipolar Items (BPIs) by Van der Wouden (1997).

Returning to French n-words, notice that the contexts in which they receive an existential interpretation coincide with the contexts where the BPI in Serbo-Croatian is licensed, namely questions, conditional clauses and embedded sentences under the scope of the higher negation. This indicates that French n-words should be analyzed as BPIs when existentially interpreted.

### 2.3 *A Prediction: Evidence for BPI status of n-words*

Before closing this section, I would like to provide an interesting piece of evidence for the claim that French n-words are BPIs when they receive an existential interpretation. Analysis of BPIs by definition depends on the nature of NPIs and PPIs. For NPIs, I have assumed the standard view that they must occur under the scope of a monotone decreasing operator or a question operator. However, as for PPIs, I will depart from the common view that they cannot occur within the scope of clausemate negation and instead adopt the claim proposed by Szabolcsi (2004). She observes that a PPI cannot take scope immediately under the scope of clausemate negation, as illustrated in (11a), but the illegitimate scope relation is rescued if the PPI and negation are separated by a scope-bearing element, as shown in (11b).

- (11) a. \*John didn't show her something.  
 b. John didn't show everyone something.  
 not>every>some

Given this property of PPIs, it is predicted that a BPI can occur under the scope of clausemate negation if there is another scope-bearing element in-between. The prediction is borne out, as is indicated by the availability of a single negation reading in example (12) cited from De Swart and Sag (2002).

- (12) *Je n' ai pas donné le moindre renseignement à personne.*  
 I CL have Neg given the least information to n-person  
 "I have not given the least information to anyone."

In this instance, sentential negation *pas* and n-word *personne* show up in the same clause, with an NPI *le moindre renseignement* "the least information" in-between. The sentence yields a single negation reading. This indicates that the n-word is analyzed as a BPI and interpreted as a narrow scope EQ. Let us consider how the n-word is licensed as a BPI in this structure. The NPI requirement is satisfied because of the presence of *pas*.<sup>5</sup> The PPI requirement is also met thanks to the NPI that intervenes between *pas* and *personne*, just like the English PPI in (11b) is allowed to scope under negation by virtue of the intervening quantifier. Therefore, the n-word in (12) can be interpreted as a BPI and the single negation reading obtains.

The parallel behavior of English PPIs and French n-words supports the claim that the latter are BPIs (that bears PPI-properties) under the existential reading.

### 3. *Negative Spread*

I will now turn to a phenomenon called negative spread, which refers to a structure that contains more than one instance of n-word but produces a single negation reading. (13) is a case in point.

- (13) *Personne (n')a rien mangé.*  
 n-person CL has n-thing eaten  
 "No one ate anything"

Notice that the availability of a single negation reading is problematic to the present analysis, according to which both n-words *personne* and *rien* in this

---

<sup>5</sup> One of the reviewers points out that the NPI requirement will not be satisfied due to the presence of the intervening quantifier (cf. the Immediate Scope Principle of Linebarger (1987)), whose effect is illustrated by the ungrammaticality of (i).

(i) \*John didn't show everyone anything.

Notice, however, that there is an important difference between (i) and (12): the intervening quantifier in the former is a universal quantifier while that in the latter is an NPI, and NPIs do not trigger intervention effects.

(ii) John didn't show anyone anything.

Indeed, if the intervening quantifier in (12) is replaced by a universal quantifier, the resultant structure becomes hard to interpret (and even deviant) and no longer produces a single negation reading so easily.

(iii) ??*Je n' ai pas donné tous ces livres à personne*  
 I CL have Neg given all these books to n-person  
 "I have not given all of these books to anyone."



indefinite article ‘a’ should be analyzed as an instance of PPIs, which can scope beneath an NQ, but not sentential negation, as illustrated in (17), the examples taken from Van Wyngaerd (1999: 209).

- (17) a. Sam didn’t greet a woman. a>not, \*not>a  
 b. Nobody kissed a woman. a>nobody, nobody>a

If we suppose that French n-words are ambiguous between NQs and BPIs that combine the standard NPI requirements and the *a*-type PPI requirements, rather than the *some*-type, then we can analyze *rien* in (13) as a BPI while still preventing n-words from being interpreted as a BPI under the scope of clausemate sentential negation. Indeed, the Dutch BPI *ooit* ‘ever’ has exactly this property. The data in (18) are taken from Van der Wouden (1997: 132).

- (18) a. \**Een van de kinderen gaat ooit bij oma op bezoek.*  
 One of the children goes ever with granny on visit  
 b. *Weinig kinderen gaan ooit bij oma op bezoek.*  
 Few children go ever with granny on visit  
 “Few children ever visit granny.”  
 c. \**Een van de kinderen gaat niet ooit bij oma op bezoek.*  
 one of the children goes not ever with granny on visit  
 d. *Geen van de kinderen gaat ooit bij oma op bezoek.*  
 None of the children goes ever with granny on visit  
 “None of the children ever visit granny.”

The BPI is not licensed in (18a) because the sentence does not contain any monotone decreasing operator and fails to satisfy the NPI requirements while it is licensed in (18b) because the quantified subject counts as a licensing operator. The crucial contrast is between (18c) and (18d). The BPI is not licensed in the former because it shows up under the scope of clausemate sentential negation whereas the one in the latter is licensed in spite of the fact that it is scoped over by an NQ. This can be explained by assuming that the PPI requirement of *ooit* are the *a*-type, not the *some*-type.<sup>6</sup>

We have seen two solutions to the negative spread puzzle. Both work equally well. However, on conceptual grounds, for all other things being equal, the second approach should be taken as preferable to the first because it just relies on the well-motivated classification of PPIs and does not have to resort to any independent mechanism such as negative absorption.

<sup>6</sup> The distinction between ‘a’ and ‘some’ is not so ad hoc as it may first seem. It can be stated in terms of Boolean properties. That is, ‘a’ can occur in the scope of an antiadditive operator, but not an antimorphic one while ‘some’ cannot in the scope of either of them.

#### 4. *Comparison of French n-words and Spanish n-words*

We have so far seen that French n-words are ambiguous between NQs and BPIs. This is in line with Herburger's (2001) analysis of Spanish n-words, according to which n-words in this language are ambiguous between NQs and NPIs. The examples in (19) show that Spanish n-words can be interpreted as NQs while those in (20) illustrate their NPI-like behavior. See Herburger (2001) for more examples.

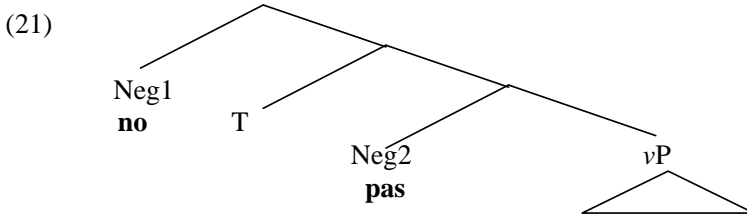
- (19) a. *Nadie vino*  
n-person came  
"Nobody came."  
b. *A ninguno de ellos los olvidó.*  
to n-body of them CL forgot  
"He forgot none of them."
- (20) a. *No vino nadie.*  
Neg came n-person  
"Nobody came."  
b. *No vi nadie.*  
Neg saw n-person  
"I didn't see any."  
c. *¿Cuándo me has regalado nada?*  
When to-me have given n-thing  
"When have you given anything to me?"  
d. *Antes de hacer nada, debes lavarle las manos.*  
before of do n-thing must wash.CL the hands  
"Before doing anything, you should wash his hands."  
e. *No creo que Pedro haya leído ningún libro en la lista*  
Neg believe that Pedro has read n-one books on the list  
"I don't believe that Pedro has read any book on the list."

Notice that Spanish n-words can occur in the presence of clausemate sentential negation without inducing a double negation reading, as shown in (20a, b). Actually sentential negation is indispensable in this structures. This makes a sharp contrast with French n-words, which have the ability to negate sentences by themselves and always trigger double negation when concurrent with clausemate sentential negation, modulo a case like (12). This is virtually the only difference between Spanish n-words and French n-words, and it is this difference that forces us to analyze the former as NPIs and the latter as BPIs under their existential interpretation.

The question to address at this point is what factor is responsible for the difference between Spanish n-words and French n-words. An answer can be



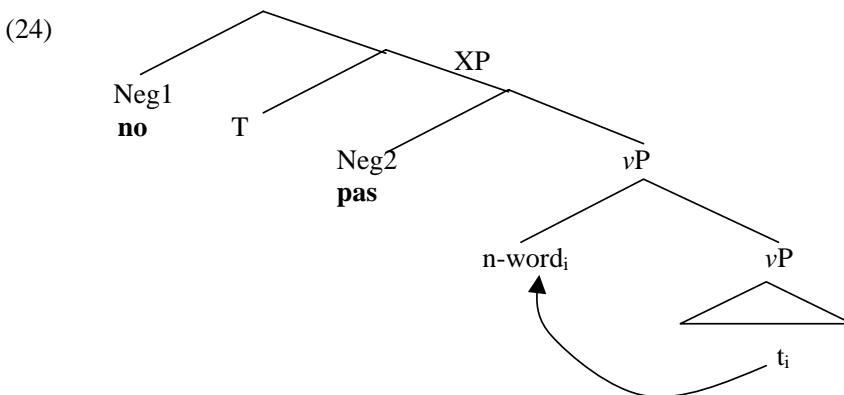
found in a work by Zanuttini (1991), who tries to correlate this difference to the difference in the syntactic position of sentential negation in the respective languages. She observes that the syntactic position of sentential negation is preverbal in Spanish (*no* always precedes the leftmost tense-carrying element) while it is postverbal in French (*pas* always follows the leftmost tense-carrying element). This difference can be interpreted as an indication that the syntactic locus of negation in Spanish is higher than T whereas that in French is lower than T, as illustrated in (21).



In addition to this factual observation, let me make two assumptions:

- (22) In order for negative expressions to take sentential scope they must c-command the syntactic locus of negation in a given language.
- (23) N-words in postverbal position undergo Quantifier Raising (QR) to  $\nu$ P-adjoined position to get interpreted (Heim and Kratzer 1998).

The result of QR is illustrated in (24).



Once these assumptions are in place, the observed difference between Spanish n-words and French n-words falls out automatically. Let us first consider why postverbal n-words can be interpreted as NPIs but not as NQs in Spanish. The answer is evident because the raised n-word does not c-command Neg1, which is the syntactic locus of sentential negation in Spanish, and is unable to take sentential scope from this position (by assumption (22)). This is why sentential negation is needed to license the postverbal n-word as an NPI.

Turning to French, let us consider why postverbal n-words can be interpreted as NQs. In this language the raised n-word does c-command Neg2 under the definition of c-command that distinguishes between category and segment. (The first branching category that dominates the  $\nu$ P-adjoined n-word is the node labeled as XP in (24), which dominates Neg2.) Thus, postverbal n-words can take sentential scope from the  $\nu$ P-adjoined position, hence no need for sentential negation.

### 5. *One Underlying Lexical Entry for the Two Meanings*

I have shown that n-words in French as well as ones in Spanish are ambiguous between NQs and EQs and that the two languages differ as to whether or not an EQ reading is available in the presence of clausemate sentential negation. A final question to be addressed in this paper is how this semantic ambiguity should be captured. A naive solution would be to say that n-words in these languages are lexically ambiguous. This is Herburger's (2001) conclusion. In this section, I would like to pursue the possibility (contra Herburger (2001)) that there is a single underlying lexical representation from which the two interpretations are derived.

I would like to propose that n-words enter the derivation with the lexical specification given in (25), where the existential operator bears two Neg-features, one of which is unvalued, as represented by [ $u$ Neg]. The unvalued feature can be valued by NPI-licensing operators. Valuation results in (26), where both Neg-features are valued. The semantic value of this form is logically equivalent to that of a plain existential quantifier, with two negations canceling each other out.

$$(25) \quad [u\text{Neg}][\text{Neg}]\exists = \sim\exists$$

$$(26) \quad [\# \text{Neg}][\text{Neg}]\exists = \sim\sim\exists = \exists$$

On this proposal, (25) is a default setting of an n-word. When an n-word occurs in a context that does not contain any NPI-licensing operator above it, it is transferred to LF in the form of [ $u$ Neg][Neg], which is interpreted as an NQ. This accounts for the fact that French n-words in (1), (3), and (4a) and Spanish n-words in (19) are interpreted as NQs. The smart reader may think that an item

with an unvalued feature is not interpretable and causes a crash of computation. I suggest that unvalued features are simply invisible at the interfaces so that [*u*Neg][Neg] will equal [Neg]. In other words, even if a structure contains an unvalued feature, it will yield a legitimate interpretation at the interface if it is informative enough. [*u*Neg][Neg] is informative enough in this sense because it is able to produce the interpretation of an NQ, despite the presence of an unvalued Neg-feature.<sup>7</sup> On the other hand, when an n-word occurs under the scope of an NPI-licensing operator, the unvalued Neg-feature gets valued so that the form in (26) will be transferred to LF and interpreted as an EQ. This accounts for the existential reading of French n-words in (5), (6) and (7) as well as Spanish n-words in (20).

A question that remains to be answered is why a postverbal n-word in French refuses to occur with clausemate sentential negation to yield a single negation reading, as seen in (4b). Under the present proposal, this means that the unvalued Neg-feature of a postverbal n-word cannot be valued by clausemate sentential negation. I claim that this can be explained by assuming that a feature valuation (Agree) can take place only between two (or more) items that are in an asymmetrical c-command relationship. If the structure depicted in (24) is correct, it follows that the *v*P-adjoined n-word and Neg<sub>2</sub> are not in an asymmetrical c-command relationship because the two c-command each other. Therefore, the feature valuation cannot take place and double negation is unavoidable in structures like (4b).<sup>8,9</sup>

---

<sup>7</sup> This does not imply any loss in the empirical coverage of the theory. All the ungrammatical structures that are ruled out under the standard theory due to the presence of an unvalued feature, say, an unvalued Case feature, can still be correctly excluded because a DP with an unvalued Case feature is not informative enough as to its morphological realization, hence causing a crash at PF. In the same vein, if an unvalued wh-feature on an interrogative complementizer reaches the interfaces, the derivation will crash at LF because such a CP will not properly be interpreted as interrogative. The details are orthogonal to the present discussion, but it is important to note that this view on unvalued features does not bring about any empirical problem.

<sup>8</sup> One of the reviewers casts a doubt on the proposal based on the syntactic locus of sentential negation, by referring to Déprez's (1999) work, where it is shown that some dialect of French (most notably Québec French) allows *pas* (whose syntactic status does not differ from that of Standard Continental French) to occur with a postverbal n-word without inducing double negation, an indication that the difference between French and Spanish is not structural. (See also Rowlett (1998) and Vinet (1998) for descriptions and analyses of negation in Québec French.) This is an obvious problem with the present proposal. One possible solution is to allow for the possibility that the unvalued Neg-feature can be valued by the valued Neg-feature within an n-word in the relevant dialects of French, but not in Standard Continental French, so that n-words will turn into an NPI-like quantifier. This would be possible by articulating the configuration of Neg-features within n-words. Space limitation prevents me from fully developing this idea, but I would like to refer the reader to Szabolcsi (2004), who also suggests a similar approach to capture the complexity of polarity items.

<sup>9</sup> An anonymous reviewer is concerned that the present proposal involves an optionality of performing an Agree operation, which can be witnessed in the fact that cases like (i) are

## 6. Conclusion

In this paper, I have demonstrated that French n-words should be analyzed as ambiguous between NQs and BPIs, contrary to preceding analyses that treat them as either NPIs or NQs and thus are bound to face empirical problems. For example, on the one hand, Rowlett's (1998) analysis of French n-words as NPIs needs to postulate a non-overt negative operator to accommodate an NQ interpretation, but the postulated operator is not merely unmotivated but gives rise to empirical problems, as briefly discussed note 4. On the other hand, the apparently more popular line of analysis that takes French n-words as NQs (e.g., Godard (2004), Mathieu (2001) and de Swart and Sag (2002)) simply neglects the fact that they can be interpreted as EQs, at least, marginally, hence it is incomplete.

The present proposal is largely in accordance with Herburger's (2001) analysis of Spanish n-words, according to which they are ambiguous between NQs and NPIs. I have shown that the difference between French n-words and Spanish n-words can be reduced to the difference between the two languages with respect to the structural position of sentential negation in the spirit of Zanuttini (1991). I suggested a way of deriving the semantic ambiguity of n-words from a unique underlying lexical representation. This is an advantage over Herburger's proposal that admits the lexical ambiguity.

This investigation has two implications. First, there exists an apparently peculiar type of polar sensitive items called BPIs not only in Slavic and Dutch but also in Romance, suggesting the possibility that this item is much more widespread in human language than is generally thought. Second, negative spread can be handled in a compositional fashion without recourse to a stipulated mechanism such as negative absorption.

## References

- Corblin, F. and H. de Swart, eds. 2004. *Handbook of French Semantics*. Stanford: CSLI Publications.
- Corblin, F., V. Déprez, H. de Swart & L. Tovenà. 2004. "Negative Concord".

---

ambiguous between single and double negation readings (a single negation reading obtains when an Agree operation takes place, and a double negation reading results when it does not.).

- (i) *Personne (n') a rien mangé*  
 n-person CL hasn n-thing eaten  
 "No one ate anything" or "Nobody ate nothing."

Normally, the issue of optionality arises when the computation can choose to perform a certain operation in the absence of a triggering feature, rather than when it can choose NOT to do so in the presence of a triggering feature. The type of optionality involved in the present proposal is the latter one as Agree is allowed NOT to apply to an unvalued Neg-feature though it is beyond the scope of this paper to decide if this type of optionality is a real problem or not.

- Corblin and de Swart 2004. 417-452.
- De Swart, H. & I. A. Sag. 2002. "Negation and Negative Concord in Romance". *Linguistics and Philosophy* 25. 373-417.
- Godard, D. 2004. "French Negative Dependency". Corblin and de Swart 2004. 351-389.
- Haegeman, L. & R. Zanuttini. 1991. "Negative heads and the Neg Criterion". *The Linguistic Review* 8. 233-251.
- Heim, I. & A. Kratzer. 1998. *Semantics in Generative Grammar*. Oxford: Blackwell.
- Herburger, E. 2001. "Negative Concord Puzzle: Revisited". *Natural Language Semantics* 9. 289-333.
- Linebarger, M. 1987. "Negative Polarity Items and Grammatical Representation". *Linguistics and Philosophy* 10. 325-387.
- Mathieu, E. 2001. "On the Nature of French N-words". *UCL Working Papers In Linguistics* 13, ed. by C. Iten & A. Neeleman. 319-352.
- Muller, C. 1991. *La négation en français*. Genève: Droz.
- Progovac, L. 1994. *Negative and Positive Polarity: A Binding Approach*. Cambridge: Cambridge University Press.
- Rowlett, P. 1998. *Sentential Negation in French*. Oxford: Oxford University Press.
- Schapansky, N. 2002. "The Syntax of Negation in French: Contrariety versus Contradiction". *Lingua* 112. 793-826.
- Szabolcsi, A. 2004. "Positive Polarity – Negative Polarity". *Natural Language and Linguistic Theory* 22. 409-452.
- Vinet, M. 1998. "Contrastive Focus, French N-words and Variation". *The Canadian journal of linguistics* 43. 121-141.
- Van der Wouden, T. 1997. *Negative Contexts: Collocation, Polarity and Multiple Negation*. London & New York: Routledge.
- Van Wyngaerd, G. 1999. "Positively Polar". *Studia Linguistica* 53. 209-226.
- Zanuttini, R. 1991. *Syntactic Properties of Sentential Negation. A Comparative Study of Romance Languages*. Ph.D.Diss., University of Pennsylvania.

# **CROSS-LINGUISTIC INFLUENCE IN BILINGUAL CHILDREN: THE CASE OF DISLOCATION**

ANNA NOTLEY, ELISABETH VAN DER LINDEN AND AAFKE HULK  
*University of Amsterdam / ACLC*

Serratrice et al. (2004) propose to extend Hulk & Müller's (2000, 2001) hypothesis on cross-linguistic influence in early child bilingualism to include cases of influence after instantiation of the C-system (i.e. at a later stage of development). In the present article, we explore whether such an extension can successfully account for the use of dislocation, a topic-marking device, in French-English and French-Dutch bilingual children. On the one hand, our results support the extended formulation of the model: we find cross-linguistic influence in the bilingual data as predicted. On the other hand, certain aspects of our results cannot be sufficiently accounted for under the extended formulation. We discuss several other factors which may interact with those cited in Hulk & Müller's model, such as input frequency, transparency of syntactic-pragmatic mapping, complexity of syntactic structures, and Chomskyian economy, which may need to be considered in future research on cross-linguistic influence.

## **1. Introduction**

Currently, most researchers agree that bilingual children are able to differentiate their two language systems from a very early age (see for example: Paradis & Genesee 1996; Müller 1998; Deuchar & Quay 2000; Döpke 2000). This view of language development has become known as the separate language hypothesis. Nonetheless, the separate language hypothesis does not exclude the possibility of systematic cross-linguistic influence. Much recent study in the area of bilingual language acquisition has concentrated on defining the factors (and in particular, the language-internal factors) involved in such cross-linguistic influence.

Hulk and Müller (2000:228) were among the first to propose an explicit hypothesis predicting when to expect cross-linguistic influence. They suggest that:

“...cross-linguistic influence...is possible only if the *two* following conditions are both met:

- (i) Cross-linguistic influence occurs at the *interface* between two modules of grammar, and more particularly at the interface between pragmatics and syntax in the so-called C-domain, since this is an area which has been claimed to create problems in L1 acquisition also.
- (ii) Syntactic cross-linguistic influence occurs only if language A has a syntactic construction which may seem to allow more than one syntactic analysis and, at the same time, language B contains evidence for just one of these possible analyses. In other words, there has to be a certain *overlap* of the two systems at the surface level.”

If these two conditions are met, it is further assumed that the *direction of influence* will be from the language containing strong evidence for a construction compatible with default discourse licensing strategies, into the language with limited evidence for such a strategy.

In 2001, Müller and Hulk expand on their idea of default discourse licensing strategies. They introduce the notion of ‘mapping induced influence’ (2001:2) to their theory, and refer explicitly to *universal pragmatic licensing strategies* which have to be translated onto language specific syntactic rules. They hold that the child begins with a minimal default grammar in which universal pragmatic strategies (such as discourse licensing) must be mapped onto language specific syntactic rules. A bilingual child presented with input which reinforces his/her default grammar may persist longer at a universal stage. Moreover, they suggest that this universal stage corresponds to a stage when the C-domain is radically underspecified.

Hulk and Müller (2000; 2001) support their hypothesis with evidence on object drop and root infinitive use in Dutch-French, German-French and German-Italian bilingual children. Germanic and Romance languages differ in their use of object drop (Germanic languages allow discourse licensing of clause-initial empty object topics, while Romance languages generally license topical objects through use of a preverbal clitic), but not in their use of root infinitives. As predicted by their hypothesis, before the C-system is in place, Germanic-Romance bilingual children use object drop in their Romance language to a higher degree than monolingual children, while they show no significant difference to their monolingual peers in terms of root infinitive use.

However, in restricting the domain of application of their hypothesis to a stage when the C-domain is still radically underspecified, Hulk and Müller cannot explain cross-linguistic influence occurring after instantiation of the C-system. Yet such influence has been shown to occur. For example, bilingual children acquiring a pro-drop and a non-pro-drop language show deviant use of lexical subjects in their pro-drop language (Paradis & Navarro 2003; Serratrice & Sorace 2003; Serratrice, Sorace & Paoli 2004), and this has been found even

after the age of 3 in the Italian-English bilinguals studied by Serratrice, Sorace and Paoli (2004). To account for this within the framework of Hulk & Müller's hypothesis, Serratrice et al. (2004) propose to extend the theory to include cases of cross-linguistic influence after instantiation of the C-system.

In fact, this extension implies another modification of Hulk & Müller's hypothesis, one not explicitly outlined by Serratrice et al. (2004). That is, after instantiation of the C-system, it will probably no longer be possible to say that cross-linguistic influence only takes place when the (apparent) overlap crucially involves a universal/default strategy and that this influence manifests itself in the form of reinforcement of this strategy. In other words, under Serratrice et al.'s 'extension', the only elements that can be retained from Hulk & Müller's original hypothesis are the two conditions formulated in the 2000 paper, namely (i) the phenomenon must involve the interface between two modules of grammar, and (ii) overlap between the two grammars must exist. Without the notion of universal default strategies, no prediction about the direction of cross-linguistic influence can be made on the basis of this proposal.

In the present article, we will explore whether such an extension of Hulk & Müller's hypothesis can successfully account for the use of dislocation, a topic-marking device and thus an interface phenomenon, in French-English and French-Dutch bilingual children (the data for the French-English children come from Notley 2004, 2005). By looking at the development of dislocation use from an early age until after age 3, we aim to determine whether cross-linguistic influence occurs both in early and later stages, or not. Because the bilingual data we have used does not allow us to establish beyond doubt at which age the C-domain is fully instantiated in the children's grammars, we have chosen to distinguish between dislocations occurring in finite utterances, considering these as examples of a more advanced stage, and dislocations occurring in utterances containing either a non-verbal predicate or a infinitival verb, considering these as examples of an early stage of development. For the sake of presentation the latter are labeled non-finite dislocations in the rest of this article.

The paper is organised as follows. In the first half of the paper, the topic systems of French, English, and Dutch will be briefly presented, with particular reference to the use of dislocation in all three languages. The frequency of these dislocation constructions in adult input to children will also be considered, as well as the acquisition pattern of dislocation structures in monolingual French, English and Dutch children. Based on these three sources of information, and working with the new formulation of Müller & Hulk's 2001 model, we will propose some exploratory predictions for dislocation use in bilingual children. In the second half of the paper, we give the results for bilingual development of dislocations in each language. Finally, we assess our findings in terms of the predictions. We will then discuss how factors not dealt



with by the new formulation of Müller & Hulk's model may be contributing to the cross-linguistic influence observed.

## 2. *Marking Topic: the role of Dislocation*

To be able to successfully manipulate information in the discourse, speakers need to organise and classify propositions exchanged. One of the means available to them to do this is by using sentence topics. Sentence topics correspond to 'the expression [in a sentence] whose referent the sentence is about'. (Reinhart 1982:5). Typically, a topic communicates old or given information.

Means of overtly signaling topic include the use of prosody contours, constituent order, and special markers or constructions. Dislocation falls into this last category, being a construction in which the topic is placed at the left or right periphery of the clause and is accompanied by a resumptive element within the clause. Not all languages use the same means to mark topic, but French, English, and Dutch all do employ some form of dislocation.<sup>1</sup> The expression of topic using dislocation is a clear interface phenomenon, because it involves the use of syntactic means to indicate a pragmatic function. As such, it fulfills the first condition of Hulk & Müller's hypothesis.

## 3. *Dislocations in the Adult Systems*

For this study, we restrict ourselves to the dislocation of subjects and objects only. Examples of left and right dislocation in the three languages being examined are given below:

### **Subject, left dislocation**

*Context: Is Peter coming tonight?*

ENG: No. Peter, he won't come.

DUT: *Nee. Peter, die komt niet.*

FRA: *Non. Pierre, il ne viendra pas.*

### **Subject, right dislocation**

?He won't come, Peter.

?*Hij/die komt niet, Peter.*

*Il ne viendra pas, Pierre.*

### **Object, left dislocation**

*Context: Have you read War and Peace?*

ENG: That book, I didn't like it.

DUT: *Dat boek, dat vind ik niet goed.*

FRA: *Ce livre, je ne l'aime pas.*

### **Object, right dislocation**

I didn't like it, that book.

*Ik vind het niet goed, dat boek.*

*Je ne l'aime pas, ce livre.*

---

<sup>1</sup> All three languages can also express topic using a construction typically called 'topicalisation', in which the topic is placed to the left side of the clause but not repeated in the form of a resumptive element within the clause. Additionally, and in contrast to French, Dutch and English can use prosody as a means of expressing topic. In Dutch this can also often be combined with topic-drop, especially when the topic is an object. We will not be concerned with any of these topic-marking means here.

As these examples show, superficially, dislocations in the three languages look similar. Syntactically, the dislocated element is normally a definite form and is accompanied by a resumptive pronoun within the clause. Pragmatically, the dislocated constituent is always a topic. In general, speakers mark topics to fulfill one or more of four major topic functions: *establishing referents* in the discourse, *maintaining referents* in the discourse, *switching or re-establishing referents* in the discourse, and *creating topical contrast*. In all three of the languages under discussion, *left* dislocation can be used to fulfill any one of these functions (to maintain, to switch, to emphasize or to contrast topics), while *right* dislocation is used primarily to maintain a topic.

There are, however, also a series of important differences between the three languages. As far as syntax is concerned, Dutch left dislocation differs from French and English in several respects. The resumptive element in Dutch is not a personal pronoun but a demonstrative pronoun that has moved from its base position to the left periphery. The finite verb has also moved to the left periphery (V2 movement). This means that when the left dislocated element is the direct object, the subject is found in post-verbal position, as shown in (1):

- (1) *Aardbeien, die lust ik niet.*  
Strawberries, those like I not

Left dislocations in Dutch are thus more complex syntactic structures than in French and English<sup>2</sup>.

As far as pragmatic properties are concerned, there are differences in the use of dislocation between the three languages. Although *left* dislocation may be

---

<sup>2</sup> In recent years, several analyses of (Romance) Clitic Left Dislocation (CLLD) and Clitic Right Dislocation (CLRD) have been defended. According to the adjunction hypothesis, CLLD involves adjunction of the dislocated constituent to the left of XP, whereas CLRD involves adjunction to the right of the same or another XP (De Cat 2003). Since, in Kayne's Antisymmetry theory, adjunction is not allowed, Kayne (1994) proposes that dislocated constituents are merged in complement position. Whereas a left-dislocated constituent moves overtly to the left, this happens covertly, i.e. at LF, in the case of CLRD. According to a third analysis (i.e. Cecchetto 1999; Villalba 1998), a clitic right-dislocated constituent moves to a TopicP in the left periphery of the VP, while a left-dislocated constituent moves to a higher TopicP, in the CP area (Rizzi 1997). In CLRD sentences, the VP-peripheral TopicP is immediately dominated by a FocusP that hosts the remainder of the sentence. A fourth analysis maintains that both left- and right-dislocated items first move leftward to or are merged in the specifier of a TopicP in the left periphery of the clause and that right dislocation results from further raising of the remnant IP to the specifier of a phrase dominating the TopicP (Cardinaletti 2002; Frascarelli 2004; Samek-Lodovici 2006). For the sake of simplicity, we adopt de Cat's adjunction analysis here, a serious discussion about the syntactic structures being beyond the scope of this article (see however Sleeman & van der Linden (2006) for arguments in favour of the third analysis on the basis of the same acquisition data as discussed here).

used in all three languages to introduce a new topic, or to indicate topic maintenance, reintroduction or contrast, only French uses all of these possibilities regularly. French also uses *right* dislocation to fulfill all topic functions except the contrastive one. Dutch and English, on the other hand, use dislocation in a more restrained way. *Left* dislocation is used mainly to indicate a contrastive topic, while *right* dislocation is mostly used to express an 'afterthought' function (clarifying a topic that is perhaps not sufficiently identified). It can also have a 'pointer' role, referring to some object that is present in the extra-linguistic context, like in (2):

(2) It's not bad, that cake

As a matter of fact, the difference in frequency of use of dislocation between the three languages is large: in English and Dutch, dislocations are rare (see Keenen, Ochs & Schieffelin 1976 for English<sup>3</sup>; Jansen 1981 for Dutch<sup>4</sup>), while in French they are frequent: we find dislocations in 50-70% of utterances containing a topic, most of them being left dislocations (Lambrecht 1987; Blasco-Dulbecco 1999; Notley 2004).

The differences and similarities between the adult topic-marking systems will be considered when making our predictions for bilingual development in this area. However, now, let us review the use of dislocations in the adult input the child is exposed to (§ 5) and the development of these constructions in monolingual children (§ 6). To do this we first present our general method of analysis, used for both adult and child speech.

#### 4. *Method of Data Analysis*

Transcripts of spontaneous adult and child speech were analysed for:

- (a) the number of utterances containing a left or right dislocation
- (b) the number of utterances providing a 'possible dislocation context'

To operationalise the notion of 'possible dislocation context', the syntactic property of definiteness of a referent was used (as an indicator of givenness), where this was possible. Although the relationship between givenness (a property of the referent) and topic (a relationship between the referent and the

---

<sup>3</sup> Additionally, in our own analyses of the spontaneous speech of two adult English speakers, based on a 15-minute conversation between two female friends recorded by Christine Kitamura in the early 1990s, counting both subject and object NP topics, we found that in contexts where marking topic was pragmatically possible, the speakers used non-topicalised NPs about 95% of the time, and only used overt topic constructions about 5% of the time. Of these constructions, 2.5% were left dislocations, and 2.5% were topicalisation structures.

<sup>4</sup> Jansen (1981) looks only at left dislocations.

proposition) is not absolute (not all given referents make good topics, not all topics are given), this property was seen as the best way to provide an objective and reliable means of coding the data. However, an effort was also made to take into account the relationship between the referents in question and the overall discourse context. This was especially important in early child utterances, when determiners were still frequently dropped. Only core argument referents (agents, goals, and recipients) were considered for this study. In French, mass noun objects, taking the resumptive clitic element *en* (roughly equivalent to 'of it') were also included.

The following criteria were defined and then applied in our analysis of utterances. Definite given referents in the third person were considered as possible topics. This included both lexical NPs and third person pronominal forms. First and second person referents were considered as possible topics in topic shifting or topic contrast contexts. The demonstrative *that* (in French *ça* and in Dutch *dat/die*) was counted as a possible topic only when referring to an NP and not a full predication. Overall, any argument appearing in a chain of reference was only counted as a possible topic once (unless topic re-establishment was contextually appropriate). Cleft constructions (a type of focus construction), repetitions and fragments (utterances without a clear subject and/or object) were discarded. On the basis of this classification, the percentage of left and right dislocation use for each speaker was calculated for each transcript as a function of the total number of contexts in which dislocation was pragmatically acceptable.

### 5. *Dislocations in the Adult Input*

We analysed the adult input to the three monolingual subjects used in this study (Philippe for French, Trevor for English, Laura for Dutch) in order to establish average rates of use of left and right dislocation in the input for French, English, and Dutch.

In French, it was found that in contexts where dislocation was pragmatically possible, Philippe's parents used NPs that were not marked for topic about 56% of the time, and overt topic constructions the other 44% of the time. Of these constructions, 30% were right dislocations and 13.5% were left dislocations<sup>5</sup>. These results confirm other reports that French adults use more right dislocations than left when speaking to young children (de Cat 2003; Labelle & Valois 1996). In English, it was found that in contexts where dislocation was pragmatically possible, Trevor's father overwhelmingly continued to choose a basic word order strategy, with a small percentage of left dislocation use. In Dutch, it was found that in contexts permitting dislocation, Laura's mother also overwhelmingly used basic word order constructions

---

<sup>5</sup> The remaining 0.5% were topicalisation constructions.

(90%)<sup>6</sup>, along with a small percentage of right dislocation constructions (7%) and left dislocation (2%). These results are summarized in Figure 1.

