

Romance Languages and Linguistic Theory

13

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Languages
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Theory 13

Selected papers from
'Going Romance' 29,
Nijmegen

edited by
Janine Berns
Haike Jacobs
Dominique Nouveau

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The yearly events of both 'Going Romance' and 'Linguistic Symposium on Romance languages' feature research in formal linguistics of Romance languages, in the domains of syntax, morphology, phonology and semantics. Each volume brings together a peer-reviewed selection of papers that were presented at one of the meetings, aiming to provide a representation of the spread of topics at that conference, and of the variety of research carried out nowadays on Romance languages within theoretical linguistics.

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Volume 13

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Introduction

Janine Berns, Haïke Jacobs and Dominique Nouveau
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Going Romance 2015 was organized by the Centre for Language Studies of the Radboud University from 10–12 December 2015. The papers presented at the conference were devoted largely to syntax and semantics, but also to phonology, pragmatics and multilingualism. Out of the 76 abstract submissions that the Going Romance-29 organizing committee received, 33 papers were selected by peer-review to be presented at the conference. From the papers submitted for publication another peer-reviewed selection resulted in the 18 papers contained in this volume. These articles, presented in a simple author-based alphabetical order, represent the range of topics at the conference and the variety of research carried out on Romance languages within theoretical linguistics.

Let us next present a brief summary of each paper in this volume. **Alejo Alcaraz** provides novel arguments against a morphological analysis of the Spurious *Se* Rule in Spanish. He shows that the dative clitic *le* and the spurious clitic *se* differ syntactically and argues on that basis against the existence of a morphological rule which maps the dative clitic onto the spurious one, but leaves its syntax unaffected.

Assuming that *wh*-in-situ questions (WIQs) require givenness, **María Biezma** shows that in Castilian Spanish WIQs presuppose that the WIQ is embedded in a specific discourse and that what is given is the (hierarchical) discourse-structure in which the question is embedded. She shows that Spanish thus imposes very specific discourse-structural conditions to allow WIQs and that there are conventional linguistic devices that target discourse-structure.

The paper by **Elena Castroviejo** and **Laia Mayol** purports to derive the concessive and epistemic readings of the Catalan expression *si més no* (literally ‘if more not’). More in particular, they argue that ‘*si més no* φ ’ is a biscuit conditional whose consequent contains a VERUM operator. It conveys that if it is not true that there is a ψ such that $\psi + \varphi$ holds, there is a relevant assertion that it is indeed true that φ .

Federica Cognola and **Norma Schifano** discuss the discourse particle *ben* ‘well’ in the Trentino regional variety of Italian and show that *ben* is admitted in any of the tested TAM contexts (save for non-root embedded clauses) and always sits between the lexical/auxiliary/restructuring verb and the non-finite form and is used

to negate an implicit or explicit negative presupposition. By claiming that *ben* sits in NegPresuppositionalP, where it is licensed by the (c)overt operator *no* located in ForceP, the syntactic and interpretative properties of *ben* are formally captured.

Alice Corr discusses Catalan and Spanish instances of non-embedded clauses headed by the subordinating complementiser *que* ‘that’. Of the three distinct types of ‘in subordinate’ *que*, only quotative *que* is demonstrated to be formally identical to the subordinating complementiser. The other two types, exclamative and conjunctive *que*, exhibit the formal behaviour of speech acts. It is argued that the three *que* types cannot be accommodated within the split CP, and that exclamative and conjunctive *que* are operative within an articulated layer above Force dedicated to encoding ‘speech act’ syntax.

Karen Duek argues that a movement approach to external possession in Brazilian Portuguese makes incorrect predictions about its locality restrictions, including island effects and sensitivity to discourse factors. She offers an analysis in which the dependency between possessor and possessum is mediated by null anaphors, which are also shown to display logophoric behaviour.

Antonio Fábregas and **Rafael Marín** argue that Spanish adjectives syntactically project their scales as PathPs, while English adjectives are PlacePs that do not encode the potential syntactic differences between types of scales. Three previously unrelated contrasts between English and Spanish are accounted for by this difference: (i) the availability of adjectives as strong result complements, (ii) the availability of positive degree adjectives as the base of degree achievements and (iii) the availability of comparison class PPs with semantically absolute adjectives.

Irene Franco, **Olga Kellert**, **Guido Mensching** and **Cecilia Poletto** study the history of Italian negative additives such as *neanche* ‘neither/not even’ and propose that the grammaticalization of *neanche* originates from the contexts in which Old Italian additive *anche* occurs immediately right adjacent to the negative disjunction *né* (i.e. *né + anche > neanche*).

Jasmin Geveler, **Laia Arnaus Gil** and **Natascha Müller** analyze 12 German-Romance (French, Spanish) and Romance-Romance (French, Spanish, Italian) bilingual children from the age of 1;4 until 5;4 and 3 adults (Spanish, French) and show that the French children are able to acquire the fine distinctions of the adult systems from early on, both with respect to variation across and within languages. Whereas the French bilingual data lack any sign of cross-linguistic influence, the bilingual Spanish children do not always reflect the input frequencies.

The paper by **Svetlana Kaminskaja** examines rhythm in Ontario French, spoken in a minority setting, and explores the presence and extent of sociolinguistic variation. By comparing text readings and spontaneous samples from men and women of two age groups, rhythmic factors, such as articulation rate, syllabic structure and typology, length of a stress group, syllable and vowel duration ratios, and

phonetic rhythm are studied. It is shown that all participants articulate more slowly when reading and that women and older participants display a more French-like rhythm, whereas younger participants tend to converge to English.

Eugenia Mangialavori Rasia offers an l-syntactic account of non-trivially alternating copulas *ser/estar* building on incorporation of a prepositional head (p^*) and uses the distinction between telicity and boundedness to develop an analysis of *ser/estar* that supports a new typology of p heads within the Central Coincidence domain. She proposes a novel implementation based on p-conflation and Hyponym Argument Relations which brings *ser/estar* into a much ampler frame.

Rafael Marín and **Antonio Fábregas** explore the properties of constructions involving the stage level copula *estar* with the pronominal form *se* and argue that *estarse* is essentially stative, lacking all kinds of dynamicity and telicity, and should be analyzed as an inchoative state. They show that their analysis is not thwarted by the problems of previous proposals with respect to the temporal and aspectual behavior of *estarse* constructions.

Melania S. Masià argues that adjectives of completeness are degree modifiers in the nominal domain. By adopting a semantics of PC nouns according to which they denote substances that can be bounded or unbounded, just like their related adjectives (*libre* ‘free’, etc.), a strict parallelism between adverbs and adjectives of completeness is established which contributes to the understanding of scalarity across categories and the relation between degrees and measurements.

The contribution by **Mara Panaitescu** presents an account of Romanian cardinal DPs containing distributivity marker *câte* (Dependent Numerals (DNums)) which is expected to extend to dependency markers which do not enforce their own distributivity and which obligatorily apply to monotonic measures (*câte 200 de grame*, ‘CÂTE 200 grams’ vs. *#câte 20 de grade Celsius*, ‘CÂTE degrees Celsius’). Distributivity is satisfied by co-indexation with a plurality of events which is independently provided. The monotonicity constraint is claimed to result from the following facts: *câte* ranges over event-object pairs; it induces event-related (ER) interpretations by the same mechanism as cumulative ER cardinals, which accounts for the monotonicity constraint.

Jérémy Pasquereau proposes that the Quantification At a Distance (CAD) dependency is derived via movement and is not base-generated. He argues that CAD and *tout*-movement involve the same operation, but whether the latter is A-movement or not is a question left open for future research.

In their paper, **Rosalinde Stadt**, **Aafke Hulk** and **Petra Sleeman** test the L2 Status Factor hypothesis, according to which the L2 is the preferred background language over the L1 in L3 acquisition (henceforth L3A), and study the effect of L2 English exposure on the role of the L1 and the L2 in L3A. Focusing on verb placement, where French differs from English and Dutch, and comparing third- to

fourth-year secondary school students in the Netherlands in both an immersion and a traditional 'regular' secondary school, they investigate how increased developmental L2 exposure changes L1/L2 influence in L3A.

In her contribution, **Aleksandra Vercauteren** argues that the copular verb found in the in the focalizing SER-construction (FSC) is a verbal focus marker and is verbal in having a verbal category and exhibiting TA and phi-feature agreement, but is lacking any verbal semantics and is a semantically vacuous focus marker.

In the last paper of this volume, **Sam Wolfe** discusses word order properties of Old Occitan. He argues that it was a V2 system and that the locus of the V2 property was a low left-peripheral head, Fin, with systematic V-to-Fin⁰ movement, but widespread verb-third or more orders.