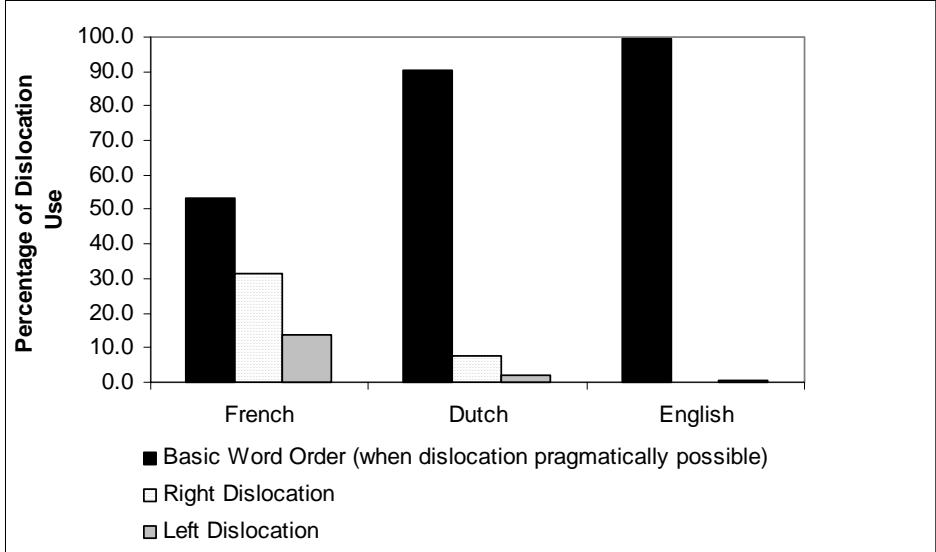


Figure 1: Use of Topic Constructions in Child Directed Speech

Overall, these results show clearly that French adults use the highest frequency of dislocation constructions when speaking to children, with a preference for right dislocations. Note that this is markedly different from their use of dislocations in adult-to-adult speech, in which left dislocations are most common. This might be due to the pragmatic role of such constructions. Right dislocations are topic maintenance devices and may be used to keep a child's attention on a subject. They are also often used as pointers to objects in the immediate non-linguistic context and conversations with children are often about this context.

In English and Dutch, children hear hardly any dislocations in the input. Those that they do hear are to the left in English and almost exclusively to the right in Dutch. In English, no right dislocations are found in the input.

<sup>6</sup> Because Dutch is a V2 language, both SVO and XVS were considered basic word orders.

## 6. *Dislocations in Monolingual Child Utterances*

### 6.1 *Subjects*

The monolingual child speech used in this study comes from the CHILDES database. All the transcripts record approximately 20-30 minutes of a free play session and the children were tracked at roughly comparable 3- to 6-month intervals starting around age 2;0 (when enough structure was in place to allow for useful quantifiable analysis).

The spontaneous speech of two monolingual French children, Philippe and Anne, one monolingual English child, Trevor, and one monolingual Dutch child, Laura, was analysed. Philippe was recorded from age 2;1.19 to age 3;3.12 and originally used in a study by Suppes, Smith & Léveillé (1973; cited in Ferdinand, 1996). For this study, transcripts were used from ages 2;1.19, 2;6.20, 3;0.20, and 3;3.12. Anne was recorded from age 1;10.12 to age 3;5.4 and is one of three children in the York corpus (her data was collected under the supervision of Bernadette Plunkett and she was the subject of studies by Plunkett (2003) and de Cat (2003, 2004)). For this study, transcripts were used from ages 2;0.27, 2;3.15, 2;6.2, 3;0.10, and 3;5.4. Trevor was recorded from age 2;0.27 to 3;11.27 and is one of four children in the Demetras corpus. For this study, transcripts were used from ages 2;0.27, 2;6.7, 3;0.8, 3;3.4, and 3;10.23. Laura was recorded from age 2;1.2 to age 3;4 by Jacqueline van Kampen and was the subject of several studies by this author (Van Kampen 2000, 2004). For this study transcripts were used from ages 2;1.2, 2;4, 2;6.24, 2;10.13, 3;2, 3;4.

### 6.2 *Modifications to Data Analysis for Child Data*

In the child data, identification of dislocations was complicated by the fact that children have grammars which initially license subject drop. This meant that in French and English (SVO languages), declarative utterances containing a post-verbal subject NP without a co-occurring subject pronoun, like in (3), were counted as right dislocations alongside utterances containing both a subject pronoun and post-verbal subject NP.<sup>7</sup>

- 3) *est pas belle, le bébé* ANNE 2;0.27  
is not beautiful, the baby

In Dutch, the presence of a post-verbal subject was not sufficient to categorise an utterance as a right dislocation, because both SVO and XVS are possible

---

<sup>7</sup> It has been argued convincingly elsewhere, using both syntactic and phonological data, that such utterances are indeed instantiations of right dislocations in child French (Ferdinand 1996; de Cat 2003; Labelle & Valois 1996). Interrogative utterances with post-verbal subjects (e.g. *où est maman?* "where is Mummy?"), however, were not classified as right dislocations in the absence of a subject clitic.

basic word orders (Dutch being a V2 language). In other words, utterances like (4) were not considered to be examples of right dislocation.

- (4) *daar loopt de poes*  
there goes the cat

Instead, in finite child Dutch utterances, only constructions in which the subject occurred at the right edge of the clause with an intervening element between verb and subject, as in (5), were counted as right dislocations.

- (5) *loopt weg de poes*  
goes away the cat

In counting left dislocations in the child data, utterances in French containing a pre-verbal tonic pronoun, but no subject clitic, were counted as left dislocations alongside utterances with both a pre-verbal NP subject and subject clitic, as in (6).

- (6) *moi a tout bu* PHI 2;1  
me has drunk everything

On the other hand, because research shows that in child language objects are omitted much less frequently than subjects (Jakubowicz, Müller, Riemer & Rigaut 1997), object dislocations were only counted when a co-occurring object pronoun was also present. This meant that, in English and French, objects occurring post-verbally, in the absence of a co-occurring object pronoun, were considered to be in base position. Objects occurring pre-verbally, in the absence of a co-occurring object pronoun, were considered to be topicalisation constructions.

Additionally, in the analysis of the child data, we did not limit ourselves to finite utterances because the children already produce dislocation-like structures before finiteness is acquired. Utterances without a finite verb (labeled here as 'non-finite') were only considered if they contained at least a 'predicate' (verbal or non-verbal) and a 'subject' or an 'object'. Deciding whether such utterances contained a dislocation was done by considering the position of the elements relative to basic word order. For example, utterances like:

- (7) *malade Anouk* ANO 2;4  
(she) sick Anouk  
(8) *in de bank Sophie de slak* ANN 2;7  
(she) in the couch Sophie the snail

were taken to be dislocations because of the post-predicate position of the subject in French and Dutch, even if the subject pronoun and the verb were dropped.

### 6.3 *Monolingual Child Results*

For each child, the relative number of finite and non-finite left and right dislocations is compared to the number of utterances in which dislocation would have been pragmatically possible in each transcript.

6.3.1 *French Monolingual Data.* Results for the development of left and right dislocation in Philippe and Anne are given in Tables 1 and 2.

| <b>Philippe</b> | <b>2;1</b> | <b>2;6</b> | <b>3;0</b> | <b>3;3</b> |
|-----------------|------------|------------|------------|------------|
| LDFinite        | 2          | 0          | 7          | 25         |
| RDFinite        | 31         | 36         | 23         | 33         |
| LDNon-fin       | 1          | 0          | 0          | 0          |
| RDNNon-fin      | 14         | 5          | 0          | 0          |
| Disl possible   | 28         | 41         | 58         | 40         |

Table 1: *Philippe: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Philippe's utterances:

- (9) *dans le pantaloon ton verre* PHI 2;1.19  
in the pants, your glass
- (10) *ça marche pas le micro* PHI 2;1.19  
it works not the microphone
- (11) *la tour Montparnasse elle est pas belle* PHI 3;0.20  
the Montparnasse tower, it's not beautiful

| <b>Anne</b>   | <b>2;0</b> | <b>2;3</b> | <b>2;6</b> | <b>3;0</b> | <b>3;5</b> |
|---------------|------------|------------|------------|------------|------------|
| Ldfin         | 3          | 3          | 36         | 16         | 43         |
| Rdfin         | 9          | 6          | 24         | 8          | 15         |
| LDnon-fin     | 0          | 1          | 6          | 0          | 3          |
| RDNnon-fin    | 1          | 2          | 7          | 0          | 1          |
| Disl possible | 17         | 9          | 16         | 18         | 27         |

Table 2: *Anne: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*



Examples of Anne's dislocations:

- (12) *le bébé, i(l) pleure.* ANNE 2;0.17  
 the baby, he's crying
- (13) *tu peux le mettre, ça?* ANNE 3;5.4  
 Can you put it on, that?

From these tables we see that left dislocations are rare at the younger ages and that they are practically always found in finite utterances. In contrast, right dislocations are more frequent in early stages and can appear in both finite and other ('non-finite') utterances. These then gradually drop off, while the rate of left dislocation increases. Eventually the children should reach a stage in which they are using more left dislocation than right, approximating the adult model (Anne has already reached this stage by age 2;6.2, whereas Philippe is moving towards it at age 3;3.12).

This picture of development is conform to the input received in French, and could also reflect the pragmatic complexity and transparency of right and left dislocation. Maintaining a topic introduced by an adult, or introducing a referent easily recoverable in the immediate non-linguistic environment (right dislocation), may be perceived of as simpler or more transparent than establishing or switching to a new topic (left dislocation). As the child develops, building structure and simultaneously acquiring a better understanding of the different roles topic may play in the discourse, we see a switch to using more left dislocations.

6.3.2 *English Monolingual Data.* Results for the development of dislocations in Trevor are given in Table 3.

| Trevor        | 2;0 | 2;6 | 3;0 | 3;3 | 3;10 |
|---------------|-----|-----|-----|-----|------|
| Ldfin         | 0   | 1   | 0   | 1   | 0    |
| Rdfin         | 0   | 0   | 0   | 0   | 0    |
| LDnon-fin     | 0   | 0   | 0   | 0   | 0    |
| RDnon-fin     | 0   | 0   | 0   | 0   | 0    |
| Disl possible | 26  | 24  | 43  | 37  | 46   |

Table 3: *Trevor: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Example of Trevor's dislocations:

- (14) but the other guy who wears a black hat he's bad TRE 3;3.4

On the basis of the English adult system, we would expect dislocations to be rare, and we would expect them to be left dislocations. This is confirmed by the data: Trevor does not produce any right dislocations and only very few left dislocations.

6.3.3 *Dutch Monolingual Data*. Results for the development of dislocations in Laura are to be found in Table 4.

| Laura      | 2;1 | 2;4 | 2;6 | 2;10 | 3;2 | 3;4 |
|------------|-----|-----|-----|------|-----|-----|
| LDFin      | 0   | 0   | 0   | 0    | 1   | 0   |
| RDFin      | 0   | 2   | 2   | 1    | 1   | 0   |
| LDNon-fin  | 0   | 1   | 0   | 0    | 0   | 0   |
| RDNNon-fin | 4   | 7   | 0   | 1    | 0   | 0   |
| Disl poss  | 15  | 42  | 9   | 16   | 9   | 17  |

Table 4: *Laura: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Laura's dislocations:

- (15) *nee, isse mij bauwe* LAU 2;4  
no, this is mine, the blue one
- (16) *die ga oor opeets, dese* LAU 3;2  
that one goes ear eat, this one

We see that, in the first files studied, Laura does not produce any left dislocations, but quite a lot of right dislocations (although the absolute numbers are small, she uses right dislocations in up to 18% of possible contexts at ages 2;4 and 2;6). In addition, in early stages, non-finite dislocations outnumber finite dislocations. The use of dislocation then steadily decreases, until at age 3;4 she does not use any dislocation.

Laura's pattern of development is not entirely expected: she uses more right dislocation than she hears in the input. One might speculate that, because this construction maps to a clear pragmatic function, one of maintaining a topic, the child opts to exploit it regardless of input frequency information.<sup>8</sup> On the other hand, the fact that left dislocations are almost absent from the input is probably the principal explanation for the fact that we do not find them in the child's utterances either. One might speculate moreover that the diversity of possible constructions in Dutch makes the left periphery more complex to

<sup>8</sup> Interestingly, most right dislocated elements are demonstrative pronouns in Laura's data, stressing their 'pointer' function.

acquire than it is in French and English (see however note 2). While French and English both have a stable basic SV(X) word order which allows left dislocation as a simple adjunction to the left side of the sentence, in Dutch left dislocation occurs in combination with fronting constructions (where topic as well as focus may be fronted) and with a tendency to drop object topics when they are not contrastive. This could be another reason why we do not find left dislocation in child Dutch, neither in early nor in later stages.

### 7. *Predictions for Bilingual Development*

Returning now to Hulk & Müller's hypothesis for cross-linguistic influence, let us consider what predictions the extended formulation makes for the development of dislocations in French-English and French-Dutch bilingual children. We have already pointed out that dislocation is clearly an interface phenomenon, satisfying the first condition of the hypothesis. In order to satisfy the second condition, we must determine whether syntactic overlap of left and right dislocation use exists between the language pairs.

#### 7.1 *Left Dislocation*

All three languages have some form of Left Dislocation (LD). However, different syntactic constraints and frequency of use of these constructions creates a situation of overlap for the language pair French-English. While in French LD of both subjects and objects of all three persons is equally likely, in English only 3<sup>rd</sup> person referents are likely to be left dislocated. In addition, LD is relatively frequent in French input to children and in monolingual child speech, but only occurs infrequently in English input and in monolingual child speech. Thus the bilingual child is presented with, on the one hand, lots of positive evidence for left dislocation of referents of all three persons in French, and on the other hand, positive evidence for only dislocating referents in the third person (along with lots of positive evidence for not dislocating at all) in English. This situation of overlap leads us to predict that cross-linguistic influence will occur. Whether this influence will result in a smaller amount of left dislocations in the bilingual children's French or a greater amount of left dislocations in the bilingual children's English cannot be predicted by the new formulation of Hulk & Müller's hypothesis, as we argued in the introduction.

In Dutch, similarly to English, LD is very infrequent in the input and in monolingual child utterances. However, in addition, Dutch LD has a different and more elaborated syntax in adult speech than in French. We have briefly shown that the syntax of Dutch, which at the surface level looks somewhat similar to French, is really rather different: the resumptive pronoun is a fronted demonstrative pronoun and when this is an object, subject-verb inversion takes place. Moreover, the landing site for the resumptive element and the V2 element is different from that of French. Therefore, it is difficult to assert that any

overlap exists between the two systems, particularly in the ears of children. As such, we do not predict any cross-linguistic influence to occur for French-Dutch bilingual children with regards to left dislocation use.

### 7.2 *Right Dislocation*

All three languages have some form of Right Dislocation (RD). It is not clear, however, whether any overlap exists between the language systems. At first glance the use of RD in the three languages does indeed seem to satisfy the condition of overlap. In French, RD of both subjects and objects of all three persons is equally likely, while in Dutch and English only 3<sup>rd</sup> person referents are likely to be right dislocated. However, input frequency and monolingual child data complicate this picture.

In Dutch RD is relatively infrequent in the input compared to French. However, RD seems to be common in French and Dutch child speech, meaning there is probably no situation of conflict for the French-Dutch bilingual child in learning to use this type of construction. We might expect the two languages to reinforce each other, but whether this results in any quantitative difference in use of RD by a bilingual child is questionable. In English, RD is absent from the input and from monolingual child speech. It is therefore unlikely that a French-English bilingual child will perceive a situation of overlap at all. Thus, we do not predict any cross-linguistic influence to occur for these children with regards to right dislocation use.

## 8. *Results: Dislocations in Bilingual Child Utterances*

The spontaneous speech of three French-English bilingual children, Olivier, Gene, and Jeremy (all three available on CHILDES), and three French-Dutch bilingual children, Anouk, Annick, and Thomas (from the UvA corpus) was analysed. Both Olivier and Gene were recorded by Paradis, Nicoladis, and Genesee and subsequently used in several studies by these authors (e.g. Paradis & Genesee 1996; Paradis et al. 2000). Both boys are first-born with no siblings at the outset of data collection. Each has an English-speaking mother and Quebec French speaking father who claim to be using the 'one parent, one language' strategy. Language samples in an English context were collected for Gene at ages 2;7.5, 3;0.20, and 3;7.9, and in a French context at ages 1;10.28, 2.6.29, 3.0.14 and 3.7.17. Language samples in an English context were collected for Olivier at ages 2;6.3, 2;9.7, 2;10.29, 3;6.9. and in a French context at 2;3.13, 2;9.(2+10), 2;10.29 and 3;6.14. According to MLU measures in the boys' two languages, comparative vocabulary size, and parental reports on language exposure, Gene was classified as a balanced bilingual from the age of 2;0, while Olivier was classified as dominant in French (Paradis et al. 2000).

Jeremy was recorded by Watkins between the ages of 2;5 and 2;9.<sup>9</sup> There are only English data available for this child. He has an English-speaking father and French speaking mother, and does not appear to have any siblings. Recordings are primarily with the father in English. When the mother is present during recording, she also addresses Jeremy in English, but occasionally code-switches. Transcripts are generally shorter than for Olivier and Gene, corresponding to 2-8 minutes of speech.

Anouk, Annick, and Thomas were recorded by Hulk & van der Linden and used in several studies by these authors (e.g. Hulk & van der Linden 1996; van der Linden 2000; Hulk & Müller 2000; van der Linden & Blok-Boas 2005). Anouk is the only child of a French mother and a Dutch father. Annick is the first-born child of a French father and a Dutch mother. She has a younger sister, born when Annick was 2;6. Thomas is the first-born child of a French mother and a Dutch father. He has a younger brother, born when Thomas was almost 3 years old. All parents claim to be using the 'one parent, one language' strategy. All the children go to a Dutch language nursery for three or four days a week. Analyses of the data of the three children, measuring MLU, MMU, Upper Bound, and vocabulary richness show that Annick and Anouk are balanced bilinguals (in the first files Anouk is slightly dominant in French), while Thomas is dominant in Dutch (Berkhout-Gerrits 2006). For this study, we analysed the following files: Annick 2;7, 2;9, 3;2, 3;4 (in Dutch and French); Anouk 2;5, 2;9, 2;10, 2;11 (in Dutch) and 2;4, 2;5, 2;7+8, 2;9, 2;11, and 3;4 (in French); Thomas 1;10, 2;1, 2;3, 2;7, 3;3 (in Dutch) and 1;10, 2;1, 2;3, 2;7, 3;0 (in French).

For each child, the relative number of finite and other ('non-finite') left and right dislocations is compared to the number of utterances in which dislocation would have been pragmatically possible in each transcript. Mixed language utterances were not included.

## 8.1 *Results for the French-English Bilinguals*

8.1.1 *English.* The results for the English files of Gene, Olivier, and Jeremy are given in Tables 5, 6 and 7, each followed by some examples of the children's utterances.

---

<sup>9</sup> No study using this data has been published.

| Gene (Eng)    | 2;7.5 | 3;0.20 | 3;7.9 |
|---------------|-------|--------|-------|
| Ldfin         | 0     | 2      | 4     |
| Rdfin         | 1     | 3      | 2     |
| LDnon-fin     | 0     | 1      | 0     |
| RDnon-fin     | 0     | 0      | 0     |
| Disl possible | 18    | 25     | 31    |

Table 5: *Gene: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Gene's English dislocations:

- (17) and this <#> [>] this a yy ? GEN 3;0.14<sup>10</sup>  
 (18) Batman he's dead there GEN 3;0.20  
 (19) it's stuck your car GEN 3;7.9  
 (20) me I want a Christmas candy GEN 3;7.9

| Olivier (Eng) | 2;6 | 2;9 | 2;10 | 3;6 |
|---------------|-----|-----|------|-----|
| Ldfin         | 2   | 0   | 2    | 2   |
| Rdfin         | 0   | 0   | 0    | 1   |
| LDnon-fin     | 0   | 0   | 0    | 0   |
| RDnon-fin     | 0   | 0   | 0    | 0   |
| Disl possible | 10  | 32  | 21   | 18  |

Table 6: *Olivier: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Olivier's English dislocations:

- (21) the big woman, she's down [/] down step OLI 2;6.3  
 (22) <the ball (&dIs)> [//] give [/] give [//] put it  
 down and I # hit it OLI 2;10.29  
 (23) Mommy what she doing Johanne? OLI 3;6.9

<sup>10</sup> This utterance is not a very sure example of a left dislocation; it could also be an instance of hesitation rather than a true LD.

| <b>Jeremy (Eng)</b> | <b>2;5</b> | <b>2;6</b> | <b>2;9</b> |
|---------------------|------------|------------|------------|
| Ldfin               | 0          | 0          | 0          |
| Rdfin               | 3          | 0          | 0          |
| LDnon-fin           | 0          | 0          | 0          |
| RDnon-fin           | 0          | 0          | 0          |
| Disl possible       | 19         | 7          | 2          |

Table 7: *Jeremy: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Jeremy's English dislocations:

- (24) it's # small one this # Daddy JER 2;5.11  
 (25) is a big one this? (Ø Subj: it) JER 2;5.11

Overall, the results for French-English bilingual children show that although these children are developing more or less in line with an English topic marking model, they are nonetheless producing more dislocation constructions, both to the left and right, than a monolingual English child. While Trevor's rate of use of left dislocation hovers between 2-4% and he uses no right dislocation, the bilingual children reach rates of use of up to 16% for left dislocation, and 13% for right dislocation, in contexts in which dislocation would have been possible (including both finite and non-finite utterances).

8.1.2 *French*. The data for French for Gene and Olivier are given in the Tables 8 and 9. There are no data for Jeremy's French.

| <b>Gene (Fr)</b> | <b>1;10</b> | <b>2;6.29</b> | <b>3;0.14</b> | <b>3;7.17</b> |
|------------------|-------------|---------------|---------------|---------------|
| LDFin            | 0           | 1             | 5             | 24            |
| RDFin            | 0           | 1             | 11            | 3             |
| LDNon-fin        | 0           | 0             | 1             | 1             |
| RDNon-fin        | 0           | 3             | 2             | 11            |
| Disl. Poss       | 5           | 12            | 9             | 16            |

Table 8: *Gene: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Gene's French dislocations:

- (26) où les mets les cartes? GEN 2;6.29  
 where put them the cards?

- (27) *oui # le garçon y [il] va là* GEN 3;0.14  
yes, the boy he goes there
- (28) *<à moi> [/] à moi soulier* GEN 3;0.14  
mine shoe

| Olivier (Fr) | 2;3 | 2;9 | 2;10 | 3;6 |
|--------------|-----|-----|------|-----|
| LDFin        | 0   | 2   | 3    | 5   |
| RDFin        | 16  | 0   | 8    | 5   |
| LDNon-fin    | 0   | 0   | 1    | 2   |
| RDNNon-fin   | 11  | 1   | 2    | 2   |
| Disl poss    | 30  | 5   | 10   | 24  |

Table 9: *Olivier: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Olivier's French dislocations:

- (29) *Qu'est-ce qu'il fait le serpent?* OLI 2;3  
what's it doing the snake?
- (30) *Moi n'a pas des autres autos* OLI 2;9-2;10  
me don't have the other cars

The results show that the children's development in French is parallel to that of monolingual French children. They start with more right dislocations and gradually left dislocations take over. There is however a difference in the relative numbers of finite and non-finite utterances. The non-finite utterances seem to persist longer in the bilingual children's French than in the monolinguals.

## 8.2 Results for the French-Dutch Bilinguals

8.2.1 *Dutch.* Our results for the Dutch files of Anouk, Annick, and Thomas are given in Tables 10, 11, and 12.

| Anouk (Du) | 2;5 | 2;9 | 2;10 | 2;11 |
|------------|-----|-----|------|------|
| LDFin      | 0   | 0   | 1    | 0    |
| RDFin      | 0   | 0   | 1    | 2    |
| LDNon-fin  | 0   | 0   | 0    | 0    |
| RDNNon-fin | 1   | 0   | 1    | 0    |
| Disl.poss  | 4   | 2   | 11   | 6    |

Table 10: *Anouk: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*



Examples of Anouk's Dutch dislocations:

- (31) *was ook buiten de olifant* ANO 2;11  
 was also outside the elephant
- (32) ( $\emptyset$  Subj: *dit*) *groen dit* ANO 2;10  
 this is green this

| <b>Annick (Du)</b> | <b>2;7</b> | <b>2;9</b> | <b>3;2</b> | <b>3;4</b> |
|--------------------|------------|------------|------------|------------|
| LDFin              | 0          | 0          | 0          | 0          |
| RDFin              | 1          | 1          | 2          | 0          |
| LDNon-fin          | 0          | 0          | 0          | 0          |
| RDNNon-fin         | 4          | 1          | 0          | 0          |
| Disl.poss.         | 5          | 13         | 12         | 10         |

Table 11: *Annick: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Annick's Dutch dislocations:

- (33) *viele op bille soldaatjes* ( $\emptyset$  Subj: *ze*) ANN 2;7  
 (they) fell on their buttocks, the soldiers
- (34) *in de bank Sophie de slak* ( $\emptyset$  Subj: *ze*) ANN 2;7  
 (she) in the couch Sophie the snail

| <b>Thomas (Du)</b> | <b>1;10</b> | <b>2;1.</b> | <b>2;3</b> | <b>2;7</b> | <b>3;3</b> |
|--------------------|-------------|-------------|------------|------------|------------|
| LDFin              | 0           | 0           | 0          | 0          | 0          |
| RDFin              | 0           | 1           | 1          | 1          | 1          |
| LDNon-fin          | 0           | 0           | 0          | 0          | 0          |
| RDNNon-fin         | 1           | 5           | 0          | 0          | 0          |
| Disl poss          | 0           | 22          | 14         | 8          | 22         |

Table 12: *Thomas: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Thomas' Dutch dislocations:

- (35) *uit dit* THO 1;10  
 out this  
 "This has to go out."
- (36) *nee, dat kan niet naar binne, motor* THO 2;3  
 no, that cannot enter, (the) motor
- (37) *is Winnie the Pooh dat* ( $\emptyset$  Subj: *het*) THO 2;8  
 (it) is Winnie the Poo, that

These results show that the numbers of dislocations used in Dutch by the bilingual children is small, perhaps even somewhat smaller than for the Dutch monolingual girl Laura in absolute figures. However, when we look at the percentages of use of right dislocations in relation to the sentences where dislocation would have been pragmatically possible, these percentages are similar to those for monolingual Laura. All in all, then, the children seem to be developing more or less in line with the Dutch monolingual model. Like Laura, they start off using a certain number of right dislocations, but no left dislocations. Then again, like in Laura's data, right dislocations disappear somewhere around age 3;5.

8.2.2 *French*. Our results for the French files of Anouk, Annick and Thomas are given in Tables 13, 14, and 15.

| <b>Anouk (Fr)</b> | <b>2;4</b> | <b>2;5</b> | <b>2;7+8</b> | <b>2;9</b> | <b>2;11</b> | <b>3;4</b> |
|-------------------|------------|------------|--------------|------------|-------------|------------|
| LDFin             | 0          | 0          | 2            | 0          | 36          | 41         |
| RDFin             | 0          | 1          | 2            | 2          | 17          | 10         |
| LDNon-fin         | 0          | 0          | 0            | 0          | 3           | 0          |
| RDNNon-fin        | 4          | 0          | 4            | 0          | 3           | 0          |
| Disl poss         | 7          | 4          | 4            | 0          | 9           | 14         |

Table 13: *Anouk: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Anouk's French dislocations:

- (38) *Amasse caillou Anouk* ANO 2;5  
 gets pepple Anouk
- (39) *Ça c'est pour Sophie* ANO 2;8  
 that it is for Sophie

| <b>Annick (Fr)</b> | <b>2;7</b> | <b>2;9</b> | <b>3;2</b> | <b>3;4</b> | <b>3;5</b> |
|--------------------|------------|------------|------------|------------|------------|
| LDFin              | 8          | 1          | 3          | 3          | 10         |
| RDFin              | 3          | 0          | 2          | 0          | 3          |
| LDNon-fin          | 4          | 0          | 0          | 0          | 2          |
| RDNNon-fin         | 5          | 4          | 2          | 0          | 3          |
| Disl poss          | 8          | 13         | 13         | 15         | 4          |

Table 14: *Annick: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Annick's French dislocations:

- (40) *Petit bois on le met là* ANN 2;7  
 Little wood we put it there
- (41) *C'est sale çui-là* ANN 2;7  
 It is dirty, that one

| Thomas (Fr) | 1;10 | 2;1 | 2;3 | 2;7 | 3;0 |
|-------------|------|-----|-----|-----|-----|
| LDFin       | 2    | 1   | 3   | 7   | 0   |
| RDFin       | 1    | 0   | 0   | 0   | 0   |
| LDNon-fin   | 2    | 2   | 3   | 11  | 0   |
| RDNon-fin   | 8    | 1   | 0   | 0   | 0   |
| Disl poss   | 11   | 22  | 4   | 15  | 4   |

Table 15: *Thomas: Dislocations in finite and non-finite utterances and the number of utterances where dislocation would have been pragmatically possible but was not produced*

Examples of Thomas' French dislocations:

- (42) *Woef il dodo* THO 1;10  
 doggie he sleeping
- (43) *Balle elle est où balle?* THO 1;10  
 ball it is where ball
- (44) *Maman elle a fait le rouge* THO 2;7.10  
 Mummy she made the red one

We see that for these children development in French is not as straightforward as in the French monolinguals and the French/English bilingual children. In the first place, we see that for Annick and Thomas the number of left dislocations is surprisingly high from the beginning. We also see that, like for the French-English children, the presence of non-finite dislocations persists for longer than in the monolingual French data. We will come back to these findings in the discussion. In the final stages of development, the pattern of dislocation use conforms to monolingual French: right dislocations become less frequent, left dislocations become more frequent.

Overall, the results show that both French-English and French-Dutch bilingual children are developing slightly differently from their monolingual peers in the domain of topic marking. There does indeed seem to be cross-linguistic influence in their development of dislocation structures. In the next section we will discuss these data in the light of the predictions we made.

## 9. *Discussion*

On the basis of the adult systems, the child directed speech, and the development of monolingual children in the three languages under study, we argued that the extended formulation of Hulk & Müller's hypothesis predicted that:

- there could be cross-linguistic influence for left dislocation in the French-English language pair but not in the French-Dutch one.
- there should not be cross-linguistic influence for right dislocation in either language pair (although there could be some reinforcement between French and Dutch)

As far as left dislocations are concerned, the predictions seem to be largely borne out in the data of the bilingual children. French-English bilingual children produce more left dislocations in their English than monolingual English children, while French-Dutch bilingual children do not use any left dislocations in their Dutch. Interestingly, there is only one instance of non-finite left dislocation in the children's English and Dutch data (for Gene at age 3;0), and this utterance could also be considered to be an instance of hesitation (see footnote 10). In their French however, as for French monolinguals, 'non-finite' left dislocations appear throughout the data set. In fact, the bilingual children appear to produce more 'non-finite' left dislocations in their French than monolingual children over a longer period of time. However, this quantitative developmental difference probably has little to do with the specific area of dislocation. Rather, it could reflect a (slight) delay and slower development of finite utterances in general in the French of these bilingual children (see also Hulk (2001) who shows such a delay for Anouk).

Note that while bilingual development of left dislocation is largely in line with the predictions, two aspects of the results do require further explanation. Firstly, the direction of cross-linguistic influence in the French-English children needs to be accounted for. Secondly, the fact that this influence seems to take place primarily in finite utterances also needs to be accounted for.

As far as right dislocations are concerned, the predictions are only partially borne out in the data. On the one hand, French-Dutch bilingual children do produce right dislocations in their Dutch and, calculated in percentages of possible occurrences, their use of this construction is slightly higher than for the monolingual Dutch child. However, as these percentages are high in the monolingual Dutch children as well, and at the same time the absolute numbers are small, it is difficult to say whether there is an influence of French. On the other hand, French-English children also produce right dislocations in their English and this result was not expected since we did not

find any overlap in the input between French and English and monolingual English children did not produce any right dislocations. Again, interestingly, these right dislocations only occur in finite utterances: there are no instances of non-finite right dislocations in the French-English children's English. However, these do appear fairly frequently in the French-Dutch children's Dutch and in all the children's French, as for Dutch and French monolinguals. Similarly to left dislocation use in French, bilingual children produce slightly more non-finite right dislocations in their French over a longer period of time than monolingual French children.

The comparisons of non-finite and finite dislocations has allowed us to see that although dislocations occur in non-finite utterances, *cross-linguistic influence seems to be manifested primarily in the form of finite dislocations*. Recall that we considered finite utterances to represent a more advanced stage of development in which, according to the original formulation of Hulk & Müller's hypothesis, no cross-linguistic influence was expected to occur. Under the new, extended version, however, influence *is* predicted to occur in a later developmental stage. From this perspective, our results support the extension of Hulk & Müller's hypothesis. The new formulation cannot explain, however, why cross-linguistic influence should only occur in this more advanced stage and not earlier.

Moreover, the (extended) hypothesis can no longer make any predictions about direction of influence. Nonetheless, we observe some clear directionality in our results. For the French-English pair, this influence goes *from French to English* in the form of the use of more left dislocations in English than in monolingual data and of the appearance of right dislocations in English while these are absent from the monolingual data. For the French-Dutch pair, the direction of influence, if there is any, is less clear. There may be some minimal influence from French to Dutch in the form of more right dislocations in the children's Dutch. However, this pattern of development can also be explained by monolingual Dutch development.<sup>11</sup>

Overall, then, some of our results are not adequately explained by the predictions:

- (a) Why do we see right dislocations in French-English children's English?
- (b) Why does influence go from French to English for both left and right dislocations?

---

<sup>11</sup> That French-Dutch children also use slightly more left dislocations in their French at an early age is a puzzling result which cannot easily be explained by an influence of Dutch on French, as we have seen that the Dutch system of left dislocation is syntactically different from the French system. Moreover, left dislocation is virtually absent from the Dutch input. However, numbers are very low, and more research is necessary here.

- (c) Why do we mainly see this influence in a later stage, i.e. in finite utterances?

Factors other than syntactic overlap must be at work here. In what follows we would like to explore what some of these factors might be, looking both at *when* cross-linguistic influence may occur, and how we can predict the *direction* that influence will go in.

Our measures of input frequency have shown that right dislocation is very frequent in French input. Is it possible that the sheer frequency of this construction creates a situation in which cross-linguistic influence is likely to occur, even in the absence of syntactic overlap? Paradis & Navarro (2003) have also considered such a frequency effect in relation to bilingual acquisition, showing that their results for the use of pro-drop by a Spanish-English bilingual child could be equally well explained by the type of input their subject receives. While such an explanation appears promising, our data cannot be accounted for on an input frequency basis alone. Otherwise, we could just as well argue that the high frequency of non-dislocated utterances in the English input should push French-English bilingual children to dislocate less in their French. Moreover, we do not see a direct mirror of French monolingual child frequencies in the bilingual children. The French-English children produce more or less equal amounts of left and right dislocations in their English, even though French monolingual children produce many more right dislocations than left in early stages. Instead, input frequency must be interacting with other factors to determine direction and degree of influence.