For their invaluable help in the review processes, we would like to express our gratitude (in alphabetical order) to the following colleagues: Roberta d'Allesandro, Sergio Baauw, Barbara Bullock, Bert Le Bruyn, João Costa, Jenny Doetjes, Frank Drijkoningen, Ad Foolen, Helen de Hoop, Roeland van Hout, Pablo Irizarri van Suchtelen, Ans van Kemenade, Ellen-Petra Kester, Olaf Koeneman, Erwin Komen, Sander Lestrade, Juana Liceras, Gijs Mulder, Pieter Muysken, Manuela Pinto, Claudià Pons-Moll, Johan Rooryck, Christina Schmitt, Petra Sleeman, Peter de Swart, Henriëtte de Swart, and last but not least, Christina Tortora. Finally, we wish to thank the Centre for Language Studies and the International Office of the Radboud University for their generous financial support.

The spurious vs. dative problem

Alejo Alcaraz

University of the Basque Country

In this paper I bring new arguments against the morphological analysis of the Spurious *Se* Rule in Spanish (Bonet 1991, Nevins 2007, 2012, among others). I show that both the dative clitic *le* and the spurious clitic *se* differ syntactically. These facts strongly argue against the existence of a morphological rule (i.e. *impoverishment*) mapping the dative clitic into the spurious one, leaving its syntax unaffected.

1. Introduction

Since Bonet's (1991) ground-breaking work on opaque clitic combinations in Romance, the fact that the syntactically motivated dative clitic *le* (1a) is systematically replaced by the reflexive clitic *se* in clusters of two 3rd person clitics in Spanish (1b) has been taken as evidence for the existence of *impoverishment* operations after syntax (Halle & Marantz 1993).

- (1) a. *Juan le compró un libro.*
Juan 3sIO bought a book
'Juan bought him/her a book.'
- b. *Juan se lo compró.*
Juan 3REFL 3smO bought
'Juan bought him/her it.'
- (2) **Juan le lo compró.*
Juan 3sIO 3smO bought
'Juan bought him/her it.'

That the *Spurious Se* (SpuSe) Rule giving rise to the opaque cluster in (1b) is a morphological operation has been taken for granted since the very beginnings of Distributed Morphology (Bonet 1991, Halle & Marantz 1993). However, as already noticed by Embick & Noyer (2007), this assumption is far from being the null hypothesis even in this framework, cf. (3).

- (3) Nevertheless, there are special cases in which [...] the relationship between syntactic and morphological structure is more complex than the picture outlined above predicts [...]. One possibility is that the syntactic structure that predicts the non-occurring morphological form has been misanalysed. Because it maintains the simplest interaction between syntax and morphology, this option represents the null hypothesis. Embick & Noyer (2007: 304)

Under this perspective, rules like the SpuSe in Spanish – that blur the mapping from Syntax to Morphology – should not fall under the purview of Morphology, everything being equal. In this paper I will show that the dative clitic *le* and the spurious clitic *se* differ in syntactic terms. This strongly argues against the analysis of the SpuSe Rule as a post-syntactic operation and paves the way to undertake the null hypothesis; i.e. no transformation maps *le* into *se* in Spanish.

The paper is structured as follows. In Section 2, I will outline the basic properties of the morphological analysis of the SpuSe Rule. I will focus on the dissimilation-based account laid out by Nevins (2007, 2012), but the arguments I put forward to show that Nevins' analysis is untenable can be straightforwardly extended to alternative morphological accounts.¹ In Section 3, I will claim that the SpuSe Rule cannot be analyzed as a property of a particular clitic cluster or as the product of a post-syntactic operation. In Section 4, I show that the spurious clitic *se* and the (properly) reflexive clitic *se* are interchangeable in ellipsis contexts, contrary to what happens with the dative clitic *le* and the (properly) reflexive clitic *se*. Finally, Section 5 explores two speculative proposals to get rid of *impoverishment* operations in morphology, while still accounting for the SpuSe Rule in a principled way.

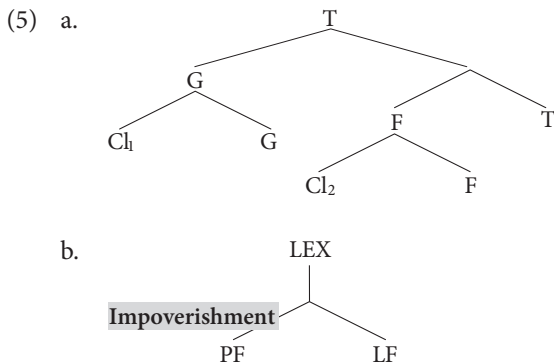
2. Morphological SpuSe rule (Nevins 2007, 2012)

Morphological accounts for the SpuSe Rule in Spanish revolves around two main assumptions:

- (4) a. *The Cluster Assumption.*
The SpuSe Rule is triggered in a particular clitic cluster. In particular, clusters where two 3rd person clitics co-occur.
- b. *The Post-Syntactic Assumption.*
The SpuSe Rule is a morphological operation without syntactic consequences.

1. I focus on Nevins' (2007) analysis because I consider this analysis to be the best attempt to reduce Spanish *Spurious Se* in Morphology as this author carefully shows that his analysis based on person dissimilation is descriptively superior to other alternative analyses.

Nevins' (2007, 2012) analysis of SpuSe Rule fully embraces the assumptions in (4), but he aims to answer why SpuSe Rules must exist at all in Morphology. Nevins claims that feature identity within the M(orphological)-Word leads to morphological markedness, which triggers feature/morpheme deletion (*impoverishment*). The M-Word (Embick & Noyer 2001) is defined as the highest terminal projection not dominated by any other terminal projection (5a). The M-Word becomes relevant at the PF branch of the grammar (5b).



The SpuSe Rule reduces to the following morphological instruction:

- (6) a. *Haplology-triggered SpuSe Rule*
Delete/Alter the features corresponding to 3rd person when it precedes another 3rd person. (Nevins 2007: (33))
- b. *Juan* [_{M-W} le_[3] lo_[3]] *compró* → *Juan* [_{M-W} se_[3] lo_[3]] *compró*.

The Rule in (6a) for SpuSe in Spanish is intended to be the language-particular instantiation of a more general scheme for feature-triggered dissimilation operations inside the M-Word. Nevins (2012) observes that in Romanian the number feature of the dative clitic is neutralized in clusters of two third person clitics (7). In Tavullia, a third person subject clitic is neutralized in the context of a third person object clitic (8).

- (7) *{*li/i} le dai*
3pIO/3sIO 3fsO give.2sS
'You give them (fem.) to them/it/him/her.' (Nevins 2012: (44))
- (8) *(*el) la ĉema*
3sS 3sO calls
'He calls her.' (Nevins 2012: (45))

According to Nevins (2012), neutralization of features or entire terminal nodes in Spanish, Romanian and Tavullia obey the general schema in (9).

- (9) 3/3-Impoverishment: Given two [-participant] morphemes M1 and M2 within a single M-World.
- a. Delete person feature in M1 (Spanish)
 - b. Delete the entire terminal M1 (Tavullia)
 - c. Delete number feature in M1 (Romanian)

Romanian is particularly interesting in terms of explanatory adequacy (Chomsky 1965). In Romanian the repair (i.e. Delete number feature in M1) is completely orthogonal to what actually triggers it (i.e. the co-occurrence of two third person features in the same M-Word). Crucially, Nevins (2012) is committed to adopt the following two assumptions: (i) the crosslinguistic variation regarding which element is the target of deletion turns out to be unpredictable and (ii) the deleted feature is potentially orthogonal to the feature triggering the dissimilation process. The question is how it is possible to acquire a rule of this type at all.

The problem – given these assumptions – is to explain how Romanian children are able to deduce that deletion of the plural feature in the dative clitic in (7) is a consequence of the co-occurrence of two third person features within the same M-Word. This sort of opacity between what the rules causes and what causes the rule certainly makes its acquisition a tricky task.

3. The spurious vs. dative problem

In both Section 3.1 and 3.2 I show that the Cluster assumption in (4a) cannot be maintained. Additionally, I show in 3.3 that the dative clitic *le* can give rise to new binding possibilities, but the spurious clitic *se* cannot. It implies that the spurious clitic *se* cannot be analyzed as the output of a post-syntactic operation like *impoverishment*, leaving its syntax unaffected. This strongly argues against the Post-Syntactic Assumption in (4b).

3.1 Bare plurals

In this Section, I will show that *dissimilation*-based accounts undergenerate. Generic bare plural Indirect Objects (IOs) – as pointed out by Fernández Soriano (1989), Jaeggli (1982) and Ordóñez (2000) – cannot be doubled by the dative clitic *le* (10a). However, the spurious dative clitic *se* can double bare generic IOs, as shown in (10b).

- (10) a. *No (*les) des tus llaves a personas desconocidas.*
 Don't 3pIO give your keys to strangers.
 'Don't give your keys to strangers' (Ordóñez 2000: (81a))

- b. *No se las des a personas desconocidas.*
 Don't REFL 3PLO give to strangers
 'Don't give them to strangers'.