We believe one of these factors may be the transparency of mapping of syntactic form to pragmatic function. Our description of the topic marking systems of the three languages under study showed that right dislocation maps overwhelmingly to a single topic marking function, that of maintaining a topic. Moreover, this function could be considered the simplest of topic functions in comparison with the other three functions; establishing, switching, and contrasting a topic all require greater control of the conversation dynamics than merely maintaining a topic already under discussion. Could it not be that the clear pragmatic function of right dislocation accounts for the direction of influence observed? Indeed, the idea that right dislocation might be an early pragmatically preferred topic-marking strategy finds some independent support in the Dutch monolingual data. Although adults only use this construction to a small degree, Dutch children use it in much higher frequencies. Moreover, in the monolingual and bilingual French data we see that initially right dislocations outnumber left dislocations. In future research, these findings could be considered in the light of observations made for other Romance child languages such as Spanish (cf. Grinstead 2004) where lexical subjects appear first (and

more frequently) in post-verbal position than in pre-verbal position (which has been generally analysed as a topic position).

Another factor possibly interacting with input frequency could be the original condition of syntactic overlap outlined in Hulk & Müller's hypothesis. This would explain why we do not see large numbers of right dislocation as compared to left dislocation in the French-English bilingual children's English. Since there is no structural overlap with English in the case of right dislocation, the rates of use of this structure are not as high as for left dislocation, for which structural overlap exists. It is also possible that other factors within the syntactic module are contributing to the developmental picture. Notably, the degree of syntactic complexity of the constructions under examination may come into play. We have seen that young French and Dutch monolingual children invariably use more right dislocation than left at early stages of development. Pragmatic factors could explain this (and in the case of French, input frequency factors also appear to play a role). However, it may *also* be that right dislocation is syntactically less complex than left dislocation, prompting children to use it earlier and more frequently. That is, the child may have to build up his/her left periphery before a slot becomes available for productive left dislocation use, while a slot may be more readily available for right dislocation use. During bilingual development, this difference in syntactic complexity may be contributing to the unexpected use of right dislocation in English.

As for the question of why the cross-linguistic influence from French to English mainly occurs in finite utterances, we do not yet have a satisfying answer. We think, however, that this question should be considered alongside the more general development of finite utterances in both monolingual and bilingual French-English children.

## 10. *Conclusion*

On the one hand, our results seem to support the extended formulation of Hulk & Müller's model, as sketched in the introduction: we did find cross-linguistic influence occurring in an area of the grammar representing an interface phenomenon (between the syntactic and the pragmatic modules), when the condition of syntactic overlap was met. Moreover, this influence was found mainly in finite utterances, i.e. in a later developmental stage. On the other hand, our results also show that the extended formulation of Hulk & Müller's model is *not sufficient* to account for the use of dislocation in French-English and French-Dutch bilingual children. We have considered several other factors to account for the cross-linguistic influence found in our data, such as input frequency, transparency of syntactic-pragmatic mapping, and complexity of syntactic structures. We may wonder now whether these factors also play a role

in early stages of development or whether there are different mechanisms at work at different stages.

Looking first at some early data, let us consider Hulk & Müller's original object drop data in Germanic-Romance bilinguals. We could certainly argue that the first factor suggested above (a high input frequency of a certain construction) is playing a role. German presents the bilingual child with lots of positive evidence for object drop. However, it is more difficult to argue that dropping the object provides the child with a more transparent mapping of syntax to pragmatics than cliticisation (the strategy used by the Romance languages to mark given object information). What object drop does provide the children with is a 'simpler' syntactical means of marking object topics and it is thus no surprise that this strategy also corresponds to a universal default strategy used by children across languages. Thus, an explanation for cross-linguistic influence based on reinforcement of default strategies makes good sense in this case, although this reinforcement may be working in combination with some of the other factors mentioned above.

Looking now at some later developmental data in the literature, let us consider Serratrice et al.'s (2004) data on pro-drop in Italian-English bilinguals, cited in the introduction. The fact that these children produce less pro-drop in their Italian than Italian monolinguals can also only be partially accounted for by the factors outlined above. The input frequency of non-pro-drop sentences in English is, of course, overwhelming. However, the input frequency of pro-drop sentences in Italian must also be fairly high. Why does influence go from English to Italian? If we invoke our explanation based on transparency of syntactic-pragmatic mapping, we might expect the pro-drop strategy to be adopted into English. Italian provides the child with two different syntactic forms, corresponding to two different pragmatic functions (given subject, new subject). The English option confuses these two: both given and new subjects appear in the subject slot, differentiated only by the use of a pronominal form. Nonetheless, we see the English non-pro-drop option adopted into Italian. In this case, there seems to be yet another factor at work, that of economy (in the Chomskyan sense). Producing lexical subjects in a pragmatically unconstrained way could be more economical for the child than having to constantly distinguish between given and new subjects.

It is thus difficult to explain the data on cross-linguistic influence in bilingual children with a single hypothesis. Such influence is probably due to a number of factors and their interaction. Moreover the particular factors involved may be language-pair-specific. The challenge for future research will be to define these factors and their interaction more clearly. In particular, the investigation of other language pairs demonstrating different areas of overlap may allow us to gradually identify how syntactic considerations, pragmatic



considerations, and input frequency work together to determine patterns of development.

### References

- Berkhout-Gerrits, L. 2006. "Tester l'hypothèse du lierre". Ms., University of Amsterdam.
- Blasco-Dulbecco, M. 1999. *Les dislocations en français contemporain. Etude syntaxique*. Paris: Champion.
- Cardinaletti, A. 2002. "Against optional and null clitics. Right dislocation vs. marginalization". *Studia Linguistica* 56. 29–57.
- Cecchetto, C. 1999. "A comparative analysis of left and right dislocation in Romance". *Studia Linguistica*, 53:1. 40-67.
- De Cat, C. 2003. "Syntactic manifestations of very early pragmatic competence". *Proceedings of the 27<sup>th</sup> Annual Boston University Conference on Language Development*, ed. by B. Beachley, A. Brown & F. Conlin, vol.2, 209-219. Somerville (Mass.): Cascadilla Press.
- 2004. "French dislocation without movement: a minimalist account". Ms. University of York.
- Deuchar, M. & S. Quay. 2000. *Bilingual Acquisition: theoretical implications of a case study*. Oxford: Oxford University Press.
- Döpke, S. 2000. "The inter-play between language-specific development and cross-linguistic influence". *Cross-linguistic Structures in Simultaneous Bilingualism*, ed. by Suzanne Döpke, 79-103. Amsterdam & Philadelphia: John Benjamins.
- Ferdinand, A. 1996. *The Development of Functional Categories: the acquisition of the subject in French*. Dordrecht: ICG Printing.
- Frascarelli, M. 2004. "Dislocation, clitic resumption and minimality". *Romance Languages and Linguistic Theory 2002*, ed. by R. Bok-Bennema, B. Hollebrandse, B. Kampers-Manhe & P. Sleeman, 99-118. Amsterdam & Philadelphia: John Benjamins.
- Grinstead, J. 2004. "Subjects and Interface Delay in Child Spanish and Catalan". *Language*, 80:1. 40-72.
- Hulk, A.C.J. 2001. "L'acquisition des pronoms clitiques français par un enfant bilingue français-néerlandais". *Revue canadienne de linguistique* 45:1/2. 97-117.
- & E. van der Linden. 1996. "Language mixing in a French-Dutch bilingual child". *Toegepaste Taalwetenschap in Artikelen* 55, 89-103.
- & N. Müller. 2000. "Bilingual first language acquisition at the interface between syntax and pragmatics". *Bilingualism: Language and Cognition* 3:3. 227-244.
- Jakubowicz, C., N. Müller, B. Riemer and C. Rigaut. 1997. "The case of subject and object omissions in French and German". *Proceedings of the 21<sup>st</sup>*

- Annual Boston University Conference on Language Development*, ed. by E. Hughes, M. Hughes & A. Greenhill, 331-342.
- Jansen, Frank. 1981. *Syntaktische konstrukties in gesproken taal*. Amsterdam: Huis aan de Drie Grachten.
- Kayne, R. 1994. *The Antisymmetry of Syntax*. Cambridge (Mass.): MIT Press.
- Keenan, E., Ochs, E. & B. Schieffelin. 1976. "Foregrounding referents: a reconsideration of left-dislocation in discourse". *Berkeley Linguistics Society* 2, ed. by H. Thompson et al., 240-257.
- Labelle, M. & D. Valois. 1996. "The status of post-verbal subjects in French child language". *Probus* 8:1. 53-80.
- Lambrecht, K. 1987. "On the status of SVO sentences in French discourse". *Coherence and Grounding in Discourse*, ed. by R. Tomlin, 217-262. Amsterdam & Philadelphia: John Benjamins.
- Müller, N. 1998. "Transfer in bilingual language acquisition". *Bilingualism, Language and Cognition* 1:3. 151-171.
- & A. Hulk. 2001. "Cross-linguistic influence in bilingual language acquisition: Italian and French as recipient languages". *Bilingualism: Language and Cognition* 4:1. 1-21.
- Notley, A. 2004. "The acquisition of topicalisation structures in French-English bilinguals: testing models of cross-linguistic influence". Ms., University of Amsterdam.
- 2005. "French-English bilingual acquisition of topic structures: analysing the roles of structure, function, and input frequency". Ms. University of Amsterdam.
- Paradis, J. & F. Genesee. 1996. "Syntactic acquisition in bilingual children: autonomous or independent?" *Studies in Second Language Acquisition* 18:1. 1-25.
- Paradis, J., E. Nicoladis. & F. Genesee. 2000. "Early emergence of structural constraints on code-mixing: evidence from French-English bilingual children". *Bilingualism: Language & Cognition* 3:3. 245-261.
- Paradis, J. & S. Navarro. 2003. "Subject realization and cross-linguistic interference in the bilingual acquisition of Spanish and English: what is the role of the input?" *Journal of Child Language* 30. 371-393.
- Plunkett, B. 2003. "Null subjects and the setting of subject agreement parameters in child French". *Romance Linguistics, Selected papers from the 32nd Linguistic Symposium on Romance Languages (LSRL), Toronto, April 2002*, ed. by A. Teresa Pérez-Leroux & Y. Roberge, 351-366. Amsterdam & Philadelphia: John Benjamins.
- Reinhart, T. 1982. *Pragmatics and linguistics: an analysis of sentence topics*. Distributed by *Indiana University Linguistics Club*, Bloomington, Indiana.

- Rizzi, L. 1997. "The fine structure of the left-periphery". *Elements of grammar: a handbook of generative syntax*, ed. by Liliane Haegeman. Dordrecht: Kluwer, 281-337.
- Samek-Lodovici, V. 2006. "When right dislocation meets the left-periphery". *Lingua* 116. 836-873.
- Serratrice, L. & A. Sorace. 2003. "Overt and null subjects in monolingual and bilingual Italian acquisition". *Proceedings of the 27<sup>th</sup> Annual Boston University Conference on Language Development* vol. 2. 739-750.
- Serratrice, L., A. Sorace, & S. Paoli. 2004. "Subjects and objects in Italian-English bilingual and monolingual acquisition". *Bilingualism: Language and Cognition* 7. 183-206.
- Sleeman, P. & E. van der Linden. 2006. "Clitic Dislocation in 2L1 acquisition: cross-linguistic influence at the edge of phrases". Presentation at the Conference "Interface legibility at the edge", Bucharest, June 2006.
- Van der Linden, Elisabeth. 2000. "Non-selective access and activation in child bilingualism: the Lexicon". *Cross-linguistic structures in simultaneous Bilingualism*, ed. by Susanne Döpke. 37-57. Amsterdam & Philadelphia: John Benjamins.
- & A.M. Blok-Boas. 2005. "Exploring possession in simultaneous bilingualism: Dutch/French and Dutch/Italian". *Eurosla yearbook 2005*, ed. by Foster-Cohen, Susan H., María del Pilar García-Mayo and Jasone Cenoz, 103-135.
- Van Kampen, J. 2000. "Left branch extraction as operator movement: Evidence from child Dutch". *The Acquisition of Scrambling and Clitization*, ed. by S.M. Powers & C. Hamann. 479-503. Norwell: Kluwer.
- 2004. "An acquisitional view on optionality". *Lingua* 114. 1133-1146.
- Villalba, X. 1998. "Right dislocation is not right dislocation". *Studies on the syntax of central Romance languages*, ed. by O. Fullana & F. Roca. 227-241. Girona: Universitat de Girona.

# CARTOGRAPHY OF POSTVERBAL SUBJECTS IN SPANISH AND CATALAN

FRANCISCO ORDÓÑEZ  
*SUNY Stony Brook*

Subjects in post-verbal position in Romance have been assumed to be in *an in situ* Spec VP position in many recent analyses in their V S O order (Motapayane 1995, Ordóñez 1998, Costa 2000, Alexiadou & Anagnostopoulou 2001, Cardinaletti 2001). In this paper, we will give arguments for an alternative view in which post-verbal subjects in this order are moved to at least to an Spec positions above VP, which I will call SubjP, and below the final landing site of verbs in TP. Arguments in favor of this characterization come from the comparison of Catalan and Spanish, which differ minimally in patterns of subject inversion with respect to quantifiers, adverbs and restructuring contexts. This work presents new evidence that a richer inflectional structure in the postverbal field leads to a more parsimonious account for parametric difference in patterns of subject distribution in closely related languages.

## 1. *One versus two postverbal subject positions*

Spanish postverbal subjects, like Portuguese ones (Ambar 1992, Costa 2000) and Romanian ones (Motapanyane 1995), can appear in more than one position when they appear with other complements. Subjects can appear before or after DP objects or PP complements:

- (1) a. *Hoy comprará Juan comida.* (VSO)  
today will buy Juan a meal
- b. *Hoy comprará comida Juan.* (VOS)  
today will buy a meal Juan  
“Juan will buy the meal today.”
- (2) a. *Hoy hablará Juan de Barcelona.*  
today will speak Juan about Barcelona
- b. *Hoy hablará de Barcelona Juan.*  
today will speak about Barcelona’ Juan  
“Today, Juan will speak about Barcelona.”

This variability in the available positions of subjects is not restricted to argumental complements. Adjectivals in small clauses can show the same possibilities as in examples in (3):

- (3) a. *En Irak resultaron varias personas heridas.*  
 In Irak resulted various peopleinjured  
 b. *En Irak resultaron heridas varias personas*  
 In Irak resulted injured various people.  
 “In Irak, a number of person were injured.”

Similarly, subjects might precede or follow infinitivals depending on modal verbs:

- (4) a. *Por fin puede Juan dormir.*  
 At last can Juan to sleep  
 b. *Por fin puede dormir Juan.*  
 At last, can to sleep Juan  
 “At last, Juan can sleep.”


Alexiadou & Anagnostopoulou (2001) and Ordóñez (1998) assumed that subjects that precede complements and predicates represent the *in situ* order in which subjects project thematically higher than other complements and predicates:

- (5) [ [VP SUB [ VP NP/PP/ADJ ] ] ]

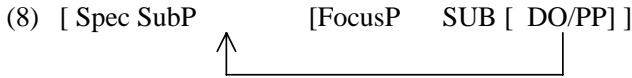
In this paper I consider an alternative view in which subjects are displaced to a higher inflectional projection which I will consider to be Spec SubP. Under this alternative view subjects equally precede complements but subjects are not in their *in situ* thematic position:

- (6) [SubjP SUB<sub>i</sub> [VP t<sub>i</sub> [ NP/PP/ADJ ] ] ]

The crucial question is whether subjects are in the same position or not in both alternating orders in (1-4). In the *in situ* proposal one can assume that complements and predicates move optionally above VP to yield the alternating orders:

- (7) [VP SUB [ NP/PP/ADJ ] ]  


The alternative proposal in (8) can account for the alternation if two subject positions are involved. There is a higher SubjP and a lower Focus P according to Belletti and her analysis of postverbal subjects in Italian. Complements and predicates must necessarily move to a higher projection than Focus P, as has been proposed by Jayaseelan (2001) Zubizarreta (1998).<sup>1</sup> The alternating orders are a result of whether a higher SpecSubjP or a lower Spec FocP is occupied by the subject.



In this paper I will show that alternative (6) is empirically superior to the *in situ* approach, and it can better account for the parametric differences between Spanish and Catalan.

1.1 *Catalan and Spec SubjP*

Catalan, contrary to Spanish, does not allow the variability we saw above for Spanish. Catalan postverbal subjects must precede complements and predicates. This is shown in the following contrasts reported in the literature (Solà 1992, Roselló 2002, Vallduví 2002):

- (9) a. \**Avui comprarà en Joan el menjar.*  
           today will buy    en Joan        the lunch.
  - b. *Avui comprarà el menjar en Joan.*  
           today will buy    the lunch     Joan.
- “Today, Juan will buy the lunch.”

Catalan does not allow subjects to precede predicates of subcategorized small clauses of raising verbs as shown in (11):

- (10) a. \**Avui van resultar molts soldats ferits.*  
           today were            many soldiers injured
  - b. *Avui van resultar ferits molts soldats.*  
           today were            injured many soldiers
- “Today, many soldiers were injured.”

---

<sup>1</sup> In the case of Zubizarreta (1998) these movements are prosodically motivated. In the case of Jayaseelan (2001) this movement is just a licensing movement of complements to their canonical order in Malayalam.

And Catalan does not allow subjects between modals and infinitives (Picallo 2000). Subjects must follow the infinitive as shown in the following contrasts:

- (11) a. \**Finalment pot en Joan dormir.*  
 Finally can Joan to sleep  
 b. *Finalment pot dormir en Joan.*  
 Finally can sleep en Joan  
 “Finally, Joan can sleep.”

Thus, the *in situ* hypothesis for the alternating orders of complement and postverbal subjects, must make movement obligatory for Catalan but optional for Spanish. Alternatively, if one assumes that two different positions for subjects are at play, the parametric variation is reduced to the fact that the higher Spec SubjP position is not made available in Catalan. We have a notable example in the literature in Germanic in favor of this second line of analysis. Bobaljik & Jonas (1996) proposed that a higher postverbal Spec TP is made available in Icelandic but not in English Transitive Expletive Constructions (TEC).

- (12) \*There has someone eaten an apple.

- (13) *Það hafa margir jólasveinar borðað þuðing.*  
 there have many Christmas trolls eaten pudding  
 “Many Christmas trolls have eaten pudding.”

Our proposal is to extend this distinction beyond Germanic and beyond Transitive Expletive constructions. The Spec SubjP hypothesis claims that subjects are higher in the V S Complement orders. In the next sections I turn to evidence that shows that this is the case for Spanish subjects when they precede complements.

### 1.2 *Leftward movement of quantifiers and the position of the subject*

A very important observation that confirms that subjects are higher than VP is shown by testing the position of subject with respect to complements that are known to have moved to the left of the VP. For instance, Kayne (1975) shows that quantifier *tout* in French, contrary lexical DP's, must necessarily move further to the left of past participles:

- (14) *Jean a [tout] mangé [\*tout].*  
 Jean has all eaten [\*all]  
 “Jean has eaten everything.”

Spanish does not show the order in (14) because it seems that past participles in Spanish must move further to the left of the moved quantifier than French past participles (see Nicolis 2001 for similar observation in Italian).

- (15) *Juan se lo había comido todo.*  
 Juan to him it had eaten everything  
 “Juan has eaten everything.”

However, as pointed out by Rizzi (1996), there is a way to test movement of the quantifier *todo* to the left when we observe its interaction with the manner adverbs ‘well’ *bien* and ‘bad’ *mal*. Since these adverbs are to the left edge of the VP, we expect *todo* to necessarily move left of the adverb as shown in (16):

- (16) a. *(lo) hace todo bien Pedro.*  
 it make all well Pedro  
 “Pedro makes it all well.”  
 b. *Lo ve todo claro Pedro.*  
 It sees all clear Pedro  
 “Pedro sees it all clearly.”

Observe that the alternative order is ungrammatical:<sup>2</sup>

- (17) a. *\*?Aquí (lo) hace bien todo Pedro.*  
 Here it makes well all Pedro  
 b. *\*?Aquí lo ve claro todo Pedro.*  
 Here It sees clear all Pedro

The contrast above clearly shows that as in French and Italian, object quantifier *todo* must move to the left of manner adverbs. In these constructions, we observe that subject floating quantifiers must precede object quantifiers:

- (18) a. *Las estudiantes lo hacen todas todo bien.*  
 The students-FEM it do all-FEM everything well

---

<sup>2</sup> For some speakers the sentence might be available only under a right dislocation reading of the subject. The fact that there is not contrast for those speakers is not relevant since we might have a focus reading of *TODO* in sentence (17). The important contrast for this hypothesis is when *bien* and *todo* are not focused there is a relevant contrast on the order in which they appear. The contrasts are clearer in sentences with a negative quantifier and infinitive.

(i) *Por no hacerlo todo bien NADIE.*  
 (ii) *\*Por no hacerlo bien todo NADIE.*



- b. \**Las estudiantes lo hacen todo todas bien.*  
 The students-FEM it do everything all-FEM well  
 “The students all do everything well well.”
- (19) a. *Mis compañeros lo hacen ambos todo bien.*  
 My classmates it do both all well  
 b. \**Mis compañeros lo hacen todo ambos bien.*  
 My classmates it do all both well  
 “My classmates both do everything well.”

Similar to the behavior of floating quantifiers, subjects must precede the quantifier *todo* in these contexts as shown in the contrasts in (20):

- (20) a. *Ayer lo hizo/encontró Juan todo bien.*  
 Yesterday it did Juan all well  
 b. \**Ayer lo hizo/encontró todo Juan bien.*  
 Yesterday it did/found all Juan well  
 “Yesterday Juan did/found everything well”

The facts make us conclude that subjects are not *in situ* in these examples but they are further to the left than adverbs and the moved quantifier *todo*. Thus, the data points out to the analysis in which subjects move to SubjP, which is higher than the landing site of the quantifier:

- (21) [SubjP Juan[ *todo* [ *bien* [VP
- ↑
- \_\_\_\_\_

As expected Catalan disallows subjects in those same positions:

- (22) a. \**Ahir ho van fer els nois tot bé.*  
 yesterday it made the boys all well  
 “Yesterday the boys made it all well.”  
 b. \**Ahir ho va fer en Joan tot bé.*  
 yesterday it made Joan all well  
 “Yesterday Joan made everything well.”

Since Spanish subjects are in a higher Spec SubjP position, we expect them to license floating quantifiers in any lower inflectional projection the subject has been through. The prediction is borne out as shown in the following example<sup>3</sup>:

<sup>3</sup> Other relevant examples that show the same point:

- (i) Por no hablar los profesores pacientemente todos a sus respectivos estudiantes.  
 For not speaking the professors patiently all to their respective students.

- (23) *Entonces trataban mis vecinos cuidadosamente ambos a su hija.*  
 Then treated my neighbors carefully both their daughter  
 “My neighbors both treated their daughter carefully.”

The structure would be analyzed as follows:

- (24) [TP trataban [SubjP mis vecinos [vP cuidadosamente [vP ambos  
 [VP a su hija

### 1.3 *The special behavior of pronominals and the Auxiliary have Plus Past Participle*

Rizzi (1996) and Ordóñez (2000) point out that the sequence of finite auxiliary *have* plus past participle cannot be broken up by the subject:

- (25) \**Ayer no nos lo había tu hermana dicho.*  
 Not not to us it had your sister said  
 “Your brother had not told us.”

In this respect Spanish clearly differs from Icelandic (TEC) where subjects in Spec TP position are above past participle according to Jonas & Bobaljik (1996):

- (26) *Það hafa jólasveinar borðað búaðing.*  
 there have many Christmas trolls eaten pudding

The differences between Icelandic and Spanish simply show that past participles in Spanish move higher than past participles in Icelandic. As we saw in the previous section, the contrast above recalls the contrast found between French and Italian with respect to the distribution of object quantifier *tutto*. Thus, Italian does not permit *tutto* to interfere between auxiliary and past participle according to Nicolis (2001):

- (27) \**Gianni aveva tutto mangiato.* (Nicolis 2001)  
 Gianni had all eaten

Similarly, the contrast between Icelandic and Spanish suggests that the landing site of subjects in Spec SubjP Spanish is below the landing site of past participles, while it is higher in Icelandic:

---

For some speakers the sentences seem to be degraded or ungrammatical. I assume that this deviance is related to the fact that in those dialects Floating quantifiers are not allowed in an in situ position inside the VP complex.

- (28) [ Auxiliary Have [ Past participle [ SubjP subject ]]] (Spanish)  
 [ Auxiliary Have [TP subject [ Past participle ]]] (Icelandic)

However, not all types of subjects are banned from such a position. Sánchez López (1993) points out that the pronominal subject *usted* can naturally appear between the auxiliary and the past participle. The same observation can be extended to other pronouns<sup>4</sup>:

- (29) *Había usted dicho que lo lograría.* (From Sánchez López 1993:281)  
 Have you said that I would do it  
 “You had already said that you would do it.”
- (30) *Ya les había yo dicho a éstos que....*  
 already had I said to these people that  
 “I had already said to these people that...”

The special behavior of subject pronouns recalls the special behavior of object pronouns in Scandinavian with respects to object shift. For instance in Swedish only pronouns are able to undergo object shift (Holmberg & Platzack 1995):

- (31) *Johan läste \*boken / den [inte t]* [Swedish]  
 Johan read the book/it not  
 “Johan didn’t read the book.”

The difference between pronominal and not pronominal elements has been taken by Johnson (1991) as evidence that this type of pronouns can move further to the left. For instance the contrasts in English in (32) can be understood as a case in which the pronouns are so far to the left that the participle always appear to its right.

- (32) a. John threw it over  
 b. \*John threw over it

---

<sup>4</sup> The contrasts between pronominals and lexical DP’s disappears with a different modality. Lexical DP’s are allowed in (i):

(i) En caso de que hubiera el lector percibido alguna contradicción entre  
 In case that the reader had-subj perceived any contradiction between...

If subjunctive and modals move higher than indicative ones, the facts suggest that a higher modal projection is involved in these examples. Subjects might be also licensed in this higher modal projection, contrary to subjects in pure indicative clauses.

Therefore, it is logical to analyze (29) and (30) as examples in which this pronoun has shifted further to the left than the final landing site of the past participle.

(33) [ Auxiliary Have[ Subject pronominals [ Past participle [SubjP ]]]]

The pronominals that appear between the auxiliary *have* and the past participle can be considered to be weak pronouns in the sense of Cardinaletti & Starke (1999). Some tests prove that they behave like weak pronouns. For instance, they resist coordination and modification in this position<sup>5</sup>:

- (34) a. \**Había usted y él dicho que lo lograría.*  
 had you and he said that he would make it  
 “You and he had said that you would make it.”  
 b. \**Había sólo usted dicho que lo lograría.*  
 had only you said that he would make it  
 “Only you had said that you would make it.”

Catalan lacks the licensing of this subject shift altogether as shown in (35):

- (35) \**Havia vostè dit que ho aconseguiria.*  
 Had you said that you will make it  
 “You had said that you will make it.”

#### 1.4 *Manner adverbs*

An additional argument for having subjects in a higher position comes from the interaction between subjects, determinerless objects and manner adverbials. Manner adverbs might intervene between the determinerless DP and the verb as shown in the following Spanish examples:

- (36) a. *No sabía que pintase bien cuadros.*  
 Not knew that painted well pictures  
 “I did not know that he painted pictures well.”  
 b. *Allí dibujaba cuidadosamente paisajes.*  
 there drew-Imp carefully landscapes  
 “There she drew landscapes carefully.”

As we had assume before, we take *bien*, *mal* are merged to the left of the VP Cinque (1999) and Costa (1997):

---

<sup>5</sup> The pronominal elements that permit this behavior are not clitics since they can involve sometimes bimorphemic pronominals such as *usted* or *nosotros*.

(37) [verb.....[ [ *bien/mal*.....[VP..... DP object ]]]]

Objects might precede these adverbials. We assume that this is due to movement of the object above the position of the adverb *bien*<sup>6</sup>:

(38) *Allí pinta cuadros bien.*  
There paints pictures well

(39) *Alli dibujaba paisajes cuidadosamente.*  
there drew-Im landscapes carefully.  
“There, S/he drew landscapes carefully.”

Subjects precede the objects in this configuration, therefore subjects must be higher than the landing site of objects and to the left of manner adverbs:<sup>7</sup>

(40) *Allí pintan tus hermanos cuadros bien*<sup>8</sup>.  
There paints your siblings pictures well  
“Your siblings paint pictures well.”

(41) *Allí dibujaba Marisa paisajes cuidadosamente.*  
there Drew-Imp Marisa landscapes carefully  
“Marisa drew landscapes carefully.”

There is a clear contrast between the examples above and examples in which the subject and object follow the adverbials:

(42) \*?*Allí Pintan bien tus hermanos cuadros.*  
There Paint well your siblings pictures

(43) \*?*Alli dibujaba cuidadosamente Marisa paisajes.*  
there drew-Imp carefully Marisa landscapes

The ungrammatical structure would presumably correspond to an analysis in which the subject is in Spec VP above the base position of the determinerless object:

<sup>6</sup> The movement could be similar to scrambling and it might be permitted only when the manner adverb receives final focus stress. Zubizarreta (1998).

<sup>7</sup> For an analysis in which objects in English move to the left of these adverbs see Johnson (1991).

<sup>8</sup> For some speakers I consulted the sentence is only permitted with heavy focus on *bien*. See footnote 6 for the licensing of *bien* in final position.

(44) \*[verb.....[ [Manner adverbs.....[VP Subject.....]]] Det-less DP]]

Catalan, and Italian according to Rizzi (1996), contrasts with Spanish. Subjects cannot precede adverbials like *bien*, *mal*. This is due to the fact that subjects cannot access a higher projection to the left of adverbs in these languages:

- (45) a. \**No pinta en Joan bé.* (Catalan)  
 Not paints Joan well.  
 “Joan does not paint well.”
- b. \**Non dipinge Gianni bene* (Italian)  
 Not paints Gianni well
- c. \**No pinta en Joan quadres bé.* (Catalan)  
 Not paints Joan pictures well  
 \**Non dipinge Gianni quadri bene*  
 Not paints Gianni pictures well

The contrasts between Spanish on the one hand and Catalan and Italian on the other with respect to the relative distribution of these adverbs and the subject are also a very important argument against a right adjunction alternative for adverbs. If right adjunction of adverbs was made available by UG, one would have to assume the rather odd proposal that right adjunction above the subject is possible in Spanish, but impossible in Catalan and Italian. However, this would go against the standard assumption that there is free ordering with respect the adjunction operation.

Another similar argument can be made with respect to the behavior of deadjectival adverbials. These adverbials show a very restricted distribution (Bartra & Suñer 1997) as in (46):

(46) *La Mafia no juega limpio a las cartas.*  
 La Mafia not plays clean to cards  
 “La Mafia does not play fair with cards.”

(47) *Silvina trabajaduro en esta cuestión.*  
 Silvina works hard on this question  
 “Silvina works hard on this question.”

For instance, these adverbials cannot be separated by a complement, as has been shown by Bosque (1989) and Suñer (1994)<sup>9</sup>:

<sup>9</sup> Some speakers do not find the contrast reported by Bosque (1989) and Suñer (1994). For those speakers movement of the object above this deadjectival adverbs is possible.

- (48) a. \*?Pedro no juega a las cartas limpio. (from Suñer 1994)  
 Pedro not play with cards clean  
 “Pedro does not play fair with cards.”  
 b. \*?Silvina trabaja en esta cuestión duro.  
 Silvina works on this question hard  
 “Silvina works hard on this question.”

The fact that no complement is allowed before this deadjectival adverbs, indicates that they are higher than any possible landing site of complements moved to the left. Observe the contrast between these deadjectival adverbs in (48) and the previous manner adverbs in (49):

- (49) a. Pedro no juega a las cartas bien.  
 Pedro not plays cards well  
 b. Silvina trabaja en esta cuestión bien.  
 “Silvina works on this question well.”

The scheme of the different position of adverbs is in (50):

- (50) [verb.....[ [Deadjectival Adverbs [Complements [ Manner adverbs ]]]

Subjects can appear before these deadjectival adverbials as shown by Suñer (1994). Therefore, Spec SubjP must be higher than deadjectival adverbs<sup>10</sup>:

- (51) No creo que aquí juegue la mafia limpio a las cartas.  
 Not think that here plays the Mafia clean to cards  
 (52) No creo que trabaje Silvina duro en esta cuestión.  
 Not think that worked Silvina hard on this question

While Spanish allows this high position above manner adverbs, determinerless DP with manner adverbials and deadjectival adverbs, the position is consistently unavailable in Catalan:

- (53) \*Aquí juga la mafia brut.  
 Here plays the mafia dirty  
 “The mafia plays dirty, here.”

<sup>10</sup> For the dialects that permit movement of the object above the position of the deadjectival adverb, the relevant contrast is the following (again with heavy stress on the final deadjectival adverb):

- (i) No creo que trabaje usted/Silvina en esta cuestión DURO  
 (ii) \*No creo que trabaje en esta cuestión usted/Silvina DURO

From our perspective this is not surprising since this higher subject Spec SubjP position is not available for subjects in Catalan in general. Again, a right adjunction alternative would be at odds with the fact that these deadjectival adverbials could be to the right of subjects in Spanish but not in Catalan.

In conclusion, we have shown Catalan lacks a subject position, the one which appears before the complements and predicates, which we assume to be Spec SubjP. Thus, a uniform explanation of the facts involving manner adverbs, deadjectival adverbs, leftward movement of object quantifiers and insertion of pronouns between auxiliary and past participles can be given from this perspective if we assume the existence of this higher Spec SubjP in Spanish, but not in Catalan.

#### 1.5 *Spec SubjP and restructuring effects*

Spec SubjP is also licensed in non finite contexts as in (54). Similar examples are shown in Torrego (1998). We find the following contrasts between Spanish and Catalan:

- (54) a. *Antes de comprar Luis manzanas*  
Before of buying Luis the apples  
b. \**Abans de comprar Lluís pomes*  
before of buying Lluís apples  
“Before Lluís bought apples.”
- (55) a. *Sin haberle comprado Juan manzanas*  
Without having bought Juan apples  
b. \**Sense haver comprat en Joan pomes*  
Without having bought Joan apples  
“Without having Joan bought apples.”

In exploring the possible distribution of subjects in SubjP we observe that they might appear between modal and infinitives and also between infinitive and complements of the infinitive (See Costa 2004 for similar facts in Portuguese).

- (56) a. *Hoy no quieren los estudiantes leer las novelas.*  
today no want-INF the students to read the novels  
b. *Hoy no quieren leer los estudiantes las novelas.*  
today no want read-INF the students the novels  
“Today, the students don’t want to read novels.”
- (57) a. *Hoy no debería María estar cansada.*  
today not should María be-INF tired  
b. *Hoy no debería estar María cansada.*  
today not should be María tired  
“Today María should not be tired.”



As expected, the two internal positions of the subject are ungrammatical in Catalan. Only the one with the postverbal subject at the end is grammatical:

- (58) *Avui no deuen (\*els estudiants) llegir (\*els estudiants) les novel·les (els estudiants).*

Not should (\*the students) read-INF (\*the students) the novels ( the students)

“The students should not read novels.”

- (59) *Avui no pot (\*en Joan) estar (\*en Joan) cansat (en Joan).*

Not can you Joan be-INF Joan tired

“Joan cannot be tired today.”