The question raised by this pattern is how it is even possible to impoverish the feature-structure of the dative clitic *le* into that of the spurious clitic *se* to produce (10b), if the dative clitic *le* is independently ruled out to begin with, as shown in (10a).

3.2 The non-existence of ethical spurious *se* clitics

An ethical 3rd person dative cannot be substituted by the spurious clitic *se* in a cluster of two 3rd person clitics, as shown in (11a). The sentence in (11b), on the other hand, shows that the 3rd person dative clitic *le* can be an ethical dative in isolation.

- (11) a. *Al niño, no {me/te/*se} le hablan.*
 To.the boy, don't 1/2/spurious.ETH 3IO talked.to
 'They didn't talk to my/your/*his boy'.
 b. *Este niño no le bebe nada.*
 This boy don't 3IO.ETH drinks nothing
 'His boy is not drinking anything'.

It turns out that the sequence of two 3rd person clitics in Spanish is simply *ineffable*. There is no possible repair when two 3rd person clitics co-occur in the same cluster (12), and one of them is a 3rd person ethical dative.

- (12) **Al niño, no le le hablo.*
 To.the boy, don't 3.ETH 3sIO speak.1sS
 'I don't talk to his boy.'

Given the fact that ethical dative clitics can independently enter in clusters with other clitics (13a), the *Haplology-triggered SpuSe Rule* in (6) overgenerates. It predicts that the SpuSe Rule should apply to (12), contrary to fact. The sentences in (11a) and (12) show that clusters of 3rd person clitics cannot be construed in syntax. But that is precisely the point: if one needs to recur independently to syntax in order to avoid combinations of two 3rd person clitics, why does one need to stipulate an idiosyncratic morphological rule to do exactly the same?

3.2.1 *The double object construction hypothesis*

If the source of the SpuSe Rule is not just the type of clitic cluster in which it occurs, where does the spurious *se* come from? In order to provide a non-stipulative answer to this question, let us turn back to ethical dative clitics. It is well-known that ethical

datives clitics – contrary to argumental dative clitics – do not give rise to Person Case Constraint PCC effects (Perlmutter 1968, Bonet 1991).

- (13) a. *no* me le *hablan a este niño.* Ethical Dative
 not 1sO.ETH 3sIO talk.3pS to this boy
 ‘They Don’t talk to my boy.’
- b. **no* me le *enviaron a este niño.* Argumental Dative
 not 1sO 3sIO send.3pS to this boy
 ‘They didn’t send me to this boy.’

This different behavior regarding PCC effects between ethical and argumental datives derives from the fact that argumental dative clitics – but not ethical dative ones – enter in the Double Object Construction (DOC) in Spanish (Demonte 1995, Ormazabal & Romero 2013). If the domain of application of the SpuSe Rule reduces to DOCs in Spanish, it explains automatically why the SpuSe Rule does not apply to ethical datives. It does not apply for the same reason ethical datives do not generate PCC effects: they do not enter in DOCs.

(14) **The DOC hypothesis.**

The SpuSe Rule is a consequence of the way two third person internal arguments are licensed in syntax.

Notice that the DOC hypothesis in (14) is more restrictive than the Cluster Assumption in (4a). As a matter of fact, (4a) predicts that the SpuSe Rule applies to any combination of two third person clitics. It does not matter how the cluster has been built in Syntax. However, I have shown that the Cluster Assumption in (4a) under- and overgenerates in Spanish.

Furthermore, the DOC hypothesis allows to ‘free’ the application of the SpuSe Rule from the domain of clitic clusters. In the Calabrian Dialect spoken in *Arena*, a third person Indirect Object can be construed as a locative or as an argumental clitic in the context of ditransitive verbs like ‘give’. It is obvious that the spurious *se* in *Arena* is not a property of the clitic cluster, but represents an alternative way to construct third person IOs in syntax: as a prepositional phrase (employing a locative clitic) or as a ‘bare’ DP (employing a reflexive clitic).

- (15) a. *‘ijju si đuna ‘kistu* [DOC]
 he SI gives this
 ‘He gives him(self)/her/them this’
- b. *‘ijju nci đuna ‘kistu* [Oblique]
 he LOC gives this
 ‘He gives this to him/her/them’ *Arena* (Manzini & Savoia 2005)

Under the DOC hypothesis in (14), the clitic system of *Arena* shows the same variability in the morphosyntactic realization of the IO as English does in the so-called Dative Alternation (Larson 1988, Baker 1988, among others): either as a ‘bare’ DP or as a prepositional phrase.

- (16) a. I give Mary a book [DOC]
 b. I give a book to Mary [Oblique]

3.3 Spurious ≠ dative

In this Section, I will review several arguments showing that spurious *se* cannot be syntactically equated with dative *le*.

3.3.1 *Weak cross-over repairs*

The dative clitic *le* can repair WCO effects, as shown in (17a), but the spurious clitic *se* cannot, as in (17b). Even if (17b) is not completely ungrammatical, the contrast between (17a) and (17b) is sharp enough and utterly unexpected under any morphological account for the SpuSe Rule.

- (17) a. *¿a quién coño_i le_i ha traído un ordenador su_i jefe?*
 a who pussy 3IO.SG has brought a computer his boss.
Hazme una lista.
 Give-me a list
 ‘who the hell has his boss brought a computer? Give me a list!’
- b. *??¿a quién coño_i se_i lo ha traído su_i jefe?. Hazme*
 a who pussy REFL 3sO has brought his boss. Give-me
una lista.
 a list.
 ‘who the hell has his boss brought it? Give me a list!’

A clearer contrast is obtained with strong pronouns instead of ‘weak’ possessives.

- (18) a. *A quién coñoⁱ leⁱ dio un tortazo la chica que estuvo*
 a who pussy 3IO gave a punch the girl that was
bailando con élⁱ?
 dancing with him.
 ‘*Who the hellⁱ did the girl dancing with himⁱ give tⁱ a kick?’
- b. **¿A quién coñoⁱ seⁱ lo dio la chica que estuvo bailando*
 a who pussy REFL 3msO gave the girl that was dancing
con élⁱ?
 with him
 ‘*Who the hellⁱ did the girl dancing with himⁱ give tⁱ it?’

3.3.2 Principle C effects with post-verbal subjects

The dative clitic *le* gives rise to Condition C effects with post-verbal Subjects in Spanish (cf Panagiotidis & Tsipplakou 2006), as shown in (19b). Yet the spurious clitic *se* do not give rise to Condition C effects under identical conditions, as in (19b').

- (19) a. *¿Quién le entregará el premio a Messi?*
 Who 3sIO will.deliver.3Ssg the award to Messi
 'Who will deliver Messi the award?'
- b. **Le_i entregará el premio el padre de Messi_i en persona.*
 3IO.SG will.deliver.3sS the award the father of M. personally
 'Messi's father will deliver him the award in the flesh.'
- b'. ^(?)*Se_i lo entregará el padre de Messi_i en persona.*
 REFL 3OSG will.deliver.3sS the father of M. personally
 'Messi's father will deliver him it in the flesh.'

The sentence in (19b') sounds more natural if the proper noun *Messi* is replaced by the epithet *el astro argentino* 'the argentinian star', as in (20a). This replacement has no effect when a cross-referential dative clitic *le* is employed (20b).

- (20) a. *Se_i lo entregará el padre del astro*
 REFL 3sO will.deliver.3Ssg the father of star
argentino_i en persona.
 argentinian personally
 'The father of the Argentinian Star will deliver him it in the flesh.'
- b. **Le_i entregará el premio el padre del astro*
 3sIO will.deliver.3S.sg the award the father of star
argentino_i en persona.
 argentinian personally
 'The father of the Argentinian Star will deliver him the award in the flesh.'

3.4 Binominal sendos in Spanish (Bosque 1992)

The distributive quantifier *sendos* in Spanish must be bound by a plural antecedent (Bosque 1992). The sentence in (21) is ungrammatical because the antecedent of binominal *sendos* – the null 1st person singular Subject – is not plural. In (22) the distributive quantifier *sendos* is licensed because its antecedent is the plural subject *dos amigos* 'two friends'.

- (21) **Leí sendos libros.*
 read.1sS each books
 (Lit.) 'I have read one book each.' (Bosque 1992: (4))

- (22) *Dos amigos_i han ganado sendos_i libros.*
 two friends have.3PLS gained each books
 ‘Two friends have gained one book each.’ (Bosque 1992: (5c))

The antecedent of binominal *sendos* must be local.

- (23) **Los tres chicos_i dijeron que sus dos amigas_j habían escrito sendas_i novelas.*
 The tree guys said that their two friends have written
 each novels
 ‘Three guys said that two friends have written one novel each.’ (Bosque 1992: (8d))

Crucially, plural clitics can act as antecedents of binominal *sendos* in Spanish.