Since Spec SubjP is below the final landing site of the verb in TP, we can capture the order in which the subject appears between the finite modal verb and infinitive in Spanish in (60):

- (60) [TP Verb [ SubjP subject .....[Infinitive.....]]]

However, it is surprising that subjects can appear between the infinitive and the object of that infinitive, or predicate of that infinitive. The fact that Catalan does not allow this possibility suggests that the position must be Spec SubjP in Spanish.

The distribution of subjects in the order MODAL-INF-SUB-COMPL must correlate to the fact that modal verbs avail themselves of mono clausal structures (i.e., show transparency effects). For instance no subject of a main clause can be embedded beyond a finite subjunctive which clearly involves a biclausal structure:

- (61) *\*No sabe que compré usted las manzanas.*

Not know that bought-1p you the apples

“You did not know that I bought apples.”

- (62) *\*No nos permitió que comprásemos usted las manzanas.*

Not to us permitted that buy-1pp you the apples.

“You did not allow us to buy apples.”

As is well known, object control verbs are not considered to be monoclausal in Romance. In examples (63) subjects cannot appear after the infinitive controlled by the object.<sup>11</sup>

- (63) a. *Ayer le aconsejaron pedir (\*ellos) los documentos.*  
 They advised to ask-INF (\*they) for the documents  
 “They advised us to order the documents.”  
 b. *Ayer le obligó a hacer (\*tu padre) la cama.*  
 yesterday obliged to make-INF (\*your father) your bed.  
 “Yesterday, your father obliged you to make your bed.”

Thus, we conclude that verbs that trigger restructuring allow main subjects to follow their infinitives and precede other complements and verbs. However, one might still wonder whether the relevant feature is subject control or object control. Specifically, subject control verbs would permit this embedded Spec SubjP subject position, while object control verbs would ban it. For instance, Torrego (1996) has shown that certain types of subjects in Spanish are allowed to appear embedded under a subject control verb, which poses questions about the nature of the relationship between PRO and the subject:

- (64) *No sabemos si firmar nosotros la carta.* (From Torrego 1996)  
 Not know whether to sign we the letter  
 “We don’t know whether to sign the letter.”

Torrego’s examples resemble examples by Piera (1988) and Belletti (2005), the only difference being that the subject embedded in the control structure is doubled by a subject in the matrix clause in Piera’s (1988) and Belletti’s (2005) examples:

- (65) *Julia quería telefonar ella.* (From Piera 1988)  
 Julia wanted to phone herself  
 “Julia herself wanted to phone.”

---

<sup>11</sup> For some speakers object control verbs like *permitir* and *ordenar* do allow restructuring effects as show by the fact that they permit clitic climbing Suñer (1980) and Luján (1978):

(i) *Me la permitió tocar.* To me it allowed-3p to play “She allowed me to play it.”  
 It is not surprising then that these speakers permit subjects embedded under these object control verbs:

(ii) *Me permitió tocar Juan la Traviata.*  
 to me permitted to play Juan “la Traviata” “Juan allowed me to play la traviata.”

According to Cinque (2004) and Kayne (1989), these unexpected restructuring effects might be explained if these verbs represent hidden instances of causative constructions.

- (66) *Gianni pensa di parlare lui di questo problema.* (Belletti 2005)  
 Gianni thinks to speak him about this problem  
 “Gianni himself thinks to speak about this problem.”

In their analyses PRO is doubled by this type of subject embedded in the infinitive:

- (67) ...[ Si PRO<sub>i</sub> firmar [nosotros<sub>i</sub> ]...] la carta.  
 if PRO to sign us the letter

The types of subjects that can double PRO are characterized by Torrego as floating quantifiers since they show the same distribution. Some of those floating quantifiers include some examples of DP which disagree in person with the matrix subject:

- (68) *No sabemos si PRO<sub>i</sub> ir [los linguistas] al cine.*  
 No know-1pp whether PRO to go the linguists to the movies  
 “We, the linguists, don’t know whether to go to the movies.”
- (69) *No saben si PRO ir todos al cine.*  
 Not know whether PRO go all to the movies  
 “We don’t know whether to go all to the movies.”

The problems with this alternative are various. In the first place, this doubling of PRO is strictly limited to pronominal elements or disagreeing subjects which resemble floating quantifiers. When non floating elements are involved the sentences are rendered ungrammatical:

- (70) *\*?No sabe si contestar Juan las cartas.* (from Torrego 1996)  
 Not know whether to answer Juan the letters  
 “Juan does not know whether to answer the letters.”
- (71) *\*Pensa di [ PRO parlare Gianni di questo problema].*  
 Think-3p of [ PRO to speak Gianni about this problem]  
 “Gianni thinks about talking about this problem.” (from Belletti 2005)

Finally, other constructions that do not involve PRO but involve restructuring permit the sequence V INF SUBJ COMPL. This is the case of causatives in (72) and perception verbs in (73). These two type of constructions involve restructuring according to Guasti (1997) and Hernanz (1999):

- (72) *Ayer nos hizo leer Juan el libro.*  
 yesterday to us make to read Juan the book  
 “Yesterday you made us read the book.”

- (73) *Ayer oyó cantar Pedro La Traviata.*  
 yesterday heard to sing Pedro *la Traviata.*  
 “Yesterday Pedro heard the singing of ‘la traviata.’”

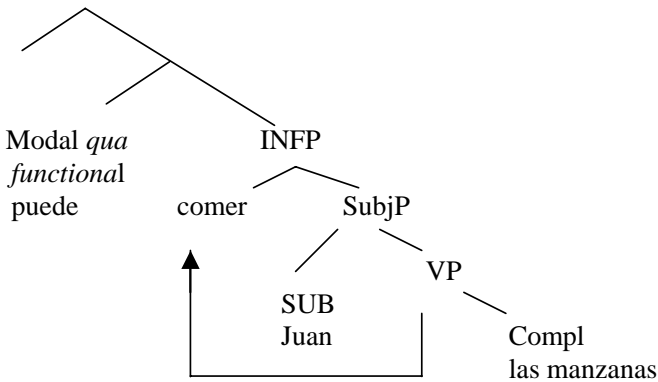
Therefore, we conclude that NO doubling of PRO is involved in these cases of V INF SUB COMPL orders. Thus, we are left with the question of how subjects might end up after the infinitive and before complements.

1.5.1 *Subjects and Functional Structure.* When infinitives are not embedded in any finite contexts, they must precede the subject in Spec SubjP.

- (74) a. *Antes de comer Juan las espinacas, le gustaría probar the lasaña.*  
 before eating Juan spinach, him would please to taste the lasaña  
 b. \**Antes de Juan comer las espinacas, le gustaría probar la lasaña.*  
 before of Juan eating the spinach, him would please to have a taste  
 of the lasaña  
 “Before Juan eats the spinach, he would like to taste the Lasagna.”

Thus infinitives move overtly above Spec SubjP to a higher inflectional projection we can call INFP. Thus, examples like (74a) are represented in (75):

- (75) >Modal> InfP>Subjects>Complements



This movement of the infinitives above Spec SubjP would be exactly parallel to examples of auxiliaries with past participles in (76). Recall that the differences between Icelandic versus Spanish are related to the fact that past participles move higher than Spec TP in Spanish, but not in Icelandic.

(76) Auxiliary > Vpp> SUB > OBJECT

*habia* (functional projection) *comido* (vpp) *Juan las manzanas*.  
 has eaten Juan apples  
 “Juan has eaten apples.”

Modals, auxiliaries, causatives and perception allow movement of the infinitive above Spec SubjP. This movement of infinitives to a specific projection above SubjP is akin to the movement proposed by Koopman & Szabolczi (2000) for Hungarian and Dutch, and Hinterhölzl (2000) for German infinitives. They all involve overt movement of infinitives to a specific position in the context of complex predicate formation.<sup>12</sup>

The high position of subjects in all these cases in which the infinitive moves can be demonstrated by their distribution with respect to subjects embedded in causative verbs, perception verbs and subcategorized small clauses. In Spanish causative verbs (77) perception verbs (78) and subcategorized small clauses (79) permit the ECM subjects to appear before infinitive or adjectival:

- (77) a. *Ayer ella le hizo [a Juan tocar el piano].*  
 yesterday she made-3 P-Juan play the piano  
 “Yesterday she/he made Juan play the piano.”
- b. *Ayer ella vio [a Juan bailar un merengue].*  
 Yesterday she saw-3 P-Juan dance a merengue  
 “Yesterday she/he saw Juan dance a Merengue.”
- c. *Ellos No consideran [a los niños muy inteligentes].*  
 They Not consider-3pp P- the boys very intelligent  
 “They do not consider the boys very intelligent.”

Subjects in Spec SubjP must precede the ECM subject as indicated in the following contrasts:

- (78) a. *Ayer le hizo ella a Juan [tocar el piano].*  
 Yesterday made she P-Juan [to play the piano]
- b. \**Ayer le hizo a Juan ella [tocar el piano].*  
 Yesterday made P-Juan she [to play the piano]  
 “Yesterday she made Juan play the piano.”
- (79) a. *Ayer vio María a Juan [bailar un Merengue].*  
 Yesterday saw Maria P-Juan to dance a Merengue

<sup>12</sup> The obvious differences are that there are no inverse orders in Romance and that Spanish is not a head final language.

- b. \**Ayer vio a Juan María [ bailar un Merengue].*  
 Yesterday saw P-Juan María [to dance a Merengue]  
 “Yesterday María saw Juan dance a Merengue.”
- (80) a. *Consideran los profesores a los niños [muy inteligentes].*  
 Considered the teachers P-the boys very intelligent
- b. \**Consideran a los niños los profesores [ muy inteligentes].*  
 Not consider P-the boys the teachers very intelligent  
 “The teachers consider the boys very intelligent.”

Thus we conclude that ECM subjects in causatives, perception verbs and small clauses cannot move or merge in a higher projection than the higher Spec SubjP of the main subject. This is again an additional argument to the ones I gave in sections 1.1 -1.4 that Spec SubjP is really high up in the clausal structure. Since Catalan does not license subjects in Spec SubjP, there will be no structures in which the subject precedes any complement embedded under a causative verb as in (81), perception verb as in (82) or subject of a small clause (83):

- (81) \**Ahir li va fer tocar el professor el piano.*  
 Yesterday made to him to play the professor the piano.  
 “Yesterday the professor made him play the piano.”
- (82) \**Ahir va veure ballar en Joan un merengue.*  
 Yesterday saw dance Joan a Merengue  
 “Yesterday, Joan saw the a merengue dancing.”
- (83) \**Consideren intel.ligents els professors els nois de l’escola.*  
 Consider intelligent the professor the boys in the school  
 “The teachers consider the boys of the school intelligent.”

Finally, the lack of subjects in Spec SubjP in Catalan explains the ungrammatically of (84a) which is permitted in Spanish in (84b):

- (84) a. \**Aquí no semblen [Spec SubjP els estudiants [ felïços ]].* (Catalan)  
 Here not seem [ Spec TP the students [ happy ]]
- b. *Aquí no parecen [ Spec SubjP los estudiantes [ felices]].* (Spanish)  
 Here not seem [ Spec TP the students [ happy]]  
 “Here the students do not seem happy.”

## 2. Conclusion

This analysis implies that Spec SubjP in Spanish has an EPP feature that Catalan lacks. The licensing of this Spec SubjP for subjects in Spanish is parallel to the licensing of Spec TP in Icelandic. The variation found in Romance between Spanish (licensing of Spec SubjP) versus Catalan is parallel

to same parametric difference between Icelandic and English TEC's. In Icelandic and in Spanish there are two EPP features that need to be satisfied in construction (51): The EPP feature of Spec SubjP and the EPP feature of the projection that licenses preverbal subjects in both languages. If one adopts Anagnostopoulou & Alexiadou's (2001) views on the EPP, one might assume that the EPP be satisfied by head movement for the higher TP. However, it is crucial that the EPP feature of the lower inflectional projection Spec SubjP be satisfied by overt movement of the subject to its Spec.<sup>13</sup>

### References

- Alexiadou, A & E. Anagnostopoulou. 1998. "Parameterizing AGR: word Order, V-Movement and EPP-Checking". *Natural Language & Linguistic Theory* 16. 491-539.
- 2001. "The Subject-in-situ generalization and the role of case in driving Computations". *Linguistic Inquiry* 32. 193-231.
- Ambar, M 1992. *Para uma sintaxe da inversão sujeito-verbo em português*. Ph.D. Diss. University of Lisbon.
- Bartra, A. & Suñer, A. 1997. "Inert Agreement Projection and the Syntax of Bare Adjectives". *Probus*. 1-31.
- Belletti, A. 1990. *Generalized verb movement aspects of verb syntax* Torino: Rosenberg & Sellier.
- 2000. "Inversion as Focalization". *Subject inversion in Romance and the theory of Universal Grammar*. ed. by A. Hulk & J.-Y. Pollock. 60-91. Oxford: Oxford University Press.
- 2004. "Aspects of the low IP area". *The structure of CP and IP*. ed. by L. Rizzi. Oxford: Oxford University Press.
- 2005. "Extended Doubling and the VP Periphery". *Probus* 17.
- Bobaljik, J. and Jonas, D 1996. "Subject positions and the roles of TP". *Linguistic Inquiry*. 195-236.
- Bosque, I 1989. *Las categorías gramaticales. Relaciones y diferencias*. Madrid: Síntesis.
- Cardinaletti, A. 2001. "A second thought on emarginazione & distressing vs right dislocation". *Current Studies in Italian Syntax: Essays offered to Lorenzo Renzi*. ed. by G. Cinque & G. Salvi. 117-135. Amsterdam: North Holland.
- 2004 "Towards a cartography of subject positions". In Rizzi L. (eds.), *The Structure of CP and IP*. Oxford: Oxford University Press. 115-160

---

<sup>13</sup> There does not seem to be any correlations between the licensing of Spec SubjP and the licensing and clitic doubling. Catalan has obligatory clitic doubling with overt pronouns and does not license Spec SubjP. Portuguese, very similar to Spanish, seems to allow Spec TP, but does not permit clitic doubling.

- & Starke M. 1999. "The typology of structural deficiency: a case study of the three classes of pronouns". *Clitics in the languages of Europe*. Ed. by H. van Riemsdijk. 145-233. Berlin: Mouton de Gruyter.
- Cinque, G. 1995. "On leftward movement of tutto in Italian". *Italian Syntax and Universal Grammar*. ed. by G. Cinque. Cambridge: Cambridge University Press.
- 1999. *Adverbs and functional heads*. Oxford: Oxford University Press.
- 2004. "Restructuring and functional structure". *Structures and beyond*. ed. by A. Belletti. 132-192. Oxford: Oxford University Press.
- Costa, J. 1997. "On the Behavior of Adverbs in Sentence-Final Context". *The linguistic review*. 43-68.
- Costa, J. 2000. ed. *Portuguese Syntax: new comparative studies*. New York: Oxford University Press.
- 2004. *Subject Positions and Interfaces*. Berlin: Mouton de Gruyter.
- Guasti M. T. 1997. "Romance Causatives". *The New Comparative Syntax*. ed. by L. Haegeman. 124-144. New York: Longman.
- Hernanz, M. L. 1999. "El infinitivo". *Gramática descriptiva de la lengua española*. ed. by I. Bosque & V. Demonte. 2197-2357. Madrid: Espasa.
- Hinterhölzl R. 2000. "Licensing Movement and Stranding in West Germanic OV languages". *The derivation of VO and OV*. Ed. by Peter Svenonius. 293-327. Amsterdam & Philadelphia: Benjamins.
- Holmberg, A. & Platzack C. 1995. *The Role of Inflection in Scandinavian Syntax*. Oxford: Oxford University Press.
- Jayaseelan, K.A. 2001. "IP-Internal Topic and Focus Phrases". *Studia Linguistica* 55. 39-75.
- Johnson, K 1991. "Object Positions". *Natural Language & Linguistic Theory* 9. 577-636.
- Kayne, R. 1975. *French Syntax: the transformational cycle*. Cambridge (Mass.): MIT Press.
- 1989. "Null subjects and clitic climbing". *The Null Subject Parameter*. ed. by O. Jaeggli & K. Safir. 239-261. Dordrecht: Kluwer.
- 1994. *The Antisymmetry of syntax*. Cambridge (Mass.):MIT Press.
- 2000. *Parameters and universals*. Oxford: Oxford University Press.
- Kayne, R & Pollock J.-Y. 2001. "New Thoughts on Stylistic Inversion". *Subject inversion in Romance and the theory of Universal Grammar*. ed. by A. Hulk & J.-Y. Pollock. 107-162. Oxford: Oxford University Press.
- Kiss, K. 1998). "Identificational Focus versus Information focus". *Language*, 74. 245-273.
- Koopman, H. & Szabolsci A. 2000. *Verbal Complexes*. Cambridge (Mass.): MIT Press.
- Luján, M. 1978. "Clitic promotion and mood in Spanish verbal complements". *Linguistics* 18. 381-484.



- Motapanyane, Virginia. 1995. *Theoretical implications of complementation in Romanian*. Padova: Unipress.
- Nicolis, M. 2001. "L-Tous, restructuring, and quantifier climbing". *Rivista di Grammatica Generativa* 26. 63-84.
- Ordóñez, F. 1998. "Post-verbal asymmetries in Spanish" *Natural Language and Linguistic Theory* 16. 313-346.
- 2000. *The Clausal Structure of Spanish: A Comparative Study*. Outstanding Dissertations in Linguistics. New York: Garland.
- Picallo, C. 1990. "Modal verbs in Catalan". *Natural Language and Linguistic Theory* 8. 285-312.
- Piera, C. 1988. "Sobre la estructura del las cláusulas de infinitivo". *Sintaxis de las Lenguas Romances*. ed. By V. Demonte & M.F. Lagunilla. 148-163. Madrid: El arquero.
- Rizzi, L. 1996. "Residual Verb Second and the Wh-Criterion". *Parameters and Functional heads: Essays in Comparative Syntax*. ed. by A. Belletti & L. Rizzi. 63-90. Oxford: Oxford University Press.
- Roselló, J. 2002. "El SV i arguments verbals". *Gramàtica del Català contemporani*. ed. By J. Solà. 1853-1949. Barcelona: Empúries.
- Sánchez López, C. 1993. "Una anomalía del sistema pronominal español". *Dicenda. Cuadernos de Filología Hispánica* 11. 259-284.
- Solà, J. 1992. *Agreement and Subjects*. PhD Diss. Universitat Autònoma de Barcelona.
- Suñer, M. 1980. "Clitic promotion in Spanish revisited". *Contemporary studies in Romance Languages*. Ed. by Neussel. 300-330. Bloomington: Indiana University Linguistics Club.
- 1994. "V-Movement and the licensing of argumental Wh-Phrases in Spanish". *Natural Language and Linguistic Theory* 12. 335-372.
- Torrego, E. 1996. "On Quantifier Float in Control Clauses". *Linguistic Inquiry* 27. 111-126.
- 1998. "Nominative Subjects and Pro-Drop INFL". *Syntax*. 206-219
- Vallduví, E. 2002. "L'oració com a Unitat Informativa". *Gramàtica del Català Contemporari*. ed. by J. Solà. 1221-1279. Barcelona: Empúries.
- Zubizarreta, M.L. 1998. *Prosody, Focus and Word Order*. Cambridge (Mass.): MIT Press.
- 2001. "The Constraints on Preverbal Subjects in Romance Interrogatives" *Subject inversion in Romance and the theory of Universal Grammar*, ed. by A. Hulk & J.-Y. Pollock. 183-205. Oxford: Oxford University Press.



- b. Inv: *qu'est-ce que c'est?*  
 what's that?  
 CHI: *poupée*  
 doll

Natalie 2;1.7

Within the generative study of language acquisition, researchers agree that there is a strong component of innate knowledge of grammar, referred to as Universal Grammar (UG). However, there is no consensus about the question how much of this knowledge is actually available in early stages of acquisition. Some researchers have accounted for omissions of function words by assuming that functional categories are absent in early grammar (cf. Radford 1990). This idea has also been applied to DP acquisition. Previous studies (Clahsen, Eisenbeiß & Vainikka 1994, Müller 1994, Granfeldt 2000a, Hulk 2004) have accounted for the omission of determiners by arguing that at this developmental stage, the D-layer is not available. In this view, a phrase like *tracteur* in (1a), has a structure like (2).

- (2) N  
 |  
 tracteur

Even though this model captures the absence of determiners at this developmental stage, it has the disadvantage that the child's grammar does not adhere to supposed UG principles. For instance, the referential properties of bare nouns in child language cannot be accounted for if we assume that a D-layer (or a notational equivalent) is not present.<sup>1</sup> Vergnaud and Zubizarreta (1992) have argued that only the D-layer can denote particular instances (token) whereas the N-layer only establishes reference to kinds (types). This distinction is formulated in the *Correspondence Law* (Vergnaud & Zubizarreta 1992: 612):

- (3) "When a DP or an NP denotes, the DP denotes a token and the NP denotes a type".

Children talk about the here and now. In case of determiner omission as in (1), it is very likely that Daniel's utterance refers to a particular tractor and not to

---

<sup>1</sup> We adhere to the position that referential properties are represented in the D-layer, a viewpoint commonly accepted in standard generative theory. This implies that the D-layer is present also in languages without overt determiners. We are aware of the fact that alternatives to a universal DP have been proposed (cf. Chierchia 1998 among others). When applied to first language acquisition, these alternatives do not necessarily have to be in contradiction with the proposal made in this paper, as long as they respect the observation that children can establish token reference. For reasons of space we cannot discuss these possible alternatives.

the concept ‘tractor’, thus it does not have a kind reading. Hence, a model assuming that functional projections are not available at this stage has to account for the observation that the utterance refers to a particular item even though the D-layer is not present. Similarly, such a model cannot account for the referential properties of proper names in early stages of language acquisition. It has been argued that proper names are raised from N to D (Longobardi 1994). However, if the D-layer is not present, it is not clear how the reference of proper names is licensed syntactically.

In sum, we find a discrepancy between the non adult-like output of young children, and supposed UG principles. Proponents of the Full Competence Hypothesis (cf. Poeppel & Wexler 1993, Borer & Rohrbacher 2002 among others) argue that functional projections are actually available and specified from the onset of acquisition. Notice that these proposals focus on omissions in the verbal domain. The challenge is to account for non-adult-like omissions of the determiner, too.

In the present contribution, we show that a modular approach to language offers a new perspective that allows us to reconcile the opposing demands presented above. Our model offers an account for the observed omission while at the same time we assume that the D-layer is present from the onset, which makes it possible to adhere to semantic principles as the Correspondence Law. We first present the theoretical background in section 2 and then apply it to the problem of omissions in first language acquisition in section 3. This model makes a number of predictions of which we investigate three in section 4. Section 5 contains the conclusions.

## 2. *Tripartite Parallel Architecture*

In modular approaches it has been argued that language consists of several subsystems. Jackendoff (1997) proposes a tripartite architecture of grammar, with a phonological, a syntactic and a conceptual component. These modules remain independent but are connected by correspondence rules.

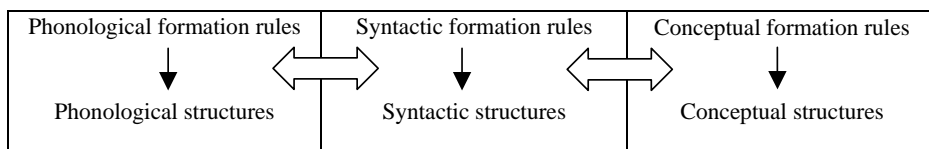


Figure 1. *Tripartite parallel architecture* (Jackendoff 1997)

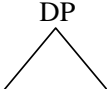
A lexical entry, for instance the French word *tracteur*, contains thus the phonological information, the syntactic representation and the conceptual interpretation, illustrated in (4). The subscript *w* stands for the phonological unit *word*.

(4) /tRaktœR/w  $\leftrightarrow$  N  $\leftrightarrow$  “vehicle used on farms etc.”

The system of correspondence rules, which map phonological units onto their syntactic representation, offers an interesting logical possibility: There does not necessarily have to be a 1:1 relationship between elements in the phonological and the syntactic module. Phonological units can be larger or smaller than terminal nodes in the syntax ( $X^0$ ). Instances where lexical items are smaller than heads are productive derivational morphemes and also inflectional morphemes. But lexical items can also be larger than heads. Jackendoff (1997: 158) argues for this type of mismatch based on evidence from idiomatic expressions. For instance, a phonological string such as [*let the cat out of the bag*] is likely to be stored as a unit in the lexicon and to correspond to a verb phrase at the syntactic level. Mismatches between syntactic representations and phonological units can also account for other phenomena in adult language, for instance for properties of the pronominal system (Weerman & Evers-Vermeul 2002, Neeleman & Szendrői (2005)). We illustrate this here in (5) and (6) with the possessive pronoun *mine*, which cannot co-occur with DP internal material such as determiners, adjectives or nouns. The same holds for its Dutch and German counterparts:

- |     |    |               |            |              |                |           |
|-----|----|---------------|------------|--------------|----------------|-----------|
| (5) | a. | Mine          | is         | not          | so good        | (English) |
|     | b. | <i>Mijnes</i> | <i>is</i>  | <i>niet</i>  | <i>zo goed</i> | (Dutch)   |
|     | c. | <i>Meins</i>  | <i>ist</i> | <i>nicht</i> | <i>so gut</i>  | (German)  |
- 
- |     |    |               |           |        |           |
|-----|----|---------------|-----------|--------|-----------|
| (6) | a. | *(the) mine   | (nice)    | (book) | (English) |
|     | b. | *(het) mijnes | (mooie)   | (boek) | (Dutch)   |
|     | c. | *(das) meins  | (schönes) | (Buch) | (German)  |

Weerman and Evers-Vermeul take this as evidence that the phonological word *mine* corresponds to a DP at the syntactic level. Note that *mine* is not a D or an N where the rest of the structure remains empty, which is an important contrast to theories based on lexical insertion. /maIn/w corresponds to the maximal projection DP; it is not *inserted* in that position, and it leaves the syntax intact:

(7) /maIn/w  $\leftrightarrow$  

More evidence where a phonological word corresponds to a non-terminal node comes from prepositional phrases (cf. 8) and proper names (cf. 9).



- (12) a. I need a Peter who cooks and plays the guitar  
 b. This is not the Amsterdam of my childhood

The reverse process is also possible: If a noun occurs without a determiner, it can establish a unique reference. Interestingly, a domain where this process is extraordinarily productive is in children's books and stories, where virtually any noun, animate or inanimate, receives unique reference once it occurs without a determiner (cf. 13). The effect is a proper name interpretation.

- (13) "That egg is mine! I saw it first," says Goose. "I touched it first. It's mine," declares Duck. ("Duck and Goose", Tad Hill)

To conclude, various phenomena in adult language can be accounted for by mismatches between the phonological and the syntactic module, i.e., the possibility that phonological units map onto syntactic categories smaller or larger than heads. Furthermore, we have seen that the assumption that proper names correspond to DPs allows us to account for their unique reference even though there is no determiner present. Notice that we adapt here a point of view that is compatible with standard assumptions since the Government and Binding framework initiated by Chomsky (1981). The crucial distinction with this model is the assumption that phonological units do not always have to correspond to terminal nodes in the syntax, which is motivated independently by observations made in adult language. In the next section, we apply these ideas to first language acquisition.

### 3. *Mismatches between Phonology and Syntax in Child Language*

If we now have a look again at determiner omission in child language (cf. 1, 1a is here repeated as 14), we find that the child's utterance in (14) parallels the situation in (9). Similarly to proper names, common nouns in child language can occur without a determiner. At the same time, the utterance refers to a particular instance, which, as argued above, conflicts with the Correspondence Law proposed by Vergnaud and Zubizaretta. Recall that a structure building approach to DP acquisition, as illustrated in section 1, cannot capture the referential properties of bare nouns in child language.

- (14) CHI: *maman veut tirer tracteur*  
 mum wants to.pull tractor Daniel 1;10.14

Given that in adult language words can correspond to larger syntactic categories than heads and assuming we want to maintain continuity between adult and child grammar, it follows that this option is also available in the children's grammar. However, this does not imply that the correspondence between syntax

and phonology has to be target-like. (14) is an example for such a non-target-like mismatch between elements in phonology and syntax: The phonological word /tRaktœR/w corresponds to a larger unit in the syntax, more specifically to a DP (cf. 15). This accounts not only for the absence of the determiner and other DP internal material but also for the referential properties of the word. As the D-layer is present, token reference can be established. Furthermore, this proposal is in line with the claim that only DPs can function as arguments (cf. e.g. Szabolcsi 1987, Longobardi 1994).

(15) /tRaktœR/w  $\leftrightarrow$  DP

Note that we do not want to claim that bare nouns in child language are proper names. A common noun like e.g., *tracteur* can refer to different tractors depending on the discourse context. In contrast, proper names establish a unique reference to animate individuals, independent of the discourse. However, we do want to argue that there is a parallel, as proper names and bare nouns in child language share an important property: They both refer to particular instances or individuals (tokens) in the absence of a determiner.

As pointed out above, the correspondence rule between the phonological and the syntactic properties of the word in (15) is not yet target-like: In adult French, *tracteur* and virtually all other nouns are obligatorily preceded by a determiner and must correspond to N in the syntax. The presence of the determiner in the input is the driving force of the child's reanalysis of the correspondence rule in (15): As the child acquires the phonological and conceptual properties of a particular word, e.g., *tracteur*, he becomes more sensitive to its occurrences in the input. This can already be observed in very young children. For instance, Hallé and de Boysson-Bardies (1994) have shown in a head-turn experiment that 11-month-old French children maintained longer head turns in response to a familiar word than to a non-familiar word that has a closely similar phonotactic structure but a lower frequency in the language. When the sensitivity towards the word increases, the child will also notice that this particular word is consistently preceded by a determiner. The initial setting of the correspondence rule in (15) cannot accommodate this input property as there is no space to host the determiner. Consequently, the correspondence rule must be reset such that /tRaktœR/w corresponds to a projection lower than DP, e.g., NP. When the child encounters DP internal material again, like prenominal adjectives, it will again retune this correspondence rule. In this way, the DP structure is unravelled layer by layer in a top-down fashion (cf. 16).

(16)

|            |                   |     |
|------------|-------------------|-----|
| /tRaktœR/w | $\leftrightarrow$ | DP  |
| /tRaktœR/w | $\leftrightarrow$ | ... |
| /tRaktœR/w | $\leftrightarrow$ | N   |



As soon as a theory allows for units larger than non-terminal nodes in adult language, it follows from the subset principle that acquisition starts out with the topmost projection and that the structure is unravelled in a top-down fashion. If this were not the case, we would encounter a problem with learnability. This can be illustrated with the acquisition of proper names: Above we have argued that the D-layer is present from the onset of acquisition. As a result, both proper names and common nouns have to correspond to DP. This means that the setting of the correspondence rules for proper names is target-like. The setting of the correspondence rule for common nouns like *tracteur* is not yet target-like, but it can be unlearned based on positive evidence in the input: Instances where *tracteur* occurs with a determiner are positive evidence against the initial setting as DP and will force the child to reanalyse the setting such that *tracteur* corresponds to a lower projection, e.g., NP. The picture would be different if the DP structure were acquired bottom-up: In that case both proper names like *Jean* and common nouns like *tracteur* would have to correspond to N. The child can abandon this initial hypothesis only when it encounters relevant positive evidence in the input. However, there is no such evidence in the input that would force the child to give up the initial hypothesis that *Jean* corresponds to N. One might argue that the child unlearns this initial setting based on the fact that proper names never occur with a determiner in the input, but this would mean that the child has to conclude from the absence of a certain construction that this construction is not possible in the target grammar.

We will say more about the acquisition of proper names in section 4.1. The proposal that DP structure is unravelled top-down makes a number of predictions for first language acquisition three of which we discuss in the next section.

#### **4. *Predictions for First Language Acquisition***

If a lexical entry consists of phonological information that is mapped onto its syntactic representation, it follows that the DP structure is acquired item-by-item. In other words, DP acquisition is a process of lexical learning. In this section we investigate this hypothesis and its consequences in three different domains: The acquisition of proper names, the development of individual items and the development of the overt realisation of determiners. We investigated the predictions in a longitudinal study of spontaneous parent-child interaction in the monolingual French child Grégoire. The data are available in the CHILDES database (cf. MacWhinney & Snow 1990). In counting the utterances, we followed Granfeldt's (2000a: 73ff) counting criteria, i.e., we excluded imitation with or without determiner directly following a parent's utterance. Furthermore, we did not count more than two repetitions of the same noun unless interrupted by either an utterance of the interlocutor or the child itself.

#### 4.1 *The Acquisition of Proper Names*

If the acquisition of the DP indeed takes place per item, then this also holds for the acquisition of proper names. It has been argued above that proper names correspond to a DP at the syntactic level. Only if there is evidence in the input that cannot be accommodated by the initial setting will the correspondence rule for a particular item be reset. This is not the case for proper names like *Jean* as these usually do not occur with a determiner in French. The correspondence rule for proper names is thus target-like from the onset of acquisition. Within an item-based learning model, we therefore do not expect errors of the type *le Jean* where a proper name is combined with a determiner not even when the child's production of determiners increases.

In order to investigate this prediction, we looked at the production of proper names in Grégoire. Table 1 gives an overview of the results:

| Age           | MLU | Determiner missing %* | Total # of nouns | Proper names without determiner token/type | Proper names with determiner |
|---------------|-----|-----------------------|------------------|--------------------------------------------|------------------------------|
| G (1) 1;9.18  | 1.9 | 85                    | 33               | 49/5                                       | 0                            |
| G (2) 1;9.28  | 1.9 | 73                    | 100              | 68/6                                       | 0                            |
| G (3) 1;10.3  | 1.9 | 53                    | 210              | 23/4                                       | 0                            |
| G (4) 1;11.22 | 1.9 | 62                    | 84               | 17/6                                       | 0                            |
| G (5) 2;0.5   | 2.1 | 33                    | 131              | 63/6                                       | 0                            |
| G (6) 2;1.25  | 2.3 | 12                    | 60               | 9/3                                        | 0                            |
| G (7) 2;3.01  | 2.5 | 17                    | 142              | 35/5                                       | 0                            |
| G (8) 2;5.1   | 3.2 | 5                     | 73               | 28/9                                       | 3**                          |
| G (9) 2;5.13  | 3.2 | 1                     | 108              | 19/7                                       | 4**                          |

\*determiner omission rates and MLU G(1), G(3)-(8) from Granfeldt (2000b)

\*\* all these determiner-proper name combinations are "*mon pinpin*" (my rabbit)

Table 1. *Proper names in Grégoire*

We find that proper names are never accompanied by a determiner, not even in the later files where Grégoire produces more than 80% of determiners in obligatory contexts (determiner omission rate < 20%). The only exception is *pinpin* (referring to *lapin* 'rabbit'), which occurs with a possessive in the last files. Above we have shown that there is an important parallel between bare nouns in child language and proper names. Proper names establish reference to particular individuals without the presence of a determiner, and in an initial phase, the same is possible for bare common nouns in child language. This

unique reference for common nouns disappears as soon as the child is able to categorise among objects. The word *pinpin* illustrates how this process can be stretched out over a longer period. Grégoire uses this word for his toy rabbit only until age 2;3.01, and in this period, it never occurs with a determiner. As soon as he starts to use *pinpin* for other rabbits as well, he combines this word with a determiner. Note that the adults in Grégoire's environment also use *pinpin* with and without a determiner, which is unusual for proper names.

The observation that errors of the type *le Jean* do not appear is expected if the DP structure is unravelled per item in a top-down fashion. Previous models based on the assumption that the D-layer is not available from the onset of acquisition (cf. section 1) cannot account for this observation. In fact, they seem to predict errors of the type *determiner+proper name* as soon as the child starts to produce determiners with common nouns more frequently.

#### 4.2 *Differences between Items*

The hypothesis that the DP structure is unravelled per lexical item, and is induced by relevant evidence in the input, predicts that the fine-tuning must be sensitive to the frequency of each item. The child will retune the correspondence rules earlier in nouns that are relatively frequent in the input whereas it will maintain the initial setting of the correspondence rule longer in less frequent nouns. Consequently we expect variation between nouns: Some items will already be reanalysed as an NP or a lower category by the child and therefore be preceded by a determiner while at the same stage, other items are still associated with DP and therefore occur as bare nouns. We investigated the development of individual items in the Grégoire corpus. Nouns that occur in at least three files, and that appear in the early recordings as well as in the late recordings were chosen. Table 2 summarises the results. We find that *lumière* (light), *voiture* (car), *chausson* (slipper) and *chien* (dog) show considerable variation. Especially in the early files, there are many bare nouns co-occurring with determiner-noun combinations.<sup>3</sup> In contrast, *main* (hand) and *nez* (nose) always appear with a determiner from early on.

---

<sup>3</sup> The new version of a correspondence rule for a lexical item does not immediately replace the older version. The older version persists but eventually will get weaker and finally fade out as it cannot accommodate the input as well as the newer version of the rule. Hence, there must be a stage where the older and a newer version of the correspondence rule co-exist. Consequently, we expect variation in the acquisition of the DP: the same noun can occur with and without a determiner during this overlap stage. This is exactly what we find in the data (cf. table 3). This has also been observed in other studies and has come to be known as the *Free Variation Stage* (Chierchia et al. 1999).

|            | G (1)<br>1;9.18 | G (2)<br>1;9.28 | G (3)<br>1;10.0<br>3 | G (4)<br>1;11.2<br>2 | G (5)<br>2;0.05 | G (6)<br>2;1.25 | G (7)<br>2;3.01 | G (8)<br>2;5.1 | G (9)<br>2;5.13 |
|------------|-----------------|-----------------|----------------------|----------------------|-----------------|-----------------|-----------------|----------------|-----------------|
| D-omission | 85              | 73              | 53                   | 62                   | 33              | 12              | 17              | 5              | 1               |

Table 2. Acquisition of *D* in Grégoire per item**lumière**

|    |   |    |   |   |   |   |   |   |   |
|----|---|----|---|---|---|---|---|---|---|
| BN | 3 | 10 | 4 | 4 | 1 | 0 | 1 | 0 | 0 |
| DN | 0 | 2  | 1 | 0 | 0 | 2 | 0 | 0 | 2 |

**voiture**

|    |    |   |    |    |   |   |    |   |   |
|----|----|---|----|----|---|---|----|---|---|
| BN | 11 | 0 | 12 | 15 | 4 | 0 | 14 | 0 | 0 |
| DN | 3  | 0 | 2  | 8  | 6 | 0 | 4  | 0 | 0 |

**chausson**

|    |   |   |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|---|---|
| BN | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| DN | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |

**chien**

|    |   |    |   |   |   |   |   |   |   |
|----|---|----|---|---|---|---|---|---|---|
| BN | 1 | 3  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DN | 2 | 12 | 1 | 0 | 0 | 0 | 0 | 2 | 0 |

**main**

|    |   |   |    |   |   |   |   |   |   |
|----|---|---|----|---|---|---|---|---|---|
| BN | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| DN | 0 | 5 | 34 | 0 | 0 | 0 | 1 | 0 | 0 |

**nez**

|    |   |   |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|---|---|
| BN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DN | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 |

We find thus that some items can occur as bare nouns whereas other items are consistently preceded by a determiner even in the early files, where the determiner omission is still between 53% and 85% (1;9.18-1;11.2). These differences support the idea that the correspondence between phonological items and syntactic categories is indeed acquired per item. However, two other possibilities come to mind: First, the early productions of *main* and *nez* could be instances of fixed determiner-noun chunks with an unanalysed determiner. This can occasionally be observed in nouns starting with a vowel where elision occurs, for instance *l'eau* (the water). However, if the early determiner-noun combinations were indeed instances of chunk formation, we would expect a U-shaped development where *main* and *nez* occur as bare nouns in the later recordings once their status has been reanalysed by the child, a prediction that cannot be confirmed.

Second, prosodic properties might play a role. After all, both *main* and *nez* are monosyllabic. Perhaps the child tends to omit syllables that do not fit into a weak-strong pattern. This would explain why disyllabic words as *lumière*,

*voiture* and *chausson* tend to occur without a determiner as the determiner would interrupt the weak-strong pattern. In contrast, monosyllabic words have to be combined with a determiner in order to fit into such a weak-strong template. Note however, that the monosyllabic word *chien* does not pattern with *main* and *nez* and occurs without a determiner. This observation indicates that even though a weak-strong template might have a possible influence on the realisation of the determiner, prosody alone cannot affect the presence of the determiner.

One might wonder why *chien* does not pattern with *main* and *nez*. An interesting observation is that the latter two are nouns denoting body parts. In French and other Romance languages, this semantic class of nouns typically combines with an expletive definite determiner, a phenomenon known as *inalienable possessive construction*:

(17) *Jean donne la main à Marie*  
 Jean gives the hand to Mary  
 "Jean gives Mary a hand."

(18) *Jean s'essuie le nez*  
 Jean REFL cleans the nose  
 "Jean wipes his nose."

Due to this property, we expect that these words occur more often with a definite determiner in the input than regular common nouns. A first comparison between *voiture* and *main* in the child-directed speech in Grégoire indeed shows that *main* occurs with the definite determiner in 96% of all instances in the input. In contrast, *voiture* only occurs with the definite determiner 50% of the time, whereas the other instances are preceded by an indefinite determiner (14%), the definite plural determiner (12%), different forms of possessives (10%), demonstratives (7%), and partitive *des* (7%). In total there are 48 occurrences of *main* and 42 occurrences of *voiture*. Hence there is no difference in the frequency between these two items, suggesting that it is the variety of the determiner in the input that has an influence on the speed of acquisition.

To conclude this section, we find evidence that items develop individually, which supports the hypothesis that the acquisition of the relevant correspondence rules takes place individually per lexical item. We expected that the speed with which determiners are acquired per noun depends on the frequency of that particular item in the input. A first investigation of the child-directed speech has shown that the variety of the determiner plays a role in this. The DP structure is unravelled earlier in nouns that appear consistently with the same (definite) determiner whereas it takes the children longer to fine-tune the

correspondence rules in nouns that are preceded by a greater variety of determiners.

### 4.3 *Developmental Curves*

The last prediction concerns the shape of developmental curves in the overt determiner production. It has been argued that rule-based acquisition and parameter setting is indicated by an S-shaped developmental curve (Van Kampen 1997). In contrast, if the development is a process of lexical learning, we expect a gradual increase in the overt realisation of determiners. Figure 2 shows the development of overt determiners in Grégoire. The production of overt determiners increases gradually and does not display the pattern of an S-curve. This suggests that the acquisition of the determiner is a lexical learning process rather than rule acquisition. This observation has been confirmed cross-linguistically for German, Dutch, English, French and Italian (cf. e.g., Van den Berg 2001, Kupisch 2004, Rozendaal & Baker in prep).<sup>4</sup>

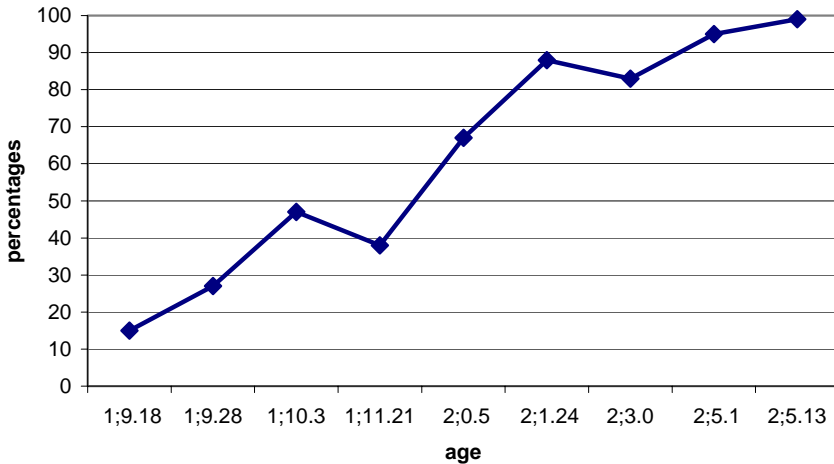
Notice that cross-linguistic studies of the acquisition of the determiner report a discrepancy between Romance and Germanic languages. Chierchia, Guasti and Gualmini (1999) found that children acquiring French and Italian converge quite early to an adult-like use of determiners whereas children acquiring English and Swedish need more time to reach a target-like production. Kupisch (2004) confirms this discrepancy for French and Italian as opposed to German. She argues that frequency in the input plays a role. In an investigation of the frequency of the determiner in child-directed speech in adult French, Italian and German she found significant differences in the number of bare nouns among the three languages. French has the fewest bare nouns. Then there is a significant difference with Italian, which has more bare nouns than French. Finally, German has the most bare nouns. Kupisch finds that this hierarchy is reflected in the order of acquisition: French children converge to the target very early, followed by Italian children. German children need the most time to reach an adult-like use of determiners.

These observations are compatible with our idea that the acquisition of the determiner takes place per item. As argued above, the child needs positive evidence for each common noun X in the input in order to abandon the initial hypothesis that X corresponds to DP in the syntax. Only instances where X is preceded by a determiner are relevant in this process. If the determiner is consistently present in a language, e.g., French, the unravelling will take less

---

<sup>4</sup> Chierchia et al. (1999) report a rather abrupt increase in the overt production of determiners in Romance DP acquisition. At first sight, this seems to be evidence for a rule-based mechanism. However, it is unlikely that the acquisition of the DP is rule-based in Romance languages but item-based in the Germanic languages, which show a gradual increase of overt determiners. Note that Chierchia et al. did not include nouns in isolation in their count, which might explain the differences to other studies.

time. In a language like German, where the determiner can be omitted in mass nouns and plural count nouns, the child has to encounter more instances of the same noun in order to abandon the initial hypothesis that this noun corresponds to a maximal projection.



**Figure 2.** *Overt development of determiners in Grégoire\**

\* Graph accumulated from the data in Granfeldt (2000b: 67)

## 5. Conclusion

A number of studies have accounted for phenomena in adult language by arguing that there is not always a one-to-one relationship between phonological elements and their syntactic representation. In this contribution we have applied this idea to the omission of the determiner in early child speech. We argue that bare nouns in child language correspond to the maximal projection DP, which is available in early stages of acquisition. This correspondence accounts for the referential properties of bare nouns in early child language. Moreover, an important advantage of our model is that we are not forced to postulate structures in child language that are impossible for adult language. At the same time our proposal accounts for the fact that children start to use DP structure gradually. The gradual extension reflects that the child gains stepwise access to lower syntactic layers of the DP.<sup>5</sup>

<sup>5</sup> Although space does not allow us to go into detail here, we note some important differences with earlier proposals in line with the Full Competence Hypothesis. Basing themselves mainly on verbal projections, Borer and Rohrbacher (2002), for instance, argue that functional projections are available in early stages, just like we do. However, they assume that children avoid inserting phonological material since they do not know the correct form yet. If children

It follows from our proposal that the acquisition of the determiner takes place per individual item. This correctly predicts that in the course of acquisition, Grégoire never produces errors of the type *determiner+proper name*. Furthermore, an item-based approach accounts for the observed variation between items within the same language. Notice that a structure building model implies that DP acquisition is a rule-based mechanism which is incompatible with the observed intra-linguistic variation between different nouns. Finally, an item-based model captures observed cross-linguistic differences in the speed of acquisition as well as the gradual increase in the overt production of determiners.

### References

- Borer, Hagit & Bernhard Rohrbacher. 2002. "Minding the Absent: Arguments for the Full Competence Hypothesis". *Language acquisition: a journal of developmental linguistics* 10.123-176.
- Chierchia, Gennaro. 1998. "Reference to Kinds across Languages". *Natural language semantics* 6:4.339-406.
- Chierchia, Gennaro, Maria Teresa Guasti & Andrea Gualmini. 1999. "Nouns and articles in child grammar and the syntax / semantics map". Paper presented at GALA 1999, Potsdam.
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht:Foris.
- Clahsen, Harald, Sonja Eisenbeiß & Anne Vainikka. 1994. "The seeds of structure: A syntactic analysis of the acquisition of Case marking". *Language Acquisition Studies in Generative Grammar (=Language acquisition and Language disorders 8)*, ed. by Teun Hoekstra & Bonny D. Schwartz. Amsterdam & Philadelphia: John Benjamins.
- Granfeldt, Jonas. 2000a. "The acquisition of the determiners phrase in bilingual and second language French". *Bilingualism: Language and Cognition* 3.263-280.
- 2000b. *Le développement morphosyntaxique du syntagme nominal*

---

start to produce functional elements, they use exclusively correct forms, which would indicate that they have acquired the morphophonological paradigm. If we apply this theory to the nominal domain, one of the problems is that the children do not show adult-like behavior once they start producing determiners. Some types of mistakes may even persist quite long (for instance, gender mistakes in Dutch). It is also not clear to what extent this approach can accommodate the type of lexical variation that we found for determiners and nouns. Furthermore, the idea that reference is accounted for by assuming that an empty D is linked via the discourse remains to be worked out. The main difference with our theory is, of course, that we do not assume a theory of lexical insertion in terminal nodes but rather a theory in which phonological information corresponds to (different kinds of) syntactic nodes. As pointed out, this difference is motivated independently of considerations on language acquisition.



- chez des enfants et des adultes - approche generativist*. Thesis ("Licentiat") Lund University.
- Hallé, Pierre & Benedicte de Boysson-Bardies. 1994. "Emergence of an early lexicon: Infants' recognition of words". *Infant Behavior & Development* 17.119-129.
- Hulk, Aafke. 2004. "The acquisition of the French DP in a bilingual context". *The Acquisition of French in Different Contexts. Focus on functional categories*, ed. by Philippe Prévost & Johanne Paradis, 243-274. Amsterdam & Philadelphia: John Benjamins.
- Jackendoff, Ray. 1997. *The architecture of the human language faculty*. Cambridge (Mass.): MIT Press.
- Kupisch, Tanja. 2004. "On the relation between input frequency and acquisition patterns from a cross-linguistic perspective". *Proceedings of Generative Approaches to Language Acquisition (GALA)*, ed. by Jacqueline van Kampen & Sergio Baauw, 281-292. LOT Occasional Series: Utrecht.
- Longobardi, Giuseppe. 1994. "Reference and Proper Names: A Theory of N-Movement in Syntax and Logical Form". *Linguistic Inquiry* 25.609-665.
- MacWhinney, Brian and Catherine Snow. 1990. "The child language data exchange system: an update". *Journal of Child Language* 17.457-472.
- Müller, Natascha. 1994. "Gender and number agreement within D". *Bilingual firstlanguage acquisition. French and German grammatical development*, ed. by Jürgen M. Meisel, 53-88. Amsterdam & Philadelphia: John Benjamins.
- Neeleman, Ad & Kriszta Szendrői. 2005. *Radical pro drop and morphology of pronouns*. Paper presented at 5<sup>th</sup> GLOW in Asia, Delhi, India.
- Poepfel, David & Kenneth Wexler. 1993. "The Full Competence Hypothesis of clause structure in early German". *Language: journal of the Linguistic Society of America*. 69.1-33.
- Radford, Andrew. 1990. *Syntactic Theory and the Acquisition of English Syntax: the Nature of Early Child Grammars in English*. Oxford: Blackwell.
- Roodenburg, Jasper. 2004. *Pour une approche scalaire de la déficience nominale: la position du français dans une théorie des 'noms nus'*. Ph.D. Diss., University of Amsterdam.
- Rozendaal, Margot & Anne Baker in prep. "A cross-linguistic investigation of the acquisition of the pragmatics of indefinite and definite reference in two-year olds". Ms, University of Amsterdam.
- Szabolcsi, Anna. 1987. "Functional categories in the noun phrase". *Approaches to Hungarian 2*, ed. by I. Kenesei, 160-190. Szeged: JATE
- Van den Berg, Maaïke. 2001. *L'acquisition de l'article par des enfants francophones, néerlandophones et bilingues*, MA thesis University of Amsterdam.

- Van Kampen, Jacqueline. 1997. *First Steps in Wh movement*, Ph.D. Diss. Utrecht University.
- Vergnaud, Jean Roger & Maria Luisa Zubizarreta. 1992. "The definite determiner in French and in English". *Linguistic Inquiry* 23.595-652.
- Weerman, Fred & Jacqueline Evers-Vermeul. 2002. "Pronouns and case". *Lingua* 112.301-338.



**PRAGMATIC SOLUTIONS FOR SYNTACTIC PROBLEMS**  
**UNDERSTANDING SOME L2 SYNTACTIC ERRORS IN TERMS OF DISCOURSE-  
PRAGMATIC DEFICITS \***

JASON ROTHMAN  
*The University of Iowa*

Contemporary research in generative second language (L2) acquisition has attempted to address observable target-deviant aspects of L2 grammars within a UG-continuity framework (e.g. Lardiere 2000; Schwartz 2003; Sprouse 2004; Prévost & White 1999, 2000). With the aforementioned in mind, the independence of pragmatic and syntactic development, independently observed elsewhere (e.g. Grodzinsky & Reinhart 1993; Lust et al. 1986; Pacheco & Flynn 2005; Serratrice, Sorace & Paoli 2004), becomes particularly interesting. In what follows, I examine the resetting of the Null-Subject Parameter (NSP) for English learners of L2 Spanish. I argue that insensitivity to associated discourse-pragmatic constraints on the discursive distribution of overt/null subjects accounts for what appear to be particular errors as a result of syntactic deficits. It is demonstrated that despite target-deviant performance, the majority must have native-like syntactic competence given their knowledge of the Overt Pronoun Constraint (Montalbetti 1984), a principle associated with the Spanish-type setting of the NSP.

**1. *Introduction***

Mere observation highlights the fact that the majority of adult L2 grammars diverge from target native grammars, and to varying degrees. Notwithstanding apparent L1/L2 differences, available empirical data suggest that these same L2 grammars contain knowledge of L2 properties that are

---

\* I wish to acknowledge the helpful suggestions of several people. I am especially grateful to Nina Hyams, whose comments lead me to pursue the pragmatic account for target-deviancy in this paper. I also wish to thank Carlos Quicoli and Susan Plann for similarly helpful comments. I am appreciative and indebted to the anonymous reviewers, whose comments resulted in a better product. Finally, a special thanks is due to Michael Iverson for his help in the preparation of this manuscript.

underdetermined in the input, not transferable from the L1 and not explicitly taught; the so-called *logical problem of L2 acquisition* (Gregg 1996 and White 2003). With the aforementioned in mind, contemporary research in the generative study of L2 acquisition has attempted to account for particular manifestations of target-deviancy in L2 performance in accord with theoretical models of adult UG-continuity (e.g., Goad et al. 2003; Lardiere 1998 a&b, 2000; Prévost & White 1999, 2000; Schwartz 2003; Sprouse 2004; White 1989, 2003; Sorace 2000, 2003). The present study aims to add to such explanations by exploring the ensuing effects in L2 performance of the independent development of pragmatics and syntax. This notion stems from analyses of several language acquisition studies, which highlight the independence of pragmatic and syntactic development in general (e.g., Avrutin & Wexler 1992; Flynn 1987; Grodzinsky & Reinhart 1993; Lust et al. 1986; Schaeffer 2000; Serraticce, Sorace & Paoli 2004) and in particular discuss the syntax-before-discourse observation in L2 acquisition (e.g., Montrul, 2004; Montrul & Rodríguez-Louro, 2004; Pachecho & Flynn, 2005; Pérez-Leroux et al., 1999; Sorace, 2000, 2003, 2004; Tsimplici et al., in press). If indeed pragmatic competence emerges later than syntax, it follows that deficits in pragmatic knowledge can manifest as what appear to be particular syntactic errors in performance. As a result, particular errors in L2 interlanguage (IL) development, thought to occur for reasons of syntactic deficits, are perhaps better understood and most accurately accounted for in terms of deficiencies in discourse-pragmatic knowledge.

Framed within the syntax-before-discourse observation, the current study explores the possibility that L2 syntactic competence can be native-like despite errors that surface as a result of a vulnerable syntax-pragmatics interface. This is tested by examining the possible resetting of the Null-Subject Parameter (NSP) from the English to the Spanish value assuming a Minimalist Program (MP) feature checking model analysis for null-subject licensing (Alexiadou & Anagnostopoulou 1998). Accordingly, the research questions for the present study are the following:

- a) Do English L2 learners of Spanish acquire the [+D, + interpretable]  $\phi$ -features associated with Spanish verbal agreement morphology enabling them to check a universally strong EPP-feature via V-raising alone?
- b) Do English L2 learners of Spanish acquire at the same time the associated discourse pragmatic conditions, which regulate the distribution of overt/null subjects in discourse? If not, how does this affect L2 syntactic performance?

This article is structured as follows: in sections 2 and 3, the theoretical background is presented. In section 4, L2 studies examining the resetting of the NSP are briefly reviewed. Finally, from section 5 onward, the present empirical study is presented. I argue that an L2 insensitivity to Spanish discursive constraints accounts for target-deviant uses of null and overt subject pronouns by English learners of L2 Spanish. In spite of this L1/L2 disparity, these same L2 learners demonstrate clear sensitivity to the syntactic constraints that regulate subject pronoun distribution in Spanish, which is ultimately determined by their native-like knowledge of the Overt Pronoun Constraint (OPC) (Montalbetti 1984), a [+ null-subject] derived principle.

## 2. *The Null Subject Parameter (NSP)*

Since its original formation, the NSP (Jaeggli, 1982; Rizzi, 1982, 1986) has been reanalyzed on several occasions (*e.g.*, Huang 1984; Jaeggli & Safir 1989; Safir 1985 among others) in an effort to account for null-subjects of Chinese-type languages as well as the controversial nature of determining exactly which syntactic properties, if any, derive from this parameter.<sup>1</sup> In recent years, the Minimalist Program (MP) (Chomsky 1995, 2000, 2001) has made advances in explaining *pro-drop* phenomena from a feature checking model approach. The theory I will advance herein is that of Alexiadou & Anagnostopoulou (1998), (henceforth A&A). In essence, A&A propose that Spanish verbal agreement morphology includes a nominal element [+ D, + interpretable  $\phi$ -features]. In other words, the verbal inflectional affixes of Spanish, as in (1a) are thought to share the identical status of English pronouns as in (1b).

- |        |               |                 |             |            |           |             |       |
|--------|---------------|-----------------|-------------|------------|-----------|-------------|-------|
| (1) a. | <i>beb-o</i>  | <i>beb-emos</i> | b. <b>I</b> | drink      | <b>we</b> | drink       |       |
|        | <i>beb-es</i> | <i>beb-éis</i>  |             | <b>you</b> | drink     | <b>you</b>  | drink |
|        | <i>beb-e</i>  | <i>beb-en</i>   |             | <b>she</b> | drinks    | <b>they</b> | drink |

As per A&A, “EPP-checking is D-feature checking in a non-substantive category by a [nominal] lexical category (1998:157)”. In Spanish, head-to head movement of the verb to AgrSP is able to check the EPP-feature since the

<sup>1</sup> Studies of typologically wide samplings of languages provide counter evidence to the so-called NSP clustering properties. For example, some Caribbean dialects of Spanish and Old French allow(ed) overt expletives despite being *pro-drop* languages (Arteaga 1984; Toribio 1994). Conversely, some non-null subject languages such as Yiddish and German allow null expletive subjects (Safir 1985). In the same vein, earlier work on subject and non-subject asymmetries in the relativization of embedded NPs suggested that the connection between extraction of subjects and null subjects ought to be redefined (Auwera 1984). Moreover, whereas some languages with empty subjects in finite clauses allow subject placement at the right end of the clause (Adams 1987; Grewendorf 1986), other languages allow subjects at the right end of the clause, but disallow empty subjects (Müller & Rohrbacher 1989).

agreement morpheme of the inflected verb is able to check the D-feature of AgrSP and to meet the identification requirement. Conversely, languages such as English, with ‘weak’ verbal morphology, have [- D, - interpretable] agreement features. As a result, in English-type languages, checking the universally strong EPP-feature<sup>2</sup> cannot occur without an overt subject pronoun merged to the Spec of AgrSP.

Within the MP, it is assumed that much of the burden of language acquisition, for children and arguably adults alike, is shifted to the learning of the lexicon; the learning of morphosyntactic features from the target language. Under minimalist assumptions, the computational processes of Move and Merge are purported to be universal. Therefore, language-to-language variability is likened to the existence of variable morphological properties. Assuming a universally strong EPP-feature, null subject parametric differences manifest in terms of how different languages check this feature. In languages like Spanish, X-movement enables the checking of the EPP-feature, and thus null-subjects are possible as compared to languages like English where XP-merge is required for the same checking, and thus necessitates overt subject pronouns. English learners of L2 Spanish, therefore, must acquire the relevant nominal features of Spanish agreement to be able to license null subjects in the same way as native Spanish speakers.

### 3. *Constraints on Overt Subject Pronouns in Spanish*

In Spanish and related languages (e.g. Catalan and Italian), null/overt subject distribution has been well documented, inclusive of the discursive conditions that permit and require the use of overt subject pronouns in these languages (e.g., Fernández-Soriano 1989, 1993; Luján 1987, 1999; Picallo 1994, 1998; Rigau 1986, 1988; Rizzi 1997). In Spanish, overt subject pronouns are only used in very specific discursive environments in which their presence offer more than agreement features to the semantic interpretation. For example, overt subject pronouns (or lexical subjects) are required to remove referential ambiguity when new referents are introduced into the discourse, as seen by comparing (2) with (3). Conversely, once a discourse referent has been established it is pragmatically anomalous to use overt subject pronouns to refer to the same referent.

- (2) *Paco y Luis no durmieron bien. \*Paco y Luis/ ?ellos/Ø estarán cansadas.*  
 “Paco and Luis did not sleep well. \* Paco and Luis/?they/Ø must be tired.”

---

<sup>2</sup> Without further discussion here, I acknowledge that the universality of the EPP is an open question in syntactic theory.

- (3) *No dormí bien. Paco y Luis /ellos/\*Ø piensan que estoy cansado ahora.*  
 “I did not sleep well. Paco y Luis/they/ \* Ø think that I am hungry

Additionally, as seen by comparing (4) to (5), lexical subjects or overt subject pronouns must be used to answer topic questions.

- (4) *¿Hablaste con María José anoche?... Sí, ?yo/Ø hablé con ella.*  
 “Did you speak to María José last night?... Yes, ?I/ Ø spoke with her.”
- (5) *¿Quién habló con María José anoche?... yo/\*Ø hablé con ella.*  
 “Who spoke to María José last night? I /\*Ø spoke to her”.

Moreover, the fact that embedded overt subject pronouns are most naturally understood as referentially disjoint with matrix subjects follows from the observation that they serve to express contrastive focus, as in (6).

- (6) *Todo el mundo opina que él tiene toda la razón [y no ella].*  
 “Everyone thinks that **he** is completely right [and not her]”.

Evidently, focal stress cannot be assigned to subjects that are phonetically null, thus, overt subject pronouns are also required to establish focus, as in (7).

- (7) *Nunca pensé que tuvieras que cocinar esta noche. Juan<sub>i</sub> me dijo que él<sub>i</sub> lo haría.*  
 “I never thought you would have to cook tonight. John told me **he** would do it.”

In accord with a pragmatic universal, the Avoid Pronoun Principle (APP, Chomsky 1981), which restricts the use of overt subject pronouns to cases where null subjects are impossible, the native use of overt pronominal subjects in most dialects of Spanish is limited to the above exemplified discourse-pragmatic environments. So, if the APP is a universal -- presumably available to English learners of L2 Spanish from their L1 -- why should L2 Spanish interlanguage demonstrate L1/L2 incongruence in the discourse distribution of null/overt subjects. Should this L2 target-deviancy be taken to mean that adult learners are unable to acquire necessary features needed to reset the NSP?

Chomsky (1981) suggested that the APP is a conversational principle, associated with the general rule of saying as little as minimally needed to impart an intended message. He also considered the possibilities that the APP is related to a principle of deletion-up-to-recoverability or that the APP functions as a principle of grammar. Whether the APP is a pragmatic principle or a principle of deletion, the same would hold, in that one should assume that adults



know this principle via their L1. Conversely, if the APP were a principle of grammar, it could be argued that it is the APP, not the NSP, which accounts for null-subjects: the environments which license an empty category are defined independently; recourse to the APP is allowed in pro-drop languages by virtue of the definitions of the licensing conditions for empty subjects. Essentially, the APP, again, holds generally, but it is applicable only in languages like Spanish, which are pro-drop languages. There is evidence, however, that the APP is instantiated in non-null subject languages (e.g., resumptive pronouns and imperatives in English). Whether or not the APP is transferable from English, although I suspect it is, its presence does not guarantee the native Spanish distribution of null/overt pronouns. The APP merely requires that null subjects be used unless impossible. Language learners of null subject languages, child and adult alike, must learn independently what makes null subjects ‘impossible’ in that particular grammar. For Spanish, they must learn the relevant discursive conditions. Needless to say, sensitivity to the syntactic constraints of null/overt subject distribution does not guarantee the same sensitivity to the discursive constraints, at least at the same time.

In addition to the pragmatic restrictions on overt subject use in Spanish, the Overt Pronoun Constraint (OPC) (Montalbetti 1984) embodies yet another restriction. The OPC is a universal principle of grammar instantiated in null-subject grammars, which blocks the following interpretations [\*QDP/*wh*<sub>*i*</sub>....[overt pronoun<sub>*i*</sub>.....]], as in (8).

- (8) a. Each player<sub>*i*</sub> thinks that he<sub>*i*<sub>*j*</sub></sub> is the best .  
 b. Tiger Woods<sub>*i*</sub> thinks that he<sub>*i*<sub>*j*</sub></sub> is the best.  
 c. *Cada jugador<sub>*i*</sub>, cree que él<sub>*i*<sub>*j*</sub></sub> es el mejor.*  
 d. *Cada jugador<sub>*i*</sub>, cree que Ø<sub>*i*<sub>*j*</sub></sub> es el mejor.*  
 e. *Tiger Woods<sub>*i*</sub> cree que él<sub>*i*<sub>*j*</sub></sub> es el mejor.*  
 f. *Tiger Woods<sub>*i*</sub> cree que Ø<sub>*i*<sub>*j*</sub></sub> es el mejor.*

In pro-drop languages, bound variable (BV) interpretations are always available between regular referential expressions with fixed referents (Miguel, María y la mujer) and embedded subject pronouns, whether overt or null. However, if the matrix subject is a variable expression (a quantified DP or *wh*-phrases), coindexation is only possible with null embedded subjects, which is to say, the OPC blocks BV interpretations in these sentences if the embedded subject is overt, as seen in (8c).

#### 4. *The NSP and L2 Acquisition Research*

The L2 resetting of the NSP has been examined by many researchers for many L1 → L2 combinations (e.g., Al-Kasey & Pérez-Leroux 1998; Clahsen & Hong 1995; Hilles 1986; Kaltenbacher 2001; Liceras 1989; Liceras & Díaz

1999; Phinney 1987; Tsimpli & Roussou 1991; White 1985, 1986). In particular, the NSP parameter has received a privileged amount of attention in L2 Spanish research for two important reasons. First, the target-language input provides abundant triggering data. Second, it is testable given the number of superficially unrelated properties argued to derive from the setting of this parameter (see (1) and (2) in section 1). Many details aside, relevant L2 research has provided two consistent observations: (a) L2 learners do not seem to demonstrate the predicted, rapid parametric change, but rather a gradual one; and (b) clustering of all the derived properties does not appear to occur (*e.g.*, Al-Kasey & Pérez-Leroux 1998; Licerias 1989, White 1985, 1986). Nevertheless, most authors have not correlated these observations with adult cessation to directly access UG. Conversely, they have been used either to support analyses that disassociate null-subject licensing from certain purported derived properties and/or to highlight the interference of L1 transfer.

Most relevant to the present study are the observations that English L2 learners of Spanish do two things: (a) they overuse overt subject pronouns; and (b) they attempt to produce/accept ungrammatical overt expletive subjects (Al-Kasey & Pérez-Leroux 1998; Licerias 1989; Montrul & Rodríguez-Louro 2004; White 1985, 1986). Let us further consider the possibility that, in light of these facts, resetting the NSP is possible syntactically, but L2 learners are insensitive to the discursive conditions on null/overt subject distribution. Even in the case the APP is immediately accessible via L1 transfer, lack of associated Spanish discourse-pragmatic constraints can result in L2 syntactic performance that is target-deviant. This possibility is testable because it makes the following predictions: (1) overuse of overt referential subjects concurrent with the ability to “drop” subjects in embedded clauses; (2) under use of overt pronouns in the discourse environments where they are expected (3) non-native production/acceptance of overt expletives; along with (4) knowledge of the Overt Pronoun Constraint (OPC) (Montalbetti, 1984). In the next section, the empirical study, which is designed to test these predictions, is detailed.

## 5. *The Study*

The present study tests 30 intermediate English learners of L2 Spanish as to their knowledge that Spanish, unlike their L1, is a pro-drop language. These L2 learners were sampled from a total of eighty L2 learners enrolled in a study abroad program in Madrid Spain over the 2004-2005 academic year. The data reported here were collected after 5 months of residency in Spain. Participants were selected for this study if: 1) their L1 was English; 2) they had no other previous exposure to other pro-drop languages 3) this was their first extended stay in a Hispanic country; 4) they reported having no contact with Spanish outside Spanish courses prior to their arrival in Spain and 5) they were deemed to be at a mid-high level of intermediate proficiency based on oral

interviews and grammar proficiency tests. The average total years of Spanish study was 4.27 with a range of 4-6 years. The mean age of the L2 group was 20.36 with a range of 18-21.

In addition to the L2 learner group, there is a native Spanish control group (n=20). Data from three types of tests are provided: (i) a logical sentence production task; (ii) a grammaticality judgment/correction task; and (iii) a co-reference judgment task (testing for the instantiation of the OPC).

### 5.1 *Test 1: A Logical Sentence Production Task*

In this task, the subjects were directed to form logical grammatical sentences with uninflected lexical items provided to them, in accord with a preceding context in which the subjects were presented as R-expressions. Verbs were not only uninflected, but also appeared without subject pronouns. To ensure the L2 learners would provide subject pronouns if deemed grammatically necessary, they were given a similar test in English beforehand. There were two types of test sentences: (i) expletive subject sentences (n=10) and (ii) referential subject sentences (n=10), the latter of which were sub-divided into sentences with (n=5) and without (n=5) contexts that present contrastive focus. In light of the discussion in sections 2 and 3, overt subject pronouns are only expected for type (ii) sentences with contrastive focus, an example of which is provided in (9).