- (24) *Les_i cayeron encima sendos_i sacos de tierra.*
 3PLIO fell.3PLS over each sacks of dirt.
 (Lit.) ‘Sacks of dirt fell over them.’ (Bosque 1992: (28))

Summarizing so far, binominal *sendos* needs a clause-mate C-commanding antecedent. The antecedent must be plural, but not necessarily a full DP. Plural clitics can act as antecedents of binominal *sendos* in Spanish.

Crucially, the 3rd person Dative clitic *le* can be the antecedent of the distributive quantifier *sendos* in Spanish (24'a), but the spurious clitic *se* cannot (24'b).

- (24') a. *Rita y Esperanza_i me pidieron que les_i entregara la mordida en sendos_i coches oficiales.*
 R & E 1SG asked that 3IOPL delivered the bribery in each cars official
- b. **Rita y Esperanza_i me pidieron que se_i la entregara en sendos_i coches oficiales.*
 R & E 1SG asked that 3REFL 3sO delivered in each cars official
 ‘Rita and Esperanza asked me to deliver them the bribery in each official car.’

Table 1 summarizes the syntactic differences between Dative-*le* and Spurious-*se*. It is clear – by inspecting Table 1 – that the 3rd person Dative clitic *le* is able to give rise to new binding possibilities: (1) repairing of WCO effects, (2) violation of Principle C with post-verbal Subjects and (3) licensing of the distributed quantifier *sendos*. On the contrary, the spurious clitic *se* is not able to give rise to new binding possibilities.

Table 1. Syntactic differences between dative-*le* and spurious-*se*

	WCO repairs	Principle C-effects	Binominal <i>sendos</i>
Dative- <i>le</i>	✓	✓	✓
Spurious- <i>se</i>	✗	✗	✗

The syntactic differences between the dative clitic *le* and the spurious clitic *se* cannot be traced back to the fact that the dative clitic *le* surfaces in isolation, but the spurious clitic *se* surfaces in a clitic cluster. In other words, even if the spurious clitic *se* forms a M-Word, this does not explain why the clitic *le* gives rise to new binding possibilities, but the clitic *se* does not.

Crucially, φ -agreement in English is not able to give rise to new binding possibilities (25a–b), as shown by Lasnik (1999) and den Dikken (1995). Only A-movement (but not agreement by itself) is able to produce new binding possibilities (25a'–b'). This difference between φ -agreement and A-movement in English corresponds to the difference I have observed between spurious *se* and dative *le* in Spanish.

- (25) a. *There seems to hisⁱ lawyer to have been some defendantⁱ at the scene.
 a'. Some defendantⁱ seems to hisⁱ lawyer to have been at the scene.
 b. *There seem to each otherⁱ to have been some linguistsⁱ given good job offers.
 b'. Some linguistsⁱ seem to each otherⁱ to have been given good job offers.

If spurious *se* is the product of φ -agreement – but dative *le* requires A-movement –, then spurious *se* and dative *le* are the result of two different syntactic operations. Do we still need a morphological operation to account for spurious *se* in Spanish?

4. Spurious-*se* is just reflexive-*se*

The 3rd person Dative clitic *le* cannot be bound by its clause-mate Subject in Spanish, as shown in (26). This clitic is subject to Principle B (27).

- (26) **Juan_i le_i compró un libro.*
 Juan 3sIO bought a book
 (intended) 'Juan bought himself a book.'

- (27) *Principle B.*

A pronoun must be free (not bound) in its governing category.

(Chomsky 1981:188)

Whenever a 3rd person dative clitic is bound by its clause-mate Subject in Spanish, it must surface as the reflexive clitic *se*.

- (28) *Juan_i se_i compró el coche.*
 Juan 3REFL bought the car
 ‘Juan bought himself a car.’

It would be really strange to stipulate that the clitic *se* in (28) is the product of a morphological operation mapping *le* into *se* when it is locally bound. In this regard, it is important to notice that the spurious clitic *se* can be locally bound (29).

- (29) *Juan_i se_{i/j} lo compró.*
 Juan REFL 3smO bought
 ‘Juan bought him(self)/her it.’

However, it could be argued that (29) is simply an artifact: the reflexive- and the spurious-*se* turn out to be homophonous, but they are syntactically different. In (30a) the clitic *se* is doubling a complex anaphor and must be locally bound, but in (30b) it is doubling a full DP and must be free.

- (30) a. *Juan se lo compró a sí mismo.*
 Juan REFL 3smO bought to himself
 ‘Juan bought it to himself.’
 b. *Juan se lo compró a María.*
 Juan REFL 3smO bought to Maria
 ‘Juan bought it to Mary.’