- (9) *Javier y Luisa trabajan para la misma compañía internacional y tienen más o menos el mismo trabajo. Es lógico que deban ganar el mismo sueldo pero hay un desequilibrio entre los sueldos de las mujeres y los de los hombres.*

“Javier and Luisa work for the same international company and have, more or less, the same job. It is logical that they should make equal salaries, but male and female salaries are not always equitable.”

*Todos/ saber/ que/ ganar/ más dinero. “Everyone/ to know/ that/ to make/ more money.”*

### 5.2 *Test 2: A Grammaticality Judgment/Correction Task*

The second test is a traditional grammaticality judgment/correction task<sup>3</sup>. Data will be provided on the following types of sentences as in (10).

---

<sup>3</sup> Given the issues involved in GJTs (Sorace 1996), perhaps the only reason to use GJTs is to test L2 knowledge of ungrammaticality. Thus, the most relevant item from this test is (4b).

- (10) a) **(null expletive subject)**  
*pro hace frío afuera hoy.*  
 “It is cold outside today”.
- b) **(overt expletive subject)**  
*\*Lo llueve en las montañas.*  
 “It is raining in the mountains”.
- c) **(null referential subject)**  
*Nadie cuenta con María, Ø es mentirosa*  
 “Nobody trusts Mary, she is a liar”.
- d) **(overt referential subject)**  
*¡No puede ser! María juró que ella lo haría.*  
 “Impossible! Mary swore she would do it”.

The participants were instructed to leave unmarked the sentences they believed grammatical and, conversely, to correct any of the sentences they deemed ungrammatical. They were also instructed to indicate if a sentence seemed ungrammatical to them, yet they were unable to fix it. There were eight exemplars for each sentence type except for the filler sentences (n=40), which included word-order and agreement violations.

### 5.3 Test 3: Co-reference Interpretation Task: L2 Knowledge of the OPC

This final test examined L2 knowledge of the Overt Pronoun Constraint (Montalbetti 1984), a [+ null-subject] associated principle of grammar discussed in section 3. Pérez-Leroux & Glass (1999) used a context translation task to test L2 OPC knowledge in intermediate Spanish. The present test aimed to verify their findings of L2 OPC instantiation, however, a different type of task was used, namely a co-reference interpretation task modeled after Kanno’s (1998) OPC test for L2 Japanese. The subjects were provided with contextualized sentences of four types (n=10 each) and were asked to read each exemplar circling their immediate interpretation, as in (11).

- (11) a) **Null embedded pronoun with quantified/wh matrix subject**  
*¿Quién no sabe que Ø tiene derecho a votar a los 18 años?*  
 “Who do you suppose does not know that he has the right to vote at 18?”  
 a) the same as *Quién*      b) someone else
- b) **Null embedded pronoun with DP matrix subject**  
*Ayer todos estábamos hablando en la cocina cuando María nos informó que pronto Ø se mudaría a Japón.*  
 “Who do you think will move to Japan soon?”  
 a) María      b) someone else who is not María



subject pronouns in these contexts. This L1/L2 difference is quite statistically significant ( $t = 14.89$ ,  $p < 0.001$ ).

|             | Overt Expletive (OE) | Overt Referential (ORS) | Overt Referential w/CF (ORCF) |
|-------------|----------------------|-------------------------|-------------------------------|
| NSC         | 0                    | 0                       | 4.85                          |
| L2 Learners | 0                    | 0.17                    | 1.33                          |

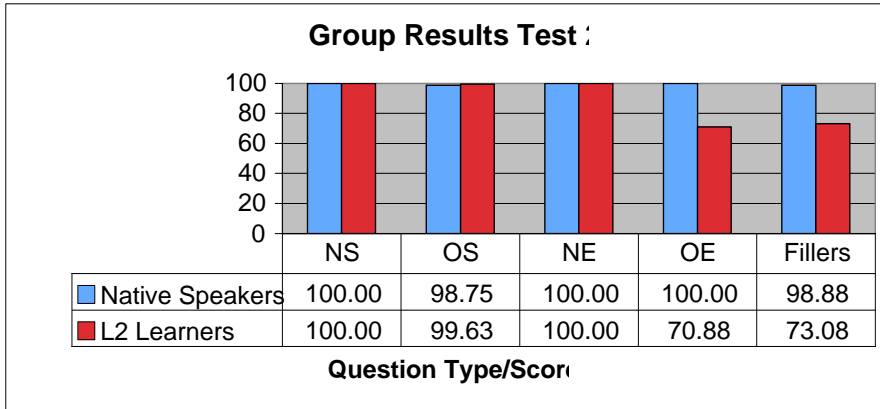
\*Results reported as number of overt subjects used. OE n=10, ORS n=5, ORFC n=5

*Table 1: Group Results from Test 1*

The L2 learners clearly perform this task differently than they would in their L1. As a group, they produce sentences in L2 Spanish without overt referential subject (in embedded and matrix positions) and expletive subject pronouns. However, given their performance with contrastive focus environment sentences, it is equally evident that they do not have knowledge of the pragmatic requirements for overt subject use in Spanish.

## 6.2 Test 2: The Grammaticality Judgment/Correction Task

As can be seen in Figure 2 below, there was virtually no variation for any test sentence type for the native control. Compared to the NSC, the L2 learners performed like native Spanish speakers in judging Spanish null subject (no deviation), overt subject ( $t = 0.87$ ,  $p = 0.391$ ), and null expletive subject sentences (no deviation) sentences. However, given the limitations of GJTs, it was crucial that the L2 learners demonstrated knowledge of what is fundamentally blocked by the target grammar. That is, most important was the determining of their (in)tolerance for Spanish overt expletive subject sentences. Despite the fact that the L2 learners performed native-like on two sentence types that are ungrammatical in their L1, they also performed in a target-deviant manner for overt expletive subject sentences in Spanish and on many of the filler sentences. This is an important revelation considering the fact that of the five sentences types for which data are reported overt expletive and the filler sentences were the only ones that are restricted (i.e. contained morphosyntactic errors) in Spanish.



NS= null referential subjects, OS= overt subjects, NE= null expletives, OE= overt expletives, Fillers= word order & gender

*Figure 2: Group Results Test 2*

On average, the L2 aggregate corrected ungrammatical overt expletive sentences 70.9 % of the time (5.67 out of 8 times) while the Spanish natives corrected these sentences 100% of the time, resulting in a significant L1/L2 difference ( $t = 4.43$ ,  $p < 0.001$ ). However, the L2 aggregate mean is not indicative of each individual performance, but rather reflects the averaging of a wide range of individual performance rates, varying from 0% to 100% correction of these ungrammatical sentences. Eighteen of the 30 L2 learners fail to correct ungrammatical overt expletive sentences 25% of the time or more. Of this same group, ten accept overt expletive sentences 50% of the time or more. While these individual learners allow for overt expletive pronouns in their judgment of Spanish sentences, all of them simultaneously demonstrate knowledge that expletive subjects can be null in Spanish. In fact, if we couple the results of Test 1 with Test 2, we note that all subjects consistently judge correctly null expletive subject sentences as well as produce them. At this particular point in IL development, it appears that in regards to expletive subject pronouns, many of the L2 learners have grammars that are both different from their L1 and from the target L2. Additionally, there was an even greater L1/L2 difference for the filler sentences ( $t = 8.45$ ,  $p < 0.001$ ), which almost exclusively related to morphological agreement errors that were not corrected. However, as we will discuss, it should not be taken for granted that these L1/L2 differences reflect syntactic deficits.

### 6.3 Test 3: Co-reference Judgment Task

As can be seen in Table 3 below, the L2 subject group data demonstrate a *sensitivity* to the OPC, confirming the findings of Pérez-Leroux & Glass (1999) for intermediate English learners of L2 Spanish. As a group, the L2 learners derive bound variable (BV) interpretations for sentences in which the embedded subject is overt only 34.3% percent of the time when the matrix subject is a quantified DP (QDP) or *wh*-element as compared to 81% when an embedded subject pronoun is not PF-expressed ( $t = 10.16$ ,  $p < 0.001$ ). Additionally, there is a significant difference in BV interpretations for the group with reference to the type of subject in matrix position (QDP/*wh*-phrase vs. NP) when there is an overt embedded subject ( $t = 8.25$ ,  $p < 0.001$ ).

|          | QDP/Overt               | QDP/Null                | DP/Overt             |
|----------|-------------------------|-------------------------|----------------------|
| SNC BV   | 0.9 out of 10<br>9%     | 7.65 out of 10<br>76.5% | 3.9 out of 10<br>39% |
| L2ers BV | 3.43 out of 10<br>34.3% | 8.10 out of 10<br>81%   | 6.1 out of 10<br>61% |

Type of coreference interpretation (BV or DR) in a particular context of matrix subject type (a QDP /*wh* or DP/NP) and embedded subject pronoun type (overt or null).

Table 3: Group Results for Test 3

Despite the L2 OPC sensitivity, the L2 aggregate does not perform completely like the native Spanish control for both relative comparisons. Comparing the difference in BV interpretations in QDP/Overt or QDP/Null contexts for the native speakers vs. the L2 learners yields a statistically significant difference ( $t = 3.31$ ,  $p = 0.002$ ). Comparing the difference in BV interpretations when overt embedded subjects are used with matrix subjects that are either a QDP or a DP (QDP/Overt vs. DP/Overt) between the two groups surprisingly yields no significant difference (QDP/*wh*- vs. NP:  $t = 0.68$ ,  $p = 0.501$ ). However, upon further inspection it was found that this lack of significance was due to a similar interval of difference for the QDP/Overt vs. DP/Overt sentences, and not actually caused by the L2 learners demonstrating native-like behavior. Pérez-Leroux & Glass find the same group trend for intermediate L2 learners. However, one should ponder what this group *sensitivity* to the OPC actually indicates? In an effort to investigate this reasonable question, we turn to the data of individual L2 learners.

The individual data shows that ten of thirty individual subjects do not demonstrate knowledge of the OPC at all, rendering the overall group divisible into two subgroups: (i) those that have clear knowledge of the OPC ( $n=20$ ); and (ii) those who do not have knowledge of the OPC ( $n=10$ ). It is the averaging of these two subgroups that creates the semblance of an OPC tendency for the



entire group. Pérez-Leroux & Glass do not comment on individual data, rendering it impossible to determine if their observed OPC sensitivity is also a result of a strict aggregate analysis. Re-doing the statistics for only the subgroup of L2 subjects who demonstrate knowledge of the OPC, the group rate of BV interpretations in OPC restricted contexts drops from 34.3% to 19.5%. The rate of BV interpretations in contexts with QDP/wh-matrix clause subjects with a null embedded subject increases to 83%. Thus, the difference in interpretation of coreference based on the presence or lack of overt embedded subjects when the matrix subject is a QDP/wh- is 63.5% ( $t = 12.22$ ,  $p < 0.001$ ) for this subgroup, showing no statistically significant difference when compared to the SNS mean difference of 67.5% ( $t = 0.68$ ,  $p = 0.5$ ). Furthermore, the difference in BV interpretations for this subgroup with reference to the type of subject in matrix position (QDP/wh- vs. DP) when there is an overt embedded subject ( $t = 7.93$ ,  $p < 0.001$ ) is native-like ( $t = 1.24$ ,  $p = 0.225$ ).

## 7. Discussion of Results

In this section, the data from the three tests are coupled together as they relate to the research questions. The first asked if it was possible for English L2 learners of Spanish to acquire the necessary morphosyntactic features associated with Spanish verbal morphology, which result in EPP-feature checking via V-raising alone. The data from all three tests suggest that this is possible by the intermediate level of IL development and thus provides evidence of L2 feature acquisition by adult learners *in contra* the *Failed Functional Features Hypothesis*. Firstly, the data from Test 1 demonstrate that the L2 learners are able to produce sentences without overt subject pronouns. This is true for expletive and referential subjects in matrix and embedded clauses. Since the EPP-feature is universally strong, some syntactic process must check this feature. In English, the EPP-feature must be checked by XP-merge since English has no nominal feature associated with its verbal morphology. The fact that the L2 learners are able to consistently produce null subject sentences in L2 Spanish in contexts not licensed in English must entail that the EPP-feature is checked without merging a subject pronoun to the Spec of AgrSP (see Tsimpli & Roussou 1991 and Licerias & Díaz 1999 for alternative accounts). The only way to do this, without assuming non-linguistic rules, is to imagine that the nominal features associated with Spanish verbal morphology of Spanish were acquired. Data from Test 2, which demonstrate that these L2 learners reliably judge *pro-drop* sentences supports the observations from Test 1.

Given L2 knowledge of the OPC, the data from Test 3 serve to crystallize the conclusions drawn. Grammatical restrictions like the OPC are never taught in formal instruction (cf. Kanno 1998; Pérez Leroux & Glass 1997). Furthermore, the OPC is unable to operate in the particular grammar of English, which does not permit empty subjects. As a result, knowledge of the

OPC in these participants is a classical example of *the logical problem of L2 acquisition*. It is widely accepted that the OPC is associated with setting the NSP to the Spanish-type value. Test 3 demonstrates that 20 of the 30 L2 subjects have native-like knowledge of the OPC. This is the ultimate criterion in determining that these 20 L2 learners have reset the NSP at this particular point in IL development.

It must be noted, however, that a closer analysis of the sentences produced in Test 1 revealed a possible relationship between verbal morphological knowledge and OPC knowledge. That is, 7 of the 10 subjects who do not demonstrate OPC knowledge had a greatly impoverished performance with the production of verbal and nominal morphological agreement as compared to several of their peers, who more or less performed native-like. Since learning the verbal morphology inclusive of associated features is necessary for resetting the NSP and EPP-checking in Spanish, this relationship may be quite significant. However, in light of syntax-before-morphology evidence (e.g., Lardiere 1998a, 1998b, 2000; Prévost & White 1999, 2000; Schwartz 2003) it is not clear that this seeming pattern relates to anything more than the ubiquitously reported problems in L2 surface morphology production. This possibility is supported by several facts. Firstly, some L2 learners who had native-like knowledge of the OPC also did poorly with morphological production in Test 1. Secondly, the remaining three L2 learners who did not demonstrate knowledge of the OPC performed more or less native-like with morphological production in Test 1. Lastly, a look at Test 2 revealed no absolute correlation between poor L2 morphological production (test 1) and poor L2 correction of morphological errors (test 2). That is, some L2 learners who did poorly on morphological production in Test 1 (including 3 of the 7 discussed above) did rather well with agreement correction in Test 2, and vice versa. While parameter resetting and the learning of L2 features must be possible in adulthood, as evidenced by the OPC knowledge of 20 of the present 30 subjects, it is not clear that all adult learners will do so congruently, which merely suggests that the timing of learning can be variable.

The second research question asked if the hypothesized independent development of pragmatics and syntax could be attested to and, if so, how the lack of pragmatic knowledge may explicate certain apparent syntactic errors in L2 performance. It was suggested that this idea would be testable in the present study because it predicted that English L2 learners of Spanish could have: (1) the ability to produce and judge null referential subjects concurrent with the overuse of overt referential subjects in environments that are pragmatically odd and/or their under use in discursive environments that require them and (2) non-native production/acceptance of overt expletives, despite knowledge of the Overt Pronoun Constraint (OPC) (Montalbetti 1984).

Contrastive focus contexts in Test 1 were used to see if the L2 learners acquired the discourse-pragmatic knowledge that requires the use of overt subject pronouns in Spanish. The data of Test 1 indicated a sensitivity to the syntactic constraints on null/overt subject distribution in Spanish, coexisting with an insensitivity to the pragmatic conditions on their discursive distribution. Given the structured nature of the test, overuse of overt subject pronouns was not observed. Although the more commonly reported target-deviant use of subject pronouns in L2 Spanish is a unidirectional reporting of overt subject overuse, a bidirectional under and overuse of overt subject pronouns has been reported to typify L2 Spanish null/overt subject pronoun distribution as well (Montrul & Rodríguez- Louro 2004). In fact, the under-use of overt subject pronouns is more consistent with a grammar regulated by the APP, which should be immediately accessible via the L1. As discussed earlier, access to the APP alone does not result in the particular grammar distribution of null/overt subject pronouns of Spanish. That is, the APP merely stipulates a favoring of null subjects whenever possible. The fact that the vast majority of L2 learners did not produce overt subject pronouns in CF environments can only be accounted for in terms of their insensitivity to the discursive properties of Spanish that, in conjunction with the APP, render null subjects impossible in particular discourse contexts.

It has been widely noted that English learners of L2 Spanish typically overuse overt subject pronouns in production, which seems counterintuitive if the APP is indeed accessible via the L1. Although this was not observed in the present study, it deserves some attention as this observation too can be explained via L2 insensitivity to discourse-pragmatic constraints. Sorace (2000, 2003) has discussed the fact that L2 learners, even at highly advanced levels of proficiency, often exhibit what she calls residual optionality in interface-conditioned syntax as a result of L2 extended use of L1 options, often in light of a lack of unambiguous input from the target L2. English learners of L2 Spanish receive positive evidence that overt subjects are possible in Spanish. Moreover, the use of overt subjects in most discursive contexts is not wrong syntactically, but rather pragmatically anomalous. In light of L2 insensitivity to Spanish discursive constraints that regulate null/overt pronoun distribution, Spanish input is not entirely unambiguous. In this case, English can weigh heavily on the choice employed at the level of discourse, favoring the alternative closest to the L1. As a result, a target-deviant distribution obtains as a result of the missing discursive knowledge that is crucial to the native-like use of null vs. overt subject pronouns in Spanish.

In Test 2, it was revealed that these L2 learners tolerated ungrammatical overt expletive subjects in Spanish. Since null subject grammars employ null expletive pronouns, it seems reasonable that data from Test 2 could be interpreted as evidence that these grammars are syntactically target-deficient.

Importantly, however, it was never the case that an L2 learner rejected null expletive sentences. Additionally, in Test 1 all L2 learners produced all relevant sentences with null expletive pronouns. This is important because it highlights the fact that they know expletive subjects can be (and perhaps most naturally are) null in Spanish. It appears that for some L2 learners, however, both types are possible. It should be noted that while rare and certainly not the case for most dialects of Spanish, there are pro-drop grammars that permit overt expletives such as Galician and European Portuguese (Raposo & Uriagereka 1990). In Spanish, however, overt expletive subject pronouns never meet the pragmatic requirements for overt subjects since, lacking semantic content, they cannot receive contrastive or focal stress. As a result, the purported lack of necessary discourse-pragmatic constraints can explain the L2 tolerance of overt expletive subjects as well. Ultimately, knowledge of the OPC confirms the native-like NSP syntactic knowledge for many of these L2 learners, several of whom allow ungrammatical overt expletive pronouns in L2 performance. Thus, we may speak of a case where L2 pragmatic deficits infringe on syntactic performance.

## **8. Conclusion**

Over the past decade, Full Access approaches to adult L2 acquisition have made great progress in determining what variables, in addition to L1 transfer, result in L1/L2 disparities despite demonstrable adult UG-continuity (e.g. Goad et al. 2003; Prévost & White 1999, 2000; Schwartz 2003; Sorace 2000, 2003). While it remains to be seen if the majority of adult learners is truly unable to achieve native-like mastery of an L2, it seems clear that there are mitigating circumstances in L2 acquisition whereby a one-to-one comparison of adult L2 grammars to target native L1 grammars is not an entirely fair comparison.

In light of the syntax-before-discourse observation, the present study hypothesized that the syntax-pragmatics interface is one of the mitigating factors that results in variable L2 target-deviancy. As it pertained to the distribution of null/overt subject pronouns in L2 Spanish interlanguage, we observed the real possibility that L2 target-deviant syntactic performance for particular properties is best explained in terms of deficits in discourse-pragmatic knowledge despite sophisticated native-like syntactic knowledge. As a result, it is assumed that UG constrains L2 acquisition in general and that the syntax-pragmatics interface is yet another contributor to the very observable occurrences of target-deviant performance in adult IL development.

### References

- Adams, Marianne. 1987. "From Old French to the theory of pro-drop". *Natural Language and Linguistic Theory* 5. 1-32.
- Alexiadou, A. & Agnostopoulou, E. 1998. "Parametrizing AGR: Word order, V-movement and EPP-checking". *Natural Language and Linguistic Science* 16. 491-539.
- Al-Kasey, T. & Pérez-Leroux, A.T. 1998. "Second language acquisition of Spanish null-subjects". *The generative study of second language acquisition*, 161-185. ed. by S. Flynn, G. Martohardjono, & W. O'Neil. Mahwah (New Jersey): Lawrence Erlbaum.
- Arteaga, Deborah. 1984. "Impersonal constructions in Old French". *Issues and Theory in Romance Linguistics. Selected Papers from the Linguistic Symposium on Romance Languages XIII*, ed. by M.L. Mazzola. 141-157. Washington: Georgetown University Press.
- Avrutin, S. & Wexler, K. 1992. "Development of Principle B in Russian: co-indexation at LF and co-reference". *Language Acquisition* 2. 259-306.
- Auwera, van der, Johan. 1984. "Subject and non-subject asymmetries in the relativization of embedded NPs". *Sentential Complementation*, ed. by W. de Geest and Y. Putseys. 257-269. Dordrecht: Foris.
- Chomsky, N. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- 1995. *The Minimalist Program*. Cambridge (Mass.): MIT Press.
- 2000. "Minimalist inquiries: the framework". *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by R. Martin, D. Michaels, and J. Uriagereka. 89-156. Cambridge (Mass.): MIT Press.
- 2001. "Derivation by phase". *Ken Hale: A Life in Language*, ed. by M. Kenstowicz and S. Keyser. 1-52. Cambridge (Mass.): MIT Press.
- Clahsen, H. and Hong, U. 1995. 'Agreement and null-subjects in German L2 development: New evidence from reaction time experiments'. *Second Language Research*, 11. 57-87.
- Fernández-Soriano, O. 1989. "Strong pronouns in null-subject languages and the Avoid Pronoun Principle". *MIT Working Papers in Linguistics* 11. 228-239.
- 1993. "La visión paramétrica del lenguaje: más sobre los sujetos y objetos nulos". *La lingüística y el análisis de los sistemas no nativos*. ed. by Licerias, J. Ottawa: Dovehouse.
- Flynn, S. 1987. *A Parameter-Setting Model of L2 Acquisition*. Dordrecht: Reidel.
- Goad, H., White, L., & Steele, J. 2003. "Missing inflection in L2 acquisition: Defective syntax or L1-constrained prosodic representations?" *The Canadian Journal of Linguistics/La Revue canadienne de Linguistique*, 48. 243-263.

- Gregg, K. 1996. "The logical and developmental problem of second language acquisition". *Handbook of second language acquisition*, ed. by W. Ritchie & T. Bhatia, 49-81. San Diego: Academic Press.
- Grewendorf, G. 1986. *Ergativity in German*. Dordrecht: Foris.
- Grodzinsky, Y. & Reinhart, T. 1993. "The innateness of binding and co-reference". *Linguistic Inquiry* 24. 69-102.
- Hilles, S. 1986. "Interlanguage and the pro-drop parameter". *Second Language Research* 2. 33-52.
- Huang, C.T. 1984. "On the distribution and reference of empty pronouns". *Linguistic Inquiry*, 15. 531-574.
- Jaeggli, O. 1982. *Topics in Romance Syntax*. Dordrecht: Foris
- & Safir, K. 1989. "The null-subject parameter and parametric theory". *The Null-subject Parameter*, ed. by O. Jaeggli & K. Safir. 1-44. Dordrecht: Kluwer Academic Publishers.
- Kaltenbacher, M. 2001. *Universal grammar and parameter resetting in second language acquisition*. Berlin: Peter Lang.
- Kanno, K. 1998. "Consistency and variation in second language acquisition". *Second Language Research* 14. 376-388.
- Lardiere, D. 1998a. "Case and tense in the 'fossilized' steady-state". *Second Language Research* 14. 1-26.
- 1998b. "Dissociating syntax from morphology in a divergent L2 end-state grammar". *Second Language Research* 14. 359-375.
- 2000. "Mapping features to forms in second language acquisition". *Second language acquisition and linguistic theory*, ed. by J. Archibald. 102-129. Oxford: Blackwell.
- Liceras, J. 1989. "On some properties of the 'pro-drop' parameter: Looking for missing subjects in non-native Spanish". *Linguistic Perspectives on Second language Acquisition*, ed. by S.Gass & J. Schachter. 109-133. Cambridge: Cambridge University Press.
- & Díaz, L. 1999. "Topic-drop versus pro-drop: Null subjects and pronominal subjects in the Spanish of Chinese, English, French, German and Japanese speakers." *Second Language Research*, 15, 1-40.
- Luján, Marta 1985. "Binding Properties of overt pronouns in null pronominal languages". *Chicago Linguistic Society*, 21. 123-143.
- 1986. "Stress and binding of pronouns". *Chicago Linguistic Society*, 22. 69-84.
- Lust, B., Mazuka, R., Snyder, W. & Wakayama, T. 1986. "Distinguishing effects of parameters in early syntax acquisition: A cross-linguistic study of Japanese and English". *Papers and Reports on Child Language Development* 25, 73-82.
- Montalbetti, M. 1984. *After Binding: On the interpretation of pronouns*. Ph.D.Diss., MIT.

- Montrul, S. 2004. "Subject and object expression in Spanish heritage speakers: A case of morphosyntactic convergence." *Bilingualism: Language and Cognition* 7. 125-142
- & Rodríguez-Louro, C. 2004. "Beyond the syntax of the Null Subject Parameter: A look at the discourse-pragmatic distribution of null and overt subjects by L2 learners of Spanish". Paper presented at *The Romance Turn, Universidad Nacional de Educación a Distancia* (Madrid).
- Müller, G. and B. Rohrbacher .1989. "Eine Geschichte ohne Subjekt. Zur Entwicklung der pro-Theorie". *Linguistische Berichte* 119. 3-52
- Ordóñez, F. & Treviño, E. 1999. "Left Dislocated Subjects and the pro-drop parameter: A case study of Spanish". *Lingua* 107. 39-68.
- Pacheco, S. & Flynn, S. 2005. *Syntax-Pragmatics Interface: Brazilian Portuguese Acquisition of L2 English*. Paper presented at the 9<sup>th</sup> Hispanic Linguistic Symposium and the 8th Conference on the L1 & L2 Acquisition of Spanish and Portuguese.
- Pérez-Leroux, A.T. & Glass, W. 1997. "OPC effects on the L2 acquisition of Spanish". *Contemporary Perspectives on the Acquisition of Spanish, Volume 1: Developing Grammars*, ed. by A. T. Pérez-Leroux and W. Glass. 149-165. Somerville (Mass.): Cascadilla Press.
- , A.T. & Glass, W. 1999. "Null anaphora in Spanish second language acquisition: probabilistic versus generative approaches". *Second Language Research* 15. 220-249.
- T., Scott, A.M., Hertel, T., Kellar, V., Glass, W. 1999. "Sources of knowledge in second language acquisition". *Spanish Applied Linguistics* 3. 33-63.
- Phinney, M. 1987. "The pro-drop parameter in second language acquisition". *Parameter Setting*, ed. by T. Roeper, and E. Williams. 221-246. Boston: D. Reidel Publishing Company.
- Picallo, M.C. 1994. "Catalan possessive pronouns: the Avoid Pronoun Principle revisited". *Natural Language and Linguistic Theory* 12. 259-299.
- . 1998. "On the Extended Projection Principle and null expletive subjects". *Probus* 10. 219-241.
- Prévost, P. & White, L. 1999. "Finiteness and variability in SLA: More evidence for missing surface inflection". *Proceedings of the Annual Boston University Conference on Language Development* 23. 575-586.
- & White, L. 2000. "Missing surface inflection or impairment in second language acquisition?" *Second Language Research* 16. 103-133.
- Raposo, E. & Uriagereka, J. 1990. 'Long distance Case assignment'. *Linguistic Inquiry* 21. 505-537.
- Rigau, G. 1986. "Some remarks on the nature of strong pronouns in null-subject Languages". *Generative Studies in Spanish Syntax* ed. by I. Bordelouis, H. Contreras and K. Zagona. Dordrecht: Foris.

- 1988. "Strong pronouns". *Linguistic Inquiry* 19. 503-511.
- Rizzi, L. 1982. *Issues in Italian syntax*. Dordrecht: Foris.
- 1986. "Null objects in Italian and the theory of *pro*". *Linguistic Inquiry* 17. 501-557.
- 1997. "A parametric approach to comparative syntax: properties of the pronominal system". *The New Comparative Syntax*, ed. by L. Haegeman. 268-285. London: Longman.
- Safir, K. 1985. *Syntactic chains*. New York: Cambridge University Press.
- Schaeffer, J. 2000. *The acquisition of direct object scrambling and clitic placement: Syntax and pragmatics*. Amsterdam & Philadelphia: John Benjamins.
- Schwartz, B. 2003. "Child L2 acquisition: Paving the way". *BUCLD 27 Proceedings*, ed. by Barbara Beachley et al. 25-50. Somerville (Mass.): Cascadilla Press.
- Serratrice, L. Sorace, A. & Paoli, S. 2004. "Crosslinguistic influence at the syntax-pragmatics interface: Subjects and objects in English-Italian bilingual and monolingual acquisition". *Bilingualism: Language and Cognition* 7. 183-205.
- Sorace, A. 1996. "The use of acceptability judgements in second language research." *Handbook of second language acquisition*, ed. by W. Ritchie & T. Bhatia. 375-405. San Diego: Academic Press.
- 2000. "Differential effects of attrition in the L1 syntax of near-native L2 speakers". *Proceedings of the 24th Boston University Conference on Language Development*, ed. by S. C. Howell, S. A. Fish, & T. Keith-Lucas. , 719-725. Somerville (Mass.): Cascadilla Press.
- 2003. "Near-Nativeness". *The Handbook of Second Language Acquisition*, 130-151. ed. by C. Doughty and M. Long. Oxford: Blackwell.
- 2004. "Native language attrition and developmental instability at the syntax-discourse interface: Data, interpretations and methods". *Bilingualism: Language and Cognition* 7. 143-145.
- Sprouse, R. 2004. "The bankruptcy of the stimulus". Plenary speech presented at Generative Approaches to Language Acquisition N. America (GALANA) 2004.
- Toribio, A. J. 1994. "Dialectal variation in the licensing of null referential and expletive subjects". *Aspects of Romance Linguistics*, ed. by C. Parodi, C. Quicoli, M. Saltarelli & M.L. Zubizarreta. 409-433. Georgetown University Press.
- Tsimpli, I.-M. & Roussou, A. 1991. "Parameter resetting in L2?" *UCL Working Papers in Linguistics* 3. 149-169.



- Sorace, A., Heycock, C., & Filiaci, F., in press. "First language attrition and syntactic subjects: a study of Greek and Italian near-native speakers of English". *International Journal of Bilingualism*.
- White, L. 1985. "The pro-drop parameter in adult second language acquisition". *Language Learning* 35. 47-62.
- 1986. "Implications of parametric variation for adult second language acquisition: An investigation of the "pro-drop" parameter". *Experimental approaches to second language acquisition*, ed. by V. Cook. 55-72. Oxford: Pergamon.
- 1989. *Universal grammar and second language acquisition*. Amsterdam & Philadelphia: John Benjamins.
- 2003. *Second language acquisition and Universal Grammar*. New York: Cambridge University Press.

# A POVERTY OF THE STIMULUS ARGUMENT FOR THE INNATENESS OF THE IDENTIFICATION CONDITIONS ON VP ELLIPSIS <sup>1</sup>

ANA LÚCIA SANTOS  
*Universidade de Lisboa / Onset – CEL*

The co-existence in European Portuguese of Null Complement Anaphora and of VP ellipsis licensed by main verbs poses a learnability problem and ultimately provides a poverty-of-the stimulus argument for the innateness of the identification conditions on VP ellipsis. If the identification constraint operating on ellipsis derives from innate principles and if the acquisition of VP ellipsis depends on the acquisition of V-to-I movement, we should expect VP ellipsis to be acquired as early as V-to-I. The analysis of a new spontaneous production corpus of the acquisition of EP shows that children produce VP ellipsis as early as 1;6 in simple contexts such as answers to yes-no questions. This is evidence for early V-to-I but it is also evidence for a very early ability to deal with the syntax – discourse interface, in case Merchant's (2001) approach of the identification conditions on ellipsis is adopted.

## 1. *Introduction*

In European Portuguese (EP), VP ellipsis (VPE) is licensed not only by auxiliaries but also by main verbs (cf. Matos 1992). It is a goal of this paper to show that the co-existence of VPE licensed by main verbs and other types of null anaphora, particularly, Null Complement Anaphora (NCA) in EP poses a learnability problem, since children would need negative evidence in order to distinguish VPE and NCA. The second goal of this paper is to show that this learnability problem is an argument supporting the existence of innate knowledge involved in the acquisition of VPE.

This paper is organized as follows: in section 2, I state the learnability problem posed by the co-existence of VPE and NCA in EP and argue that this learnability problem supports the claim that the child has innate knowledge of the identification constraints on VPE; in section 3, I summarize previous results

---

<sup>1</sup> I am grateful to Nina Hyams and Inês Duarte for discussion and many suggestions. Thanks also to Nuno Soares and to the audience of Going Romance. Of course, all errors are mine.

of research on the acquisition of VPE and show that all the results indicate that children produce and comprehend VPE at least around 3 years old, but this research is not centered either on production or on comprehension of VPE by children younger than 3; in section 4, I present a new corpus of spontaneous production of monolingual EP speakers between 1;5 and 3;11 and show that there is sufficient evidence that children at these early stages produce VPE in simple contexts such as answers to yes-no questions; in section 5, I summarize the main results.

## 2. *The acquisition of VP ellipsis in EP: a learnability problem*

### 2.1 *VP ellipsis, Null Complement Anaphora and a learnability problem*

In EP, there is V-stranding VPE, in the sense of Goldberg (2005): VPE is licensed by main verbs (cf. 1), as well as by auxiliaries (cf. 2) and the copula. The existence of VPE licensed by main verbs in EP was suggested by Raposo (1986) and argued for by Matos (1992).

- (1) *O João foi mais ao cinema com a*  
 the João went more often to+the cinema with the  
*namorada este ano e o Pedro também foi [-]*  
 girlfriend this year and the Pedro also went  
 “João went more often to the movies with his girlfriend this year and Pedro did too.”

[-] = [*mais ao cinema com a namorada este ano*].  
 more often to+the cinema with the girlfriend this year

- (2) *O João tem ido mais ao cinema*  
 the João has gone more often to+the cinema  
*e o Pedro também tem [-]*  
 and the Pedro also has  
 “Pedro has been going more often to the cinema and Pedro has too.”

[-] = [*ido mais ao cinema*]  
 gone more often to+the cinema

But EP also allows null object and Null Complement Anaphora (NCA). The following are typical cases of null object (cf. 3) and NCA (cf. 4).

- (3) *A Joana viu \_ na TV ontem.* [Raposo, 1986]  
 The Joana saw on+the TV yesterday  
 “Joana saw it on TV yesterday.”

- (4) A *sopa deve ser comida com azeite, mas*  
 the soup must be eaten with olive oil but  
*a Teresa não pode [-].*  
 the Teresa NEG can  
 “The soup must be eaten with olive oil but Teresa cannot do it.”  
 [-] = *comer a sopa com azeite*  
 eat the soup with olive oil

In the case of null object, only the object complement of the verb is omitted and it is possible in a context in which the complement is recoverable from the linguistic or the pragmatic context (cf. Raposo 1986). In the case of VPE, a VP has been omitted and it is normally assumed that this VP typically has a linguistic antecedent, i.e. it is not recovered from the pragmatic context (cf. Hankamer & Sag 1976).<sup>2</sup> NCA corresponds to cases in which a clausal complement (and not the entire VP) is omitted and it is a type of null anaphora whose distribution is lexically restricted: NCA is licensed only by a limited number of main verbs and modals.<sup>3</sup>

It is one of the goals of this paper to show that the co-existence of VPE and NCA in EP poses a learnability problem. The argument goes as follows.

First, VPE is licensed by all verbs in EP if a particular configuration is met in which the verb is in I and c-commands its trace in the VP. NCA is a null complement *pro* (cf. Depiante 2000) which is selected by a particular subset of the verbs that may have a sentential complement. VPE is determined by general syntactic properties, whereas the possibility of NCA is lexically determined (cf. Depiante 2000).

Second, VPE and NCA correspond to very different derivations. VPE is a fully structured VP which gets deleted (cf. Hankamer & Sag 1976; Merchant 2001 a.o.) and is subject to an identification constraint classically defined as ‘parallelism’ (cf. Hankamer & Sag 1976); NCA is a *pro* and, thus, does not allow extraction and is not subject to the same kind of identification constraint (cf. Depiante 2000). Since all verbs license VPE and some license NCA, many sentences are ambiguous between a VPE reading, which is a ‘parallel’ reading (cf. 5a, which maintain in the ellipsis the passive structure in the antecedent) and a NCA reading, which is a ‘nonparallel’ reading (cf. 5b, which does not maintain the passive).

<sup>2</sup> Moreover, Null Object is arguably a variable (cf. Huang 1984; Raposo 1986; Duarte 1987) derived by movement of a topicalized constituent (cf. Duarte 1987). This is in agreement with the fact that it cannot occur within islands (cf. Raposo 1986).

<sup>3</sup> NCA is licensed by a subclass of main verbs and modals in languages in which VPE is not allowed – this is the case of French, for instance (cf. Emonds 1978; Depiante 2000).

- (5) *Os dossiers têm de ser organizados mas a Ana não quer [-].*  
 the dossiers must be organized but the Ana NEG wants  
 “The dossiers must be organized but Ana doesn’t want to.”
- a. [-] = *que sejam organizados*  
 that be organized  
 ‘the dossiers to be organized’
- b. [-] = *organizar os dossiers*  
 organize the dossiers

However, when there is extraction (topicalization, for instance) from the ellipsis site, only a ‘parallel’ interpretation (a VPE reading) is possible. This explains why the reading in (6b) is blocked by the topicalization of [*os dos impostos*].

- (6) *Os dossiers têm de ser organizados*  
 the dossiers must be organized  
*mas os dos impostos a Ana não quer [-].*  
 but the of+the taxes the Ana NEG wants  
 “The dossiers must be organized but Ana doesn’t want those concerning taxes to be organized.”
- a. [-] = *que sejam organizados*  
 that be organized  
 ‘the dossiers concerning taxes to be organized’
- b. \*[-] = *organizar*  
 to organize  
 ‘organize the dossiers concerning taxes’

The possibility of extraction (already noticed by Haik 1987) is probably the best argument for an analysis of VPE as a fully structured VP which is derived through deletion. The impossibility of extracting from a NCA site is Depiante’s (2000) main argument to say that NCA is a *pro* in the complement position of the verb. The contrast between (6a) and (6b) proves that (6a) as well as (5a) correspond to VPE whereas (6b) and (5b) correspond to NCA.

The question for acquisition is to determine how EP speakers achieve the knowledge of the grammaticality contrast in (6) and, consequently, how they acquire VPE and NCA as different structures.

To determine that their language has VPE, speakers can rely on unambiguous evidence available in the input, i.e. null anaphora that can only be VPE, as it is the case of VPE licensed by auxiliaries (cf. 2 above). To determine that VPE is a fully structured VP (and not a *pro*), speakers can rely on positive evidence like extraction from the ellipsis site (cf. 6). The problem is how can children determine that there is NCA if they can interpret the cases of NCA as

VPE, given that the same verbs that license NCA also license VPE? To determine that there is such a thing as NCA, children would need to know that (6b) is ungrammatical, which is evidence that, when we interpret a sentence as in (5b), we are not deriving it as VPE but as NCA. However, negative evidence is absent from the input (cf. Chomsky 1986). If nothing else is said, the knowledge of the contrast between (6a) and (6b) is potentially unattainable.

## 2.2 *A solution*

In order to present a solution for the learnability problem laid out in the last section, I start by assuming that the ‘parallelism requirement’ holding in VPE is best analyzed as a semantic restriction such as the e-GIVENness restriction (cf. 7) suggested by Merchant (2001).<sup>4</sup> According to Merchant’s (2001) view, a VP can only be deleted if it is e-GIVEN.

### (7) e-GIVENness

An expression E counts as e-GIVEN iff E has a salient antecedent A and, modulo  $\exists$ -type shifting,

(i) A entails F-clo(E), and

(ii) E entails F-clo(A)

[Merchant, 2001: 26]

Merchant’s definition of e-GIVENness is built as a double entailment that contains the definition of givenness. The restriction in (7i), which, in general terms, requires that the elided expression is given, is assumed by Merchant to be common to deaccenting contexts and may be the result of a universal constraint establishing that phonologically reduced material is given (along the lines of Merchant 2001). The restriction in (7ii) is developed to account for the contrast in (8), and generally implies that the expression entails the antecedent. I suggest that (7ii) is derivable from the Full Interpretation Principle, i.e. the principle requiring that “every element of PF and LF, taken to be the interface of syntax [...] with systems of language use, must receive an appropriate interpretation” (Chomsky 1986). If (7ii) didn’t hold in VPE, the interpretation of (8) could not be completely determined, because it would not be sufficiently restrained: if (7ii) didn’t hold in VPE, the interpretation of the elided material in (8) would be compatible with (8b), because (8b) is compatible with a simple givenness restriction formulated as (7i).<sup>5</sup>

<sup>4</sup> See Merchant (2001) for an explanation of how the active / passive contrast responsible for the parallelism contrast in (5) and (6) may be viewed as a semantic contrast. It is also possible that the parallelism contrast induced by the passive / active contrast in (5) and (6) is produced by the absence of a by-phrase in the passive and the presence of a subject in the active.

<sup>5</sup> As Merchant (2001) notices, the deaccenting counterpart of (8b) is possible (cf. *i* – italics signal deaccenting and the capitals signal focus). But deaccenting is not subject to the restriction

- (8) Abby called Chuck an idiot after BEN did [-].  
 a [-] = call Chuck an idiot. b [-] ≠ insult Chuck. [Merchant 2001: 27]

As a result, I suggest that the semantic identity restriction in deletion contexts may be innate, although language specific forms of deletion (e.g. VPE) must be acquired.

In this case, since children have innate knowledge of the e-GIVENness constraint on ellipsis, they distinguish it from NCA contexts; by hearing sentences with an omitted complement which do not meet the e-GIVENness requirement (i.e. NCA structures) children have the relevant evidence to determine that the language has NCA and to determine which particular verbs license NCA. Of course, to determine that their language has VPE, children still need unambiguous evidence such as VPE licensed by auxiliaries and to acquire V-to-I movement, since VPE is licensed in a configuration in which the verb c-commands the VP.<sup>6</sup>

Summarizing, the acquisition of VP ellipsis is dependent on:

- (i) innate knowledge of
  - a. a givenness restriction on phonologically reduced material (deaccented or deleted) and
  - b. the Full Interpretation Principle;
- (ii) setting of the V-to-I parameter (it is crosslinguistically true that the verb must c-command the VP in order to license VPE);
- (iii) input containing unambiguous VP ellipsis structures, which allows the child to determine that the language has VPE: in EP, the trigger is VP ellipsis licensed by an auxiliary in I.

The particular distribution of VPE in EP and its co-existence with NCA provide an argument supporting the existence of innate constraints on VPE. In fact, trying to explain the good results children show in interpreting VPE, Thornton and Wexler (1999: 213) suggest that although VPE is not a universal property of languages, it is a process that probably relies on some mechanism of Universal Grammar. Matsuo and Duffield (2001) also suggest that the

---

in (7ii). This captures the idea that ellipsis and deaccenting do not obey the same restrictions, namely ellipsis is possible in a more restricted set of contexts.

(i) Abby called Chuck an idiot after BEN *insulted him*. [Merchant 2001: 15]

<sup>6</sup> An anonymous reviewer suggests that maybe the use of context would be sufficient for children to distinguish between VPE and NCA. It is true that children could hear (5) in a context in which only the reading (5a) is possible or in a context in which only the reading (5b) is possible. However, the crucial point is that the child would need to have some knowledge of the identification condition on ellipsis in order to determine that only (5a) may be derived as VPE. If the child does not have this knowledge, he may assume that both (5a) and (5b) may be derived as VP ellipsis but, in this case, he would be assuming a grammar which is different from the adult grammar.

parallelism restriction operating in VPE could be thought as a universal in case it operates both in elided and downstressed VPs.

### 2.3 *Prediction*

Given (i) the fact that the identification constraint on VPE is derivable from innate constraints, (ii) the fact that VPE depends on setting the V-to-I parameter, which is argued to be set at a very early stage (cf. Hyams 1992; Meisel & Müller 1992; Gonçalves 2004 for Portuguese), and (iii) the fact that it depends on evidence frequently available in the input, i.e. evidence for VPE licensed by auxiliaries, there is no reason to expect VPE to be acquired late.

Furthermore, if we find VPE at early stages, we find a different type of evidence for the setting of the V-to-I parameter. Finally, if we maintain Merchant's account of the identification constraint on ellipsis, which is defined in terms of givenness, to find early ability to produce or comprehend VPE would mean to find early ability to deal with givenness. This would be an argument partially supporting De Cat and Unsworth's (2003) suggestion that there is no evidence for a delay concerning the Syntax / Information Structure interface in early acquisition.

### 3. *Previous research on the acquisition of VP ellipsis*

The results of research done thus far indeed suggest that young children are able to produce and comprehend VPE. Particularly, different researchers using different experimental techniques have obtained results that suggest that children as young as 3 years old are able to comprehend and produce VPE (cf. Guo et al. 1996; Postman et al. 1997; Thornton & Wexler 1999; Foley et al. 2003; Matsuo & Duffield 2001). However, these are experimental studies testing ellipsis in coordination contexts and (probably as a consequence) they generally do not look at the performance of children younger than 3 (only Postman et al. report results from children at 2;7).

In this paper, I intend to fill in this gap in the literature, by showing that children acquiring EP spontaneously produce VPE before 3 years old and, especially, at a stage in which their MLUw is particularly low.

### 4. *Early spontaneous production of VP ellipsis in European Portuguese*

In this section, I present a new spontaneous production corpus of the acquisition of EP between 1;5 and 3;11 and show that children at these early stages produce VPE in contexts not involving coordination such as answers to yes-no questions.



4.1 *The corpus*

I consider the spontaneous production of three monolingual children acquiring European Portuguese.<sup>7</sup> The data were transcribed using the CHAT format (MacWhinney 2000). Each file corresponds to the transcription of one session of videotaping (45-50 minutes of recording). More details on the corpus are provided in Table 1.

| Child  | Age             | MLUw          | Number of files | Number of child's utterances |
|--------|-----------------|---------------|-----------------|------------------------------|
| Inês   | 1;6.6 – 3;11.12 | 1.527 – 3.815 | 21              | 6591                         |
| Tomás  | 1;6.18 – 2;9.7  | 1.286 – 2.954 | 16              | 6800                         |
| InêsM. | 1;5.9 – 2;7.24  | 1.315 – 2.370 | 15              | 5101                         |

Table 1: *Spontaneous production corpus*4.2 *Answers to yes-no questions: a VPE context not involving coordination*

EP offers the possibility to explore spontaneous production of VPE at a stage in which possibly children still do not produce the coordination contexts in which we often find VPE. EP allows VPE in answers to yes-no questions (cf. 9 and 10). VPE occurs in verbal answers, a type of affirmative answer which EP displays, on a par with SIM 'yes' and SER 'be' answers.<sup>8</sup> SER 'be' answers are answers built with a frozen 3<sup>rd</sup> singular form of the verb *ser* 'be' and are used to answer questions that do not have the verb *ser* 'be'; these frozen forms are *é* 'is', *foi* 'was' and the imperfective *era* 'was'.

- (9) Q: *Entregaste o artigo à Maria na biblioteca?*  
 gave[2sg] the paper to+the Maria at+the library  
 "Did you give Maria the paper at the library?"  
 A: a. *Entreguei.* **Verbal answer (VPE context)**  
       gave[1SG]  
       b. *Sim.* SIM 'yes' answer  
       yes  
       c. *É. / Foi* SER 'be' answer  
       is was
- (10) Q: *Tens lido o jornal?*  
 have[2sg] read the newspaper  
 "Have you been reading the newspaper?"

<sup>7</sup> Inês was videotaped by Maria João Freitas for her PhD research (cf. Freitas 1997) and for the project PCSH/C/LIN/524/93 developed at Laboratório de Psicolinguística da Faculdade de Letras da Universidade de Lisboa.

<sup>8</sup> Verbal answers also exist in Hebrew and in Irish and are analyzed as VPE in those languages (cf. Doron 1999; McCloskey 1991). Note also that in (9) the verbal answer is not ambiguous between VP ellipsis and Null Object because more than the object complement of the verb was omitted.

|    |    |                            |                                    |
|----|----|----------------------------|------------------------------------|
| A: | a. | <i>Tenho.</i><br>have[1SG] | <b>Verbal answer (VPE context)</b> |
|    | b. | <i>Sim.</i><br>yes         | SIM ‘yes’ answer                   |
|    | c. | <i>É.</i><br>is            | SER ‘be’ answer                    |

Since in EP all verbs license VPE, but EP also has null object and NCA, a subset of the verbal answers are ambiguous between VPE and null object or NCA. However, verbal answers built with auxiliaries or copula verbs as well as answers in which more than one argument or a VP adjunct is omitted must be analyzed as VPE. I return to this in the next section.

#### 4.3 *Main findings*

The analysis of the spontaneous production corpus shows that verbal answers occur very early in the acquisition process and are very frequent even in the first files. More precisely, we find 55, 86 or 94 verbal answers in the first five files for each child – a moment in the acquisition process in which the MLUw ranges between 1.2 and 2.1.

A thorough analysis of children’s verbal answers shows that they cannot be taken as (linguistically irrelevant) random repetition of a word in the preceding discourse. One of the main arguments showing that this is so is the fact that verbal answers are adult-like, in the sense that children choose the relevant verb when there are embedded clauses. This is illustrated by children’s verbal answers to questions built with the verbs *querer* ‘want’ and *achar* ‘think’. In the case of questions with *querer* ‘want’, only the higher verb is possible as the answer (cf. 11); in the case of questions with *achar* ‘think’, both the higher and the lower verb may occur in the answer (cf. 12 and 13).

- (11) MAE: *queres que eu te vá buscar uma ?*  
 want that I you go bring one  
 “Do you want me to bring you one?”
- INI: *quei [: quer(o)] .*  
 want  
 “Yes.”

Inês 1;10.29

- (12) MAE: *acha que tem febre ?*  
 think that has fever  
 “Do you think that he has fever?”  
 INI: *achi [: acho] .*  
 think  
 “Yes.” Inês 1;8.2
- (13) MJF: *achas que ela já está a dormir?*  
 think[2SG] that she already is PREP sleeping  
 “Do you think that she is already sleeping?”  
 INI: *(es)tá .*  
 is  
 “Yes.” Inês 2;2.1

Children perform without error when answering these questions: they do not give answers with the embedded verb when the question (the antecedent) is a sentence with *querer* ‘want’, even though they answer with either the higher or the lower verb when the question is built with *achar* ‘think’.<sup>9</sup>

But, most importantly, verbal answers (including those found at a stage corresponding to a MLUw below or around 2) include unambiguous VPE cases, such as cases of auxiliaries licensing VPE (cf. 14,15); cases of copula verbs licensing VPE (cf. 16, 17) - the forms *é* ‘is’, *foi / era* ‘was’ are excluded since they can also occur as SER ‘be’ answers; cases in which a VP modifier is omitted (cf. 18); cases in which more than one internal argument is omitted (cf. 19).<sup>10</sup> Note also that, in these examples, the form of the verb in the answer is not

---

<sup>9</sup> When cases in which the antecedent question is itself elliptic are excluded, we obtain a total amount of 37 question / answer pairs with *querer* ‘want’ / *achar* ‘think’ in the corpus. These 37 question / answer pairs distribute among the three children in the corpus. Answers to an elliptic question are cases such as (i). In those cases, one could think that the choice of the verb by the child is guided by the occurrence of the elliptic question in the immediate preceding discourse. However, all the children’s answers to questions with *querer* ‘want’ / *achar* ‘think’ are target-like when they are answers to elliptic questions as well as when they are answers to non-elliptic questions.

(i) Q: *Queres?*  
 want  
 “Do you want it?”  
 A: *Quero.*  
 want  
 “Yes.”

<sup>10</sup> See Santos (2006) for criteria that distinguish unambiguous VPE contexts from null object contexts or contexts of simple argument drop in EP, as well as for new arguments that EP has VPE licensed by main verbs (these arguments assume the new and fine grained criteria established by Goldberg 2005 to identify VPE).

always the same as the one in the question, so it is not likely that the child is merely repeating the verb.<sup>11</sup>

- (14) MAE: *estás lhe a dar colo?*  
 are him-DAT PREP give lap  
 “Are you putting him in your lap?”  
 INI: *(es)tu.*  
 am  
 “Yes.” Inês 2;1.10
- (15) MAE: *o cavalo vai papar?*  
 the horse goes eat  
 “Is the horse going to eat?”  
 TOM: *vai.*  
 goes  
 “Yes.” Tomás 1;9.14
- (16) MAE: *está sujo ?*  
 is dirty  
 “Is it dirty?”  
 INM: *(es)tá .*  
 is  
 “Yes.” Inês M. 1;7.6
- (17) MAE: *és a mãe deles?*  
 are the mother PREP+them  
 “Are you their mother?”  
 INI: *so(u).*  
 am  
 “Yes.” Inês 2;7.6
- (18) MJF: *tinham chocolate lá dentro?*  
 have chocolate inside  
 “Did they have chocolate inside?”  
 INI: *tí(nh)am.*  
 have  
 “Yes.” Inês 2;3.8

---

<sup>11</sup> See Santos (2006) for other arguments supporting the claim that early verbal answers are not mere repetition. These arguments include the fact that the child does not try to answer questions by randomly repeating words from the question, such as nouns or adjectives. The correct choice of the higher or the lower verb to answer questions built with *querer* ‘want’ / *achar* ‘think’ are also an argument supporting the claim that we are not dealing with repetition.

- (19) MAE: *fez ai+ai ao Tomás ?*  
 did injury to+the Tomás  
 “Did he hurt Tomás?”  
 TOM: *fez.*  
 did  
 “Yes.”

Tomás 2;2.9

In Table 2, I present the rate of unambiguous VPE structures in answers to yes-no questions, including tags. I present both (i) the rate of unambiguous VPE answers out of the total amount of verbal answers and (ii) the rate of unambiguous VPE answers out of the set of answers excluding verbal answers with forms of the verb *ser* ‘be’ that are also used in SER ‘be’ answers. Note that the potential ambiguity is not the same in the two cases. When we have a verbal answer that contains a form of the verb *ser* ‘be’ that can also occur as a SER ‘be’ answer, the ambiguity is between a verbal answer that is necessarily a VPE structure (the verb is a copula) or a SER ‘be’ answer, i.e. an answer in which the form of the verb *ser* ‘be’ is a frozen form and does not behave as a verb. When we have a verbal answer with other verbal form, the potential ambiguity is between a VPE derivation and a derivation as null object or NCA.

| Out of the total of verbal answers | Out of all verbal answers excluding the forms <i>é</i> ‘is’, <i>foi</i> ‘was’ and <i>era</i> ‘was’ |
|------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>20,6 %</b> (218 out of 1060)    | <b>43,7 %</b> (218 out of 499)                                                                     |

Table 2: *Rate of unambiguous VPE in answers*

## 5. Conclusions

The analysis of early verbal answers to yes-no questions in EP establishes VPE as a very early acquisition. This is in agreement with the hypothesis that part of the knowledge involved in the acquisition of VPE is innate. Crucially, this innate knowledge includes the ability to encode given information. We thus find an argument partially supporting De Cat & Unsworth’s (2003) suggestion: children have competence to deal with the Syntax - Information Structure interface. The results are also in agreement with the hypothesis that V-to-I movement is acquired at a very early stage. To the extent that we can prove that a subset of children’s verbal answers must be VPE and if VPE implies V-to-I movement, these results are independent evidence for very early V-to-I. Moreover, they allow establishing that V-to-I movement is acquired at a stage in which the MLUw is low, around or below 2. At this stage, it is difficult to find other type of evidence for verb movement (namely, word

order evidence), given that we typically need at least three word utterances to find the relevant evidence (e.g. the word order verb – adverb – object).

### References

- Chomsky, Noam. 1986. *Knowledge of Language. Its Nature, Origin and Use*. Westport, Connecticut & London: Praeger.
- De Cat, Cécile & Sharon Unsworth. 2003. “Testing for pragmatic delay in L1 and L2 acquisition”. Presented at the GLOW Acquisition Workshop.
- Depiante, Marcela A. 2000. *The Syntax of Deep and Surface Anaphora: A Study of Null Complement Anaphora and Stripping / Bare Argument Ellipsis*. PhD Diss., University of Connecticut.
- Doron, Edit. 1999. “V-Movement and VP ellipsis”. *Fragments. Studies in Ellipsis and Gapping*. ed. by S. Lappin & E. Benmamoun, 124-140. New York & Oxford: Oxford University Press.
- Duarte, I. 1987. *A Construção de Topicalização na Gramática do Português: Regência, Ligação e Condições sobre Movimento*. Ph.D. Diss., Universidade de Lisboa.
- Emonds, J. 1978. “The verbal complex V'-V” in French”. *Linguistic Inquiry* 9:2. 151-175.
- Foley, Claire et al. 2003. “Knowledge of variable binding in VP-ellipsis: language acquisition research and theory convergence”. *Syntax* 6:1. 52-83.
- Freitas, Maria João. 1997. *Aquisição da estrutura silábica do Português Europeu*. Ph.D.Diss., Universidade de Lisboa.
- Goldberg, Lotus. 2005. *Verb-stranding VP Ellipsis: a cross-linguistic study*. Ph.D Diss., McGill.
- Gonçalves, Fernanda. 2004. *Riqueza Morfológica e Aquisição da Sintaxe em Português Europeu e Brasileiro*. Ph.D.Diss., U. Évora.
- Guo, Fangfang et al. 1996. “Operator-variable binding in the initial state: a cross-linguistic study of VP ellipsis structures in Chinese and English”. *Cahiers de Linguistique – Asie Orientale* 25:1.3-34.
- Haik, Isabelle. 1987. “Bound VPs that need to be”. *Linguistics and Philosophy*. 10:4. 503-530.
- Hankamer, Jorge & Ivan Sag. 1976. “Deep and surface anaphora”. *Linguistic Inquiry*. 7:3. 391-426.
- Huang, C.-T. J. 1984. “On the distribution and reference of empty pronouns”. *Linguistic Inquiry*. 15:4. 531-574.
- Hyams, Nina. 1992. “The Genesis of Clausal Structure”. *The Acquisition of Verb Placement*. ed. by Jürgen Meisel, 371-400. Dordrecht: Kluwer.
- MacWhinney, Brian. 2000. *The CHILDES project: Tools for analyzing talk*. Mahwah, New Jersey: Lawrence Erlbaum.

- Matos, Gabriela. 1992. *Construções de elipse do predicado em Português. SV Nulo e Despojamento*. Ph.D.Diss., Universidade de Lisboa.
- Matsuo, Ayumi & Nigel Duffield. 2001. "VP-ellipsis and anaphora in child language acquisition". *Language Acquisition*. 9: 4. 301-327.
- McCloskey, J. 1991. "Clause structure, ellipsis and proper government in Irish". *Lingua* 85. 259-302.
- Meisel, Jürgen M. & Natascha Müller. 1992. "Finiteness and verb placement in early child grammars: evidence from simultaneous acquisition of French and German in bilinguals". *The Acquisition of Verb Placement*. ed. by J. Meisel, 109-138. Dordrecht: Kluwer.
- Merchant, Jason. 2001. *The Syntax of Silence. Sluicing, Islands and the Theory of Ellipsis*. Oxford: Oxford University Press.
- Postman, Whitney et al. 1997. "Evidence for Strong Continuity: New experimental results from children's acquisition of VP-ellipsis and bound variable structures". *MIT Working Papers in Linguistics* 31. 327-344.
- Raposo, Eduardo. 1986. "On the null object in European Portuguese". *Studies in Romance Linguistics*. ed. by O. Jaeggli & C. Silva-Corvalán, 373-390. Dordrecht: Foris Publications, pp. 373-390.
- Santos, Ana Lúcia. 2006. *Minimal Answers. Ellipsis, syntax and discourse in the acquisition of European Portuguese*. Ph.D.Diss., Universidade de Lisboa.
- Thornton, Rosalind & Kenneth Wexler. 1999. *Principle B, VP ellipsis and Interpretation in Child Grammar*. Cambridge (Mass.): MIT Press.

## SUBJECT INDEX

- A**
- Adverb 42 fn4, 61, 63, 104, 125  
127, 129, 131, 135, 136, 138-  
142, 144, 196, 207, 215 fn2,  
259, 263, 264, 267, 268, 268  
fn6, 268 fn7, 268-271, 285,  
333
  - Affirmative 116, 118, 119, 122  
fn9, 123, 123 fn10, 128, 155,  
156, 218, 219, 221, 328
  - Affixes 41, 44, 45, 99-114, 301  
suffixes 100 fn3, 112 fn14,  
204  
prefixes 100 fn3, 112 fn14
  - Age differences in acquisition  
229, 231
  - Age effects in acquisition 67, 68,  
201-212
  - Age of first exposure 201, 202,  
205, 206, 209, 243
  - Agent(ivity) 40, 43-46, 49, 124,  
125, 202 fn3-204, 235
  - Ambiguity 156-158, 160, 163,  
166, 169, 213-228, 302, 323,  
328 fn8, 329, 332
  - Anaphor 42, 321-324
  - Answering (strategies) 19-38, 62,  
91-93, 159, 160, 193, 194,  
303, 321, 322, 327-329 fn9,  
332
  - Argument structure 107-110
  - Aspect 10 fn5, 101, 101 fn3, 104,  
107, 108-110, 131-148, 203,  
204, 209
  - Asymmetrical c-command 226
  - Asymmetry Theory 99-114
  - Auxiliary 2, 7, 9, 10, 123 fn10,  
177, 201, 202-205, 207-209,  
215 fn2, 265-267, 271, 276,  
321, 322, 324, 326, 327, 329,  
330  
Participle 1-18, 204, 262, 263,  
264-266, 271, 276
- B**
- Bilingual(ism) 27, 201-212, 229  
258
  - Bare (NP) 205, 281, 282, 286,  
287, 289-291, 293, 294
- C**
- Cartography 19, 20, 32, 259-280
  - Case 1-18, 68, 101 fn6, 226 fn7  
Accusative 1-4, 7-9, 11, 13  
Nominative 2-5, 7-9, 11,  
13
  - Causatives / causation 14, 15, 39-  
57, 101, 104, 105, 273 fn11,  
275-277
  - Child directed speech 236, 251
  - Child language 27, 28 fn11, 28  
fn12, 34, 46, 60-73, 149-162,  
238, 254, 281-297
  - Choice functions 167-169, 178,  
180
  - Cleft 19, 21, 22, 24, 24 fn10, 25,  
30-36, 73-98, 106-113, 235
  - Copular verbs 22, 23, 134, 178,  
322, 329, 330, 332
  - Correspondence 287, 294  
Law 282, 283, 286  
Rule 186, 284, 287, 288-293
  - Critical period for L2 acquisition  
202



**D**

- Definite NP / determiner 110, 172, 232, 234, 235, 285 fn2, 292
- Degree modification 115-130
- Degree properties 181
- Deixis 196
- Determiner 100 fn3, 109, 110, 168, 172, 267, 269, 271, 281-297
  - Omission 235
  - Phrase 124, 125
- Dislocations 86, 229-258, 263 fn2

**E**

- Economy 19, 30-33, 36, 115-130, 229, 256
- Edge (of a phrase) 23, 73, 77, 79, 85-90, 96, 104, 106, 110, 112, 120, 121, 190, 193, 238, 263
- Ellipsis 191, 321-334
- Ergative 1, 4, 12, 14, 15
- Existential 136, 214, 216-220, 223, 225, 226
- Event 1, 39, 108, 109, 136-139, 142, 143
- Failed Functional Features
  - Hypothesis 132, 312
- Feature 99-115, 120, 123-126, 128, 131-134, 137, 139, 144, 146, 175, 176, 177, 180, 181, 187 fn3, 190, 191, 219, 225-227 fn9, 273, 303, 312
  - Feature checking 68, 101, 104, 106, 119, 135, 175 fn6, 189, 300, 301
    - D-feature 68, 301, 302
    - EPP feature 120, 121, 189, 278, 300, 301, 302, 312
    - uninterpretable 2, 121, 122, 302
    - phi-feature 10, 300, 301
- Focus 19-21 fn3, 23, 27, 30-34, 73-98, 116, 118-120, 123, 124, 126-129, 195, 196, 204, 233 fn2, 235, 241, 263 fn2, 268

- fn6, 268 fn8, 303, 306, 308, 309, 314, 315, 325 fn5
- Focus Phrase 261
- Focus Ground 90
- New information focus 33, 20 fn1, 33 fn17, 8, 85
- Prosody and focus 90, 94

- Full Access (hypothesis) 146, 315
- Full Competence (hypothesis) 283, 294 fn3

**G**

- Generic (NP) 135 fn2, 175
- Gesture 185-200
- Givenness 20 fn2, 232, 234, 235, 255, 256, 325-327, 332

**H**

- Hacer* construction 39 - 58

**I**

- Illocutionary force / act 85, 90, 96
- Inalienable possessive
  - construction 43, 285 fn2, 292
- Indefinite (NP) 149, 151, 152-156, 160, 165-183, 222, 292,
- Interface 69, 101-103, 106-113, 226, 325, 327
  - Lexicon-syntax 201-212, 231, 242
  - Syntax-discourse 30, 321, 332
  - Syntax-pragmatics 229, 230, 255, 300, 314 315
  - Syntax-PF interface 185, 88 fn5
  - Syntax-prosody 75
  - Syntax-semantics 165
- Intonation 25, 32, 20 fn2, 73-98, 185-187, 190, 191, 192, 192 fn11, 193-195, 197, 204
- Inversion 19-24, 30, 100 fn4, 188, 242, 259
- Island 60-63, 66-69, 122 fn9, 124, 125, 127, 165-167, 171-174, 178-180, 323 fn2

- Item-based learning model 289,  
293 fn4, 295
- L**  
Learnability 288, 321, 322, 327  
Lexical learning 288, 293
- M**  
Magnitude Estimation technique  
207  
Mass/count distinction 235, 294  
Minimalism 1, 2, 11, 12, 132, 176,  
185, 188, 300-302  
Minimizers 117, 118  
Modality 165-183, 196, 266 fn4  
  Indicative 171, 172, 174, 176,  
  177, 265 fn4  
  Subjunctive 118, 165-183,  
  272, 265 fn4
- N**  
Narrow syntax 202  
Negation 8 fn4, 61, 115, 116, 118,  
119, 123-125, 127, 129, 149-  
159, 161, 175 fn3-177, 213-  
228  
Nuclear contour 73-98  
Null Object 59-71, 322, 323, 323  
fn2, 328 fn8-330fn10, 332
- P**  
Polarity 115-130, 149, 151, 151  
fn1, 161, 175-178, 213, 218,  
225 fn8  
Positive evidence 131, 135, 139,  
242, 255, 288, 293, 314, 324  
Pragmatic inference, 10 fn5  
Pragmatic licensing strategies 230  
Pragmatics 163, 192, 193, 194,  
201, 232, 236, 240, 241, 249,  
253, 254, 256, 299-315  
Predication 103 fn11, 235  
Presupposition 167, 185, 192 fn11  
Pronoun 6, 13, 23 fn9, 104, 195,  
233, 237, 238, 240 fn8, 242,  
266, 267, 271, 278 fn13, 284,  
301, 302-314  
Clitic 6, 41, 42 fn4, 59-71, 202  
fn3, 204, 213, 214, 215  
fn2, 230, 233 fn2, 235, 237  
fn7, 238, 255, 267 fn5, 273  
fn11, 278 fn13  
Proper name 283-293, 295  
Resumptive pronoun 233, 242,  
235  
Strong pronoun 64, 65
- Q**  
Q particles 183-198  
Quantification 61, 115-130, 135,  
136, 136 fn3, 138-142, 149,  
151-156, 160, 161, 165-169,  
173, 175, 181, 196, 206, 213-  
215, 220, 220 fn3, 221, 222,  
224-226 fn8, 259, 262, 263,  
263 fn2-265 fn3, 270, 274,  
304, 306, 308, 311  
Questions 19-22, 27, 29, 31, 32  
fn16, 33-36 fn 21, 61, 74, 81-  
83, 85, 86 fn11, 88, 90, 91, 92,  
110 fn2, 159, 160, 187-195,  
196, 216, 217 fn4, 219, 303,  
321, 322, 327-332
- R**  
Reconstruction 177-181  
Reflexive 5 fn2, 43, 70, 68 fn4  
Relative clauses 22 fn6, 90, 94,  
165, 170-176, 178-181  
Restructuring 259, 271-277  
Rhythm 75, 77-81, 87, 89, 90, 92-  
94, 96
- S**  
Scales (scale structure) 117-120  
fn6, 123  
Scope 99-130, 149, 183, 187, 192,  
196, 204 fn4, 216, 217, 217  
fn4, 219-222, 224-226  
Scrambling 268 fn6

- Sigma Phrase 119, 120, 122-125, 128  
 Sign language 185-200  
 Spell-out 177  
 S-shaped developmental curve 293  
 Stress 25, 33, 74, 75, 78, 79, 80, 84, 87, 94, 149, 195, 268 fn6, 270 fn10, 303, 315, 327  
     Primary stressed syllables 75, 79, 81-83, 87, 88  
     Secondary stressed syllables 78, 79, 83,88  
 Subject 1-6, 8, 9, 11-13, 15, 19, 22, 23, 27, 30-34, 36, 41, 46, 48, 61, 76, 77, 103 fn11, 106 fn13, 117, 135 fn2, 136, 154, 169, 179 fn7, 188, 201, 202 fn3, 207, 221, 222, 230, 232-235, 237, 237 fn7, 238, 242, 242, 254-256, 259-280, 299-315, 325 fn4  
     Null subject 19-21, 26, 30, 32, 33, 36, 186, 187, 187 fn3, 194, 201, 237, 299-315  
 Subset principle 288
- T**
- Tense / temporal 10 fn5, 60, 63, 105, 134, 145, 177, 197, 202, 204, 224  
 Tone 73-98, 195  
     Boundary tones 74, 79-81, 83, 87-92, 97  
     Pitch accent 74, 79-84, 87-96  
 Topic 20, 21 fn2, 21 fn3, 83, 84, 96, 168, 187 fn3, 195, 196, 229-236, 238-241, 246, 251, 253-255, 303, 323 fn2, 324  
 Transfer (from L1 to L2) 24, 37, 39-58, 305, 315
- U**
- UG continuity 131-132, 146, 281, 286, 299, 300, 315  
 Ultimate attainment 131-144, 201, 202, 205, 209  
 Unaccusative 4, 7-11, 16, 23, 24, 39, 40, 41, 45-55, 202-205, 208  
 Unergative 2, 4, 8-10, 13-16, 39-41, 46, 47, 49-51, 53 fn7, 202, 202 fn3, 203-205, 208  
 Universal Base Hypothesis 100
- V**
- Variable 100, 107, 109, 110, 168 fn1, 304, 308, 311, 313, 315, 323 fn2  
 VP-periphery 20-23, 26, 32-35 fn21

## CURRENT ISSUES IN LINGUISTIC THEORY

E. F. K. Koerner, Editor

Zentrum für Allgemeine Sprachwissenschaft, Typologie  
und Universalienforschung, Berlin  
efk.koerner@rz.hu-berlin.de

*Current Issues in Linguistic Theory* (CILT) is a theory-oriented series which welcomes contributions from scholars who have significant proposals to make towards the advancement of our understanding of language, its structure, functioning and development. CILT has been established in order to provide a forum for the presentation and discussion of linguistic opinions of scholars who do not necessarily accept the prevailing mode of thought in linguistic science. It offers an outlet for meaningful contributions to the current linguistic debate, and furnishes the diversity of opinion which a healthy discipline must have. A complete list of titles in this series can be found on the publishers' website, [www.benjamins.com](http://www.benjamins.com)

- 292 **NICOLOV, Nicolas, Kalina BONTCHEVA, Galia ANGELOVA and Ruslan MITKOV (eds.):** Recent Advances in Natural Language Processing IV. Selected papers from RANLP 2005. xii, 307 pp. *Expected December 2007*
- 291 **BAAUW, Sergio, Frank DRIJKONINGEN and Manuela PINTO (eds.):** Romance Languages and Linguistic Theory 2005. Selected papers from 'Going Romance', Utrecht, 8–10 December 2005. 2007. viii, 338 pp.
- 290 **MUGHAZY, Mustafa A. (ed.):** Perspectives on Arabic Linguistics XX. Papers from the twentieth annual symposium on Arabic linguistics, Kalamazoo, March 2006. xii, 248 pp. *Expected December 2007*
- 289 **BENMAMOUN, Elabbas (ed.):** Perspectives on Arabic Linguistics XIX. Papers from the nineteenth annual symposium on Arabic Linguistics, Urbana, April 2005. xiv, 274 pp. + index. *Expected December 2007*
- 288 **TOIVONEN, Ida and Diane NELSON (eds.):** Saami Linguistics. 2007. viii, 321 pp.
- 287 **CAMACHO, José, Nydia FLORES-FERRÁN, Liliana SÁNCHEZ, Viviane DÉPREZ and María José CABRERA (eds.):** Romance Linguistics 2006. Selected papers from the 36th Linguistic Symposium on Romance Languages (LSRL), New Brunswick, March-April 2006. viii, 332 pp. *Expected November 2007*
- 286 **WEIJER, Jeroen van de and Erik Jan van der TORRE (eds.):** Voicing in Dutch. (De)voicing – phonology, phonetics, and psycholinguistics. 2007. x, 186 pp.
- 285 **SACKMANN, Robin (ed.):** Explorations in Integrational Linguistics. Four essays on German, French, and Guarani. ix, 217 pp. *Expected December 2007*
- 284 **SALMONS, Joseph C. and Shannon DUBENION-SMITH (eds.):** Historical Linguistics 2005. Selected papers from the 17th International Conference on Historical Linguistics, Madison, Wisconsin, 31 July - 5 August 2005. 2007. viii, 413 pp.
- 283 **LENKER, Ursula and Anneli MEURMAN-SOLIN (eds.):** Connectives in the History of English. 2007. viii, 318 pp.
- 282 **PRIETO, Pilar, Joan MASCARÓ and Maria-Josep SOLÉ (eds.):** Segmental and prosodic issues in Romance phonology. 2007. xvi, 262 pp.
- 281 **VERMEERBERGEN, Myriam, Lorraine LEESON and Onno CRASBORN (eds.):** Simultaneity in Signed Languages. Form and function. 2007. viii, 360 pp. (incl. CD-Rom).
- 280 **HEWSON, John and Vit BUBENIK:** From Case to Adposition. The development of configurational syntax in Indo-European languages. 2006. xxx, 420 pp.
- 279 **NEDERGAARD THOMSEN, Ole (ed.):** Competing Models of Linguistic Change. Evolution and beyond. 2006. vi, 344 pp.
- 278 **DOETJES, Jenny and Paz GONZÁLEZ (eds.):** Romance Languages and Linguistic Theory 2004. Selected papers from 'Going Romance', Leiden, 9–11 December 2004. 2006. viii, 320 pp.
- 277 **HELASVUO, Marja-Liisa and Lyle CAMPBELL (eds.):** Grammar from the Human Perspective. Case, space and person in Finnish. 2006. x, 280 pp.
- 276 **MONTREUIL, Jean-Pierre Y. (ed.):** New Perspectives on Romance Linguistics. Vol. II: Phonetics, Phonology and Dialectology. Selected papers from the 35th Linguistic Symposium on Romance Languages (LSRL), Austin, Texas, February 2005. 2006. x, 213 pp.
- 275 **NISHIDA, Chiyo and Jean-Pierre Y. MONTREUIL (eds.):** New Perspectives on Romance Linguistics. Vol. I: Morphology, Syntax, Semantics, and Pragmatics. Selected papers from the 35th Linguistic Symposium on Romance Languages (LSRL), Austin, Texas, February 2005. 2006. xiv, 288 pp.
- 274 **GESS, Randall S. and Deborah ARTEAGA (eds.):** Historical Romance Linguistics. Retrospective and perspectives. 2006. viii, 393 pp.

- 273 **FILPPULA, Markku, Juhani KLEMOLA, Marjatta PALANDER and Esa PENTTILÄ (eds.):** Dialects Across Borders. Selected papers from the 11th International Conference on Methods in Dialectology (Methods XI), Joensuu, August 2002. 2005. xii, 291 pp.
- 272 **GESS, Randall S. and Edward J. RUBIN (eds.):** Theoretical and Experimental Approaches to Romance Linguistics. Selected papers from the 34th Linguistic Symposium on Romance Languages (LSRL), Salt Lake City, March 2004. 2005. viii, 367 pp.
- 271 **BRANNER, David Prager (ed.):** The Chinese Rime Tables. Linguistic philosophy and historical-comparative phonology. 2006. viii, 358 pp.
- 270 **GEERTS, Twan, Ivo van GINNEKEN and Haïke JACOBS (eds.):** Romance Languages and Linguistic Theory 2003. Selected papers from 'Going Romance' 2003, Nijmegen, 20–22 November. 2005. viii, 369 pp.
- 269 **HARGUS, Sharon and Keren RICE (eds.):** Athabaskan Prosody. 2005. xii, 432 pp.
- 268 **CRAVENS, Thomas D. (ed.):** Variation and Reconstruction. 2006. viii, 223 pp.
- 267 **ALHAWARY, Mohammad T. and Elabbas BENMAMOUN (eds.):** Perspectives on Arabic Linguistics XVII–XVIII. Papers from the seventeenth and eighteenth annual symposia on Arabic linguistics. Volume XVII–XVIII: Alexandria, 2003 and Norman, Oklahoma 2004. 2005. xvi, 315 pp.
- 266 **BOUDELAA, Sami (ed.):** Perspectives on Arabic Linguistics XVI. Papers from the sixteenth annual symposium on Arabic linguistics, Cambridge, March 2002. 2006. xii, 181 pp.
- 265 **CORNIPS, Leonie and Karen P. CORRIGAN (eds.):** Syntax and Variation. Reconciling the Biological and the Social. 2005. vi, 312 pp.
- 264 **DRESSLER, Wolfgang U., Dieter KASTOVSKY, Oskar E. PFEIFFER and Franz RAINER (eds.):** Morphology and its demarcations. Selected papers from the 11th Morphology meeting, Vienna, February 2004. With the assistance of Francesco Gardani and Markus A. Pöchtrager. 2005. xiv, 320 pp.
- 263 **BRANCO, António, Tony McENERY and Ruslan MITKOV (eds.):** Anaphora Processing. Linguistic, cognitive and computational modelling. 2005. x, 449 pp.
- 262 **VAJDA, Edward J. (ed.):** Languages and Prehistory of Central Siberia. 2004. x, 275 pp.
- 261 **KAY, Christian J. and Jeremy J. SMITH (eds.):** Categorization in the History of English. 2004. viii, 268 pp.
- 260 **NICOLOV, Nicolas, Kalina BONTCHEVA, Galia ANGELOVA and Ruslan MITKOV (eds.):** Recent Advances in Natural Language Processing III. Selected papers from RANLP 2003. 2004. xii, 402 pp.
- 259 **CARR, Philip, Jacques DURAND and Colin J. EWEN (eds.):** Headhood, Elements, Specification and Contrastivity. Phonological papers in honour of John Anderson. 2005. xxviii, 405 pp.
- 258 **AUGER, Julie, J. Clancy CLEMENTS and Barbara VANCE (eds.):** Contemporary Approaches to Romance Linguistics. Selected Papers from the 33rd Linguistic Symposium on Romance Languages (LSRL), Bloomington, Indiana, April 2003. With the assistance of Rachel T. Anderson. 2004. viii, 404 pp.
- 257 **FORTESCUE, Michael, Eva Skafte JENSEN, Jens Erik MOGENSEN and Lene SCHØSLER (eds.):** Historical Linguistics 2003. Selected papers from the 16th International Conference on Historical Linguistics, Copenhagen, 11–15 August 2003. 2005. x, 312 pp.
- 256 **BOK-BENNEMA, Reineke, Bart HOLLEBRANDSE, Brigitte KAMPERS-MANHE and Petra SLEEMAN (eds.):** Romance Languages and Linguistic Theory 2002. Selected papers from 'Going Romance', Groningen, 28–30 November 2002. 2004. viii, 273 pp.
- 255 **MEULEN, Alice ter and Werner ABRAHAM (eds.):** The Composition of Meaning. From lexeme to discourse. 2004. vi, 232 pp.
- 254 **BALDI, Philip and Pietro U. DINI (eds.):** Studies in Baltic and Indo-European Linguistics. In honor of William R. Schmalstieg. 2004. xlvi, 302 pp.
- 253 **CAFFAREL, Alice, J.R. MARTIN and Christian M.I.M. MATTHIESSEN (eds.):** Language Typology. A functional perspective. 2004. xiv, 702 pp.
- 252 **KAY, Christian J., Carole HOUGH and Irené WOTHERSPOON (eds.):** New Perspectives on English Historical Linguistics. Selected papers from 12 ICEHL, Glasgow, 21–26 August 2002. Volume II: Lexis and Transmission. 2004. xii, 273 pp.
- 251 **KAY, Christian J., Simon HOROBIN and Jeremy J. SMITH (eds.):** New Perspectives on English Historical Linguistics. Selected papers from 12 ICEHL, Glasgow, 21–26 August 2002. Volume I: Syntax and Morphology. 2004. x, 264 pp.
- 250 **JENSEN, John T.: Principles of Generative Phonology. An introduction. 2004. xii, 324 pp.**
- 249 **BOWERN, Claire and Harold KOCH (eds.):** Australian Languages. Classification and the comparative method. 2004. xii, 377 pp. (incl. CD-Rom).
- 248 **WEIGAND, Edda (ed.):** Emotion in Dialogic Interaction. Advances in the complex. 2004. xii, 284 pp.
- 247 **PARKINSON, Dilworth B. and Samira FARWANEH (eds.):** Perspectives on Arabic Linguistics XV. Papers from the Fifteenth Annual Symposium on Arabic Linguistics, Salt Lake City 2001. 2003. x, 214 pp.
- 246 **HOLISKY, Dee Ann and Kevin TUIE (eds.):** Current Trends in Caucasian, East European and Inner Asian Linguistics. Papers in honor of Howard I. Aronson. 2003. xxviii, 426 pp.

- 245 **QUER, Josep, Jan SCHROTEN, Mauro SCORRETTI, Petra SLEEMAN and Els VERHEUGD (eds.):** Romance Languages and Linguistic Theory 2001. Selected papers from 'Going Romance', Amsterdam, 6–8 December 2001. 2003. viii, 355 pp.
- 244 **PÉREZ-LEROUX, Ana Teresa and Yves ROBERGE (eds.):** Romance Linguistics. Theory and Acquisition. Selected papers from the 32nd Linguistic Symposium on Romance Languages (LSRL), Toronto, April 2002. 2003. viii, 388 pp.
- 243 **CUYCKENS, Hubert, Thomas BERG, René DIRVEN and Klaus-Uwe PANTHER (eds.):** Motivation in Language. Studies in honor of Günter Radden. 2003. xxvi, 403 pp.
- 242 **SEUREN, Pieter A.M. and Gerard KEMPEN (eds.):** Verb Constructions in German and Dutch. 2003. vi, 316 pp.
- 241 **LECARME, Jacqueline (ed.):** Research in Afroasiatic Grammar II. Selected papers from the Fifth Conference on Afroasiatic Languages, Paris, 2000. 2003. viii, 550 pp.
- 240 **JANSE, Mark and Sijmen TOL (eds.):** Language Death and Language Maintenance. Theoretical, practical and descriptive approaches. With the assistance of Vincent Hendriks. 2003. xviii, 244 pp.
- 239 **ANDERSEN, Henning (ed.):** Language Contacts in Prehistory. Studies in Stratigraphy. Papers from the Workshop on Linguistic Stratigraphy and Prehistory at the Fifteenth International Conference on Historical Linguistics, Melbourne, 17 August 2001. 2003. viii, 292 pp.
- 238 **NÚÑEZ-CEDENO, Rafael, Luis LÓPEZ and Richard CAMERON (eds.):** A Romance Perspective on Language Knowledge and Use. Selected papers from the 31st Linguistic Symposium on Romance Languages (LSRL), Chicago, 19–22 April 2001. 2003. xvi, 386 pp.
- 237 **BLAKE, Barry J. and Kate BURRIDGE (eds.):** Historical Linguistics 2001. Selected papers from the 15th International Conference on Historical Linguistics, Melbourne, 13–17 August 2001. Editorial Assistant: Jo Taylor. 2003. x, 444 pp.
- 236 **SIMON-VANDENBERGEN, Anne-Marie, Miriam TAVERNIERS and Louise J. RAVELLI (eds.):** Grammatical Metaphor. Views from systemic functional linguistics. 2003. vi, 453 pp.
- 235 **LINN, Andrew R. and Nicola MCLELLAND (eds.):** Standardization. Studies from the Germanic languages. 2002. xii, 258 pp.
- 234 **WEIJER, Jeroen van de, Vincent J. van HEUVEN and Harry van der HULST (eds.):** The Phonological Spectrum. Volume II: Suprasegmental structure. 2003. x, 264 pp.
- 233 **WEIJER, Jeroen van de, Vincent J. van HEUVEN and Harry van der HULST (eds.):** The Phonological Spectrum. Volume I: Segmental structure. 2003. x, 308 pp.
- 232 **BEYSSADE, Claire, Reineke BOK-BENNEMA, Frank DRIJKONINGEN and Paola MONACHESI (eds.):** Romance Languages and Linguistic Theory 2000. Selected papers from 'Going Romance' 2000, Utrecht, 30 November–2 December. 2002. viii, 354 pp.
- 231 **CRAVENS, Thomas D.:** Comparative Historical Dialectology. Italo-Romance clues to Ibero-Romance sound change. 2002. xii, 163 pp.
- 230 **PARKINSON, Dilworth B. and Elabbas BENMAMOUN (eds.):** Perspectives on Arabic Linguistics. Papers from the Annual Symposium on Arabic Linguistics. Volume XIII-XIV: Stanford, 1999 and Berkeley, California 2000. 2002. xiv, 250 pp.
- 229 **NEVIN, Bruce E. and Stephen B. JOHNSON (eds.):** The Legacy of Zellig Harris. Language and information into the 21st century. Volume 2: Mathematics and computability of language. 2002. xx, 312 pp.
- 228 **NEVIN, Bruce E. (ed.):** The Legacy of Zellig Harris. Language and information into the 21st century. Volume 1: Philosophy of science, syntax and semantics. 2002. xxxvi, 323 pp.
- 227 **FAVA, Elisabetta (ed.):** Clinical Linguistics. Theory and applications in speech pathology and therapy. 2002. xxiv, 353 pp.
- 226 **LEVIN, Saul:** Semitic and Indo-European. Volume II: Comparative morphology, syntax and phonetics. 2002. xviii, 592 pp.
- 225 **SHAHIN, Kimary N.:** Postvelar Harmony. 2003. viii, 344 pp.
- 224 **FANEGO, Teresa, Belén MÉNDEZ-NAYA and Elena SEOANE (eds.):** Sounds, Words, Texts and Change. Selected papers from 11 ICEHL, Santiago de Compostela, 7–11 September 2000. Volume 2. 2002. x, 310 pp.
- 223 **FANEGO, Teresa, Javier PÉREZ-GUERRA and María José LÓPEZ-COUSO (eds.):** English Historical Syntax and Morphology. Selected papers from 11 ICEHL, Santiago de Compostela, 7–11 September 2000. Volume 1. 2002. x, 306 pp.
- 222 **HERSCHENSOHN, Julia, Enrique MALLÉN and Karen ZAGONA (eds.):** Features and Interfaces in Romance. Essays in honor of Heles Contreras. 2001. xiv, 302 pp.
- 221 **D'HULST, Yves, Johan ROORYCK and Jan SCHROTEN (eds.):** Romance Languages and Linguistic Theory 1999. Selected papers from 'Going Romance' 1999, Leiden, 9–11 December 1999. 2001. viii, 406 pp.

- 220 **SATTERFIELD, Teresa, Christina M. TORTORA and Diana CRESTI (eds.):** Current Issues in Romance Languages. Selected papers from the 29th Linguistic Symposium on Romance Languages (LSRL), Ann Arbor, 8–11 April 1999. 2002. viii, 412 pp.
- 219 **ANDERSEN, Henning (ed.):** Actualization. Linguistic Change in Progress. Papers from a workshop held at the 14th International Conference on Historical Linguistics, Vancouver, B.C., 14 August 1999. 2001. vii, 250 pp.
- 218 **BENDJABALLAH, Sabrina, Wolfgang U. DRESSLER, Oskar E. PFEIFFER and Maria D. VOEIKOVA (eds.):** Morphology 2000. Selected papers from the 9th Morphology Meeting, Vienna, 24–28 February 2000. 2002. viii, 317 pp.
- 217 **WILTSHIRE, Caroline R. and Joaquim CAMPS (eds.):** Romance Phonology and Variation. Selected papers from the 30th Linguistic Symposium on Romance Languages, Gainesville, Florida, February 2000. 2002. xii, 238 pp.
- 216 **CAMPS, Joaquim and Caroline R. WILTSHIRE (eds.):** Romance Syntax, Semantics and L2 Acquisition. Selected papers from the 30th Linguistic Symposium on Romance Languages, Gainesville, Florida, February 2000. 2001. xii, 246 pp.
- 215 **BRINTON, Laurel J. (ed.):** Historical Linguistics 1999. Selected papers from the 14th International Conference on Historical Linguistics, Vancouver, 9–13 August 1999. 2001. xii, 398 pp.
- 214 **WEIGAND, Edda and Marcelo DASCAL (eds.):** Negotiation and Power in Dialogic Interaction. 2001. viii, 303 pp.
- 213 **SORNICOLA, Rosanna, Erich POPPE and Ariel SHISHA-HALEVY (eds.):** Stability, Variation and Change of Word-Order Patterns over Time. With the assistance of Paola Como. 2000. xxxii, 323 pp.
- 212 **REPETTI, Lori (ed.):** Phonological Theory and the Dialects of Italy. 2000. x, 301 pp.
- 211 **ELŠÍK, Viktor and Yaron MATRAS (eds.):** Grammatical Relations in Romani. The Noun Phrase. with a Foreword by Frans Plank (Universität Konstanz). 2000. x, 244 pp.
- 210 **DWORKIN, Steven N. and Dieter WANNER (eds.):** New Approaches to Old Problems. Issues in Romance historical linguistics. 2000. xiv, 235 pp.
- 209 **KING, Ruth:** The Lexical Basis of Grammatical Borrowing. A Prince Edward Island French case study. 2000. xvi, 241 pp.
- 208 **ROBINSON, Orrin W.:** Whose German? The *ach/ich* alternation and related phenomena in ‘standard’ and ‘colloquial’. 2001. xii, 178 pp.
- 207 **SANZ, Montserrat:** Events and Predication. A new approach to syntactic processing in English and Spanish. 2000. xiv, 219 pp.
- 206 **FAWCETT, Robin P.:** A Theory of Syntax for Systemic Functional Linguistics. 2000. xxiv, 360 pp.
- 205 **DIRVEN, René, Roslyn M. FRANK and Cornelia ILIE (eds.):** Language and Ideology. Volume 2: descriptive cognitive approaches. 2001. vi, 264 pp.
- 204 **DIRVEN, René, Bruce HAWKINS and Esra SANDIKCIOGLU (eds.):** Language and Ideology. Volume 1: theoretical cognitive approaches. 2001. vi, 301 pp.
- 203 **NORRICK, Neal R.:** Conversational Narrative. Storytelling in everyday talk. 2000. xiv, 233 pp.
- 202 **LECARME, Jacqueline, Jean LOWENSTAMM and Ur SHLONSKY (eds.):** Research in Afroasiatic Grammar. Papers from the Third conference on Afroasiatic Languages, Sophia Antipolis, 1996. 2000. vi, 386 pp.
- 201 **DRESSLER, Wolfgang U., Oskar E. PFEIFFER, Markus A. PÖCHTRAGER and John R. RENNISON (eds.):** Morphological Analysis in Comparison. 2000. x, 261 pp.
- 200 **ANTTILA, Raimo:** Greek and Indo-European Etymology in Action. Proto-Indo-European \**ag* -. 2000. xii, 314 pp.
- 199 **PÜTZ, Martin and Marjolijn H. VERSPOOR (eds.):** Explorations in Linguistic Relativity. 2000. xvi, 369 pp.
- 198 **NIEMEIER, Susanne and René DIRVEN (eds.):** Evidence for Linguistic Relativity. 2000. xxii, 240 pp.
- 197 **COOPMANS, Peter, Martin EVERAERT and Jane GRIMSHAW (eds.):** Lexical Specification and Insertion. 2000. xviii, 476 pp.
- 196 **HANNAHS, S.J. and Mike DAVENPORT (eds.):** Issues in Phonological Structure. Papers from an International Workshop. 1999. xii, 268 pp.
- 195 **HERRING, Susan C., Pieter van REENEN and Lene SCHØSLER (eds.):** Textual Parameters in Older Languages. 2001. x, 448 pp.
- 194 **COLEMAN, Julie and Christian J. KAY (eds.):** Lexicology, Semantics and Lexicography. Selected papers from the Fourth G. L. Brook Symposium, Manchester, August 1998. 2000. xiv, 257 pp.
- 193 **KLAUSENBURGER, Jürgen:** Grammaticalization. Studies in Latin and Romance morphosyntax. 2000. xiv, 184 pp.

- 192 **ALEXANDROVA, Galina M. and Olga ARNAUDOVA (eds.):** The Minimalist Parameter. Selected papers from the Open Linguistics Forum, Ottawa, 21–23 March 1997. 2001. x, 360 pp.
- 191 **SIHLER, Andrew L.:** Language History. An introduction. 2000. xvi, 298 pp.
- 190 **BENMAMOUN, Elabbas (ed.):** Perspectives on Arabic Linguistics. Papers from the Annual Symposium on Arabic Linguistics. Volume XII: Urbana-Champaign, Illinois, 1998. 1999. viii, 204 pp.
- 189 **NICOLOV, Nicolas and Ruslan MITKOV (eds.):** Recent Advances in Natural Language Processing II. Selected papers from RANLP '97. 2000. xi, 422 pp.
- 188 **SIMMONS, Richard VanNess:** Chinese Dialect Classification. A comparative approach to Harngjou, Old Jintarn, and Common Northern Wu. 1999. xviii, 317 pp.
- 187 **FRANCO, Jon A., Alazne LANDA and Juan MARTÍN (eds.):** Grammatical Analyses in Basque and Romance Linguistics. Papers in honor of Mario Saltarelli. 1999. viii, 306 pp.
- 186 **MÍŠESKA TOMIĆ, Olga and Milorad RADOVANOVIĆ (eds.):** History and Perspectives of Language Study. Papers in honor of Ranko Bugarski. 2000. xxii, 314 pp.
- 185 **AUTHIER, Jean-Marc, Barbara E. BULLOCK and Lisa A. REED (eds.):** Formal Perspectives on Romance Linguistics. Selected papers from the 28th Linguistic Symposium on Romance Languages (LSRL XXVIII), University Park, 16–19 April 1998. 1999. xii, 334 pp.
- 184 **SAGART, Laurent:** The Roots of Old Chinese. 1999. xii, 272 pp.
- 183 **CONTINI-MORAVA, Ellen and Yishai TOBIN (eds.):** Between Grammar and Lexicon. 2000. xxxii, 365 pp.
- 182 **KENESEI, István (ed.):** Crossing Boundaries. Advances in the theory of Central and Eastern European languages. 1999. viii, 302 pp.
- 181 **MOHAMMAD, Mohammad A.:** Word Order, Agreement and Pronominalization in Standard and Palestinian Arabic. 2000. xvi, 197 pp.
- 180 **MEREU, Lunella (ed.):** Boundaries of Morphology and Syntax. 1999. viii, 314 pp.
- 179 **RINI, Joel:** Exploring the Role of Morphology in the Evolution of Spanish. 1999. xvi, 187 pp.
- 178 **FOOLEN, Ad and Frederike van der LEEK (eds.):** Constructions in Cognitive Linguistics. Selected papers from the Fifth International Cognitive Linguistics Conference, Amsterdam, 1997. 2000. xvi, 338 pp.
- 177 **CUYCKENS, Hubert and Britta E. ZAWADA (eds.):** Polysemy in Cognitive Linguistics. Selected papers from the International Cognitive Linguistics Conference, Amsterdam, 1997. 2001. xxviii, 296 pp.
- 176 **VAN HOEK, Karen, Andrej A. KIBRIK and Leo NOORDMAN (eds.):** Discourse Studies in Cognitive Linguistics. Selected papers from the 5th International Cognitive Linguistics Conference, Amsterdam, July 1997. 1999. vi, 187 pp.
- 175 **GIBBS, JR., Raymond W. and Gerard J. STEEN (eds.):** Metaphor in Cognitive Linguistics. Selected papers from the 5th International Cognitive Linguistics Conference, Amsterdam, 1997. 1999. viii, 226 pp.
- 174 **HALL, T. Alan and Ursula KLEINHENZ (eds.):** Studies on the Phonological Word. 1999. viii, 298 pp.
- 173 **TREVIÑO, Esthela and José LEMA (eds.):** Semantic Issues in Romance Syntax. 1999. viii, 309 pp.
- 172 **DIMITROVA-VULCHANOVA, Mila and Lars HELLAN (eds.):** Topics in South Slavic Syntax and Semantics. 1999. xxviii, 263 pp.
- 171 **WEIGAND, Edda (ed.):** Contrastive Lexical Semantics. 1998. x, 270 pp.
- 170 **LAMB, Sydney M.:** Pathways of the Brain. The neurocognitive basis of language. 1999. xii, 418 pp.
- 169 **GHADESSY, Mohsen (ed.):** Text and Context in Functional Linguistics. 1999. xviii, 340 pp.
- 168 **RATCLIFFE, Robert R.:** The “Broken” Plural Problem in Arabic and Comparative Semitic. Allomorphy and analogy in non-concatenative morphology. 1998. xii, 261 pp.
- 167 **BENMAMOUN, Elabbas, Mushira EID and Niloofar HAERI (eds.):** Perspectives on Arabic Linguistics. Papers from the Annual Symposium on Arabic Linguistics. Volume XI: Atlanta, Georgia, 1997. 1998. viii, 231 pp.
- 166 **LEMMENS, Maarten:** Lexical Perspectives on Transitivity and Ergativity. Causative constructions in English. 1998. xii, 268 pp.
- 165 **BUBENIK, Vit:** A Historical Syntax of Late Middle Indo-Aryan (Apabhram śa). 1998. xxiv, 265 pp.
- 164 **SCHMID, Monika S., Jennifer R. AUSTIN and Dieter STEIN (eds.):** Historical Linguistics 1997. Selected papers from the 13th International Conference on Historical Linguistics, Düsseldorf, 10–17 August 1997. 1998. x, 409 pp.
- 163 **LOCKWOOD, David G., Peter H. FRIES and James E. COPELAND (eds.):** Functional Approaches to Language, Culture and Cognition. Papers in honor of Sydney M. Lamb. 2000. xxxiv, 656 pp.
- 162 **HOGG, Richard M. and Linda van BERGEN (eds.):** Historical Linguistics 1995. Volume 2: Germanic linguistics.. Selected papers from the 12th International Conference on Historical Linguistics, Manchester, August 1995. 1998. x, 365 pp.



- 161 **SMITH, John Charles and Delia BENTLEY (eds.):** Historical Linguistics 1995. Volume 1: General issues and non-Germanic Languages.. Selected papers from the 12th International Conference on Historical Linguistics, Manchester, August 1995. 2000. xii, 438 pp.
- 160 **SCHWEGLER, Armin, Bernard TRANEL and Myriam URIBE-ETXEBARRIA (eds.):** Romance Linguistics: Theoretical Perspectives. Selected papers from the 27th Linguistic Symposium on Romance Languages (LSRL XXVII), Irvine, 20–22 February, 1997. 1998. vi, 349 pp. + index.
- 159 **JOSEPH, Brian D., Geoffrey C. HORROCKS and Irene PHILIPPAKI-WARBURTON (eds.):** Themes in Greek Linguistics II. 1998. x, 335 pp.
- 158 **SÁNCHEZ-MACARRO, Antonia and Ronald CARTER (eds.):** Linguistic Choice across Genres. Variation in spoken and written English. 1998. viii, 338 pp.
- 157 **LEMA, José and Esthela TREVIÑO (eds.):** Theoretical Analyses on Romance Languages. Selected papers from the 26th Linguistic Symposium on Romance Languages (LSRL XXVI), Mexico City, 28–30 March, 1996. 1998. viii, 380 pp.
- 156 **MATRAS, Yaron, Peter BAKKER and Hristo KYUCHUKOV (eds.):** The Typology and Dialectology of Romani. 1997. xxxii, 223 pp.
- 155 **FORGET, Danielle, Paul HIRSCHBÜHLER, France MARTINEAU and Maria Luisa RIVERO (eds.):** Negation and Polarity. Syntax and semantics. Selected papers from the colloquium Negation: Syntax and Semantics. Ottawa, 11–13 May 1995. 1997. viii, 367 pp.
- 154 **SIMON-VANDENBERGEN, Anne-Marie, Kristin DAVIDSE and Dirk NOËL (eds.):** Reconnecting Language. Morphology and Syntax in Functional Perspectives. 1997. xiii, 339 pp.
- 153 **EID, Mushira and Robert R. RATCLIFFE (eds.):** Perspectives on Arabic Linguistics. Papers from the Annual Symposium on Arabic Linguistics. Volume X: Salt Lake City, 1996. 1997. vii, 296 pp.
- 152 **HIRAGA, Masako K., Christopher SINHA and Sherman WILCOX (eds.):** Cultural, Psychological and Typological Issues in Cognitive Linguistics. Selected papers of the bi-annual ICLA meeting in Albuquerque, July 1995. 1999. viii, 338 pp.
- 151 **LIEBERT, Wolf-Andreas, Gisela REDEKER and Linda R. WAUGH (eds.):** Discourse and Perspective in Cognitive Linguistics. 1997. xiv, 270 pp.
- 150 **VERSPoor, Marjolijn H., Kee Dong LEE and Eve SWEETSER (eds.):** Lexical and Syntactical Constructions and the Construction of Meaning. Proceedings of the Bi-annual ICLA meeting in Albuquerque, July 1995. 1997. xii, 454 pp.
- 149 **HALL, T. Alan:** The Phonology of Coronals. 1997. x, 176 pp.
- 148 **WOLF, George and Nigel LOVE (eds.):** Linguistics Inside Out. Roy Harris and his critics. 1997. xxviii, 344 pp.
- 147 **HEWSON, John:** The Cognitive System of the French Verb. 1997. xii, 187 pp.
- 146 **HINSKENS, Frans, Roeland van HOUT and W. Leo WETZELS (eds.):** Variation, Change, and Phonological Theory. 1997. x, 314 pp.
- 145 **HEWSON, John and Vit BUBENIK:** Tense and Aspect in Indo-European Languages. Theory, typology, diachrony. 1997. xii, 403 pp.
- 144 **SINGH, Rajendra (ed.):** Trubetzkoy's Orphan. Proceedings of the Montréal Roundtable on "Morphology: contemporary responses" (Montréal, October 1994). In collaboration with Richard Desrochers. 1996. xiv, 363 pp.
- 143 **ATHANASIADOU, Angeliki and René DIRVEN (eds.):** On Conditionals Again. 1997. viii, 418 pp.
- 142 **SALMONS, Joseph C. and Brian D. JOSEPH (eds.):** Nostratic. Sifting the Evidence. 1998. vi, 293 pp.
- 141 **EID, Mushira and Dilworth B. PARKINSON (eds.):** Perspectives on Arabic Linguistics. Papers from the Annual Symposium on Arabic Linguistics. Volume IX: Washington D.C., 1995. 1996. xiii, 249 pp.
- 140 **BLACK, James R. and Virginia MOTAPANYANE (eds.):** Clitics, Pronouns and Movement. 1997. 375 pp.
- 139 **BLACK, James R. and Virginia MOTAPANYANE (eds.):** Microparametric Syntax and Dialect Variation. 1996. xviii, 269 pp.
- 138 **SACKMANN, Robin and Monika BUDDÉ (eds.):** Theoretical Linguistics and Grammatical Description. Papers in honour of Hans-Heinrich Lieb. 1996. x, 375 pp.
- 137 **LIPPI-GREEN, Rosina L. and Joseph C. SALMONS (eds.):** Germanic Linguistics. Syntactic and diachronic. 1996. viii, 192 pp.
- 136 **MITKOV, Ruslan and Nicolas NICOLOV (eds.):** Recent Advances in Natural Language Processing. Selected Papers from RANLP '95. 1997. xii, 472 pp.
- 135 **BRITTON, Derek (ed.):** English Historical Linguistics 1994. Papers from the 8th International Conference on English Historical Linguistics (8 ICEHL, Edinburgh, 19–23 September 1994). 1996. viii, 403 pp.
- 134 **EID, Mushira (ed.):** Perspectives on Arabic Linguistics. Papers from the Annual Symposium on Arabic Linguistics. Volume VIII: Amherst, Massachusetts 1994. 1996. vii, 261 pp.