Is there a way to show that both the reflexive and the spurious clitic *se* are the same clitic in syntax, and not just homophonous? Interestingly enough, there is a way to confirm this claim: Ellipsis.

4.1 Vehicle change (Fiengo & May 1994)

Vehicle Change is a mismatch between the syntactic form that express a given argument and the syntactic form of its correlate among the tokens of the non-pronounced material. In cases of ellipsis resolution with Vehicle Change, “a nominal can take any syntactic form so long as its indexical structure (type and value) is unchanged (modulo for β -occurrences)” (Fiengo & May 1994:218). In either (31a) or (31b) Vehicle Change effects cannot be observed because both (31a) and (31b) are ungrammatical independently of Vehicle Change. If Vehicle Change does not apply (as in (31a)), a violation of Principle C arises. If Vehicle Changes applies, then this particular indexation gives rise to a violation of Principle B.

- (31) a. *Mary admires John₁, and he₁ does ~~admires John~~₁ too
 b. *Mary admires John₁, and he₁ does ~~admires him~~₁ too

However, in (32b) reconstruction with Vehicle Change gives rise to no Principle B violation because the binder of the (reconstructed) pronoun is far enough from it.

- (32) a. *Mary admires John₁, and he₁ does think Sally does admire John₁^α too
 b. Mary admires John₁, and he₁ does think Sally does admire him₁^α too

Let us see how Vehicle Change works when the dative clitic *le* is doubling a full DP. As happens with (31) in English, Vehicle Change has no effect in (33): either a violation of Principle C (33a) without Vehicle Change or a violation of Principle B (33b) with Vehicle Change under reconstruction are obtained in the ellipsis site.

- (33) **Pedro le echó la culpa a María_p, y (la tonta de) ella₁ también.*
 P. 3IO gave the blame to Mary_p, and (the stupid of) she₁ too
 ‘*Peter blamed Mary_p, and she₁ (stupid as she is) did too.’
 a. Reconstruction without vehicle change = Violation of Principle C.
 **Pedro le echó la culpa a María_p, y ella₁ le echo la culpa a María₁^α también.*
 b. Reconstruction with vehicle change = Violation of Principle B.
 **Pedro le echó la culpa a María_p, y ella₁ le echo la culpa pro₁^α/a ella₁^α también.*

However, the effects of Vehicle Change can be observed in (34). In this case, there is no violation of Principle B under reconstruction with Vehicle Change, because the binder of the (reconstructed) pronoun is not locally bound in the ellipsis site, as shown in (34b).

- (34) *El policía cree que Pedro le echó la culpa a María_p, y ella₁ también.*
 The police believes that P. 3IO gave the blame to M, and she₁ too
 ‘That police believes that Peter blamed Mary_p, and she₁ does too.’
 a. Reconstruction without vehicle change = Violation of Principle C.
 **El policía cree que Pedro le echó la culpa a María_p, y ella₁ cree que Pedro le echó la culpa a María₁^α también.*
 b. Reconstruction with vehicle change = No Violation of any Binding Principle.
 ✓*El policía cree que Pedro le echó la culpa a María_p, y ella₁ cree que Pedro le echó la culpa pro₁^α/a ella₁^α también.*

Given the fact that the clitic *le* can be doubled by almost any DP (except Bare Plurals), I have tested how the chain <le₁, DP₁> formed by the clitic and its associate is interpreted in ellipsis contexts. Boring as expected, the chain <le₁, DP₁> in (33) and (34) provides us with no surprise when reconstructed with or without Vehicle Change.

Crucially, spurious clitic *se* allows to be reconstructed as the reflexive *se* in contexts where the dative clitic *le* cannot (cf. 33).

- (35) *Juan se la echo a María_p, y (la tonta de) ella₁ también.*
 J. SE 3fsO blame to M. and (the stupid of) she₁ too.
 ‘*Peter blamed Mary_p, and she₁ (stupid as she is) did too.’
- a. Reconstruction without vehicle change = Violation of Principle C.
 **Pedro le echó la culpa a María_p, y (la tonta de) ella₁ también se la echó a María₁^α.*
- b. Reconstruction with vehicle change = Absence of Principle B.
Pedro le echó la culpa a María_p, y (la tonta de) ella₁ también se la echó pro₁^α/a ella₁^α.

As pointed out by Torrego (1995), strong pronouns in argument position do not violate Principle B in Spanish if they are cross-referenced by the reflexive clitic *se*. This explains why the spurious clitic *se* does not violate Principle B with Vehicle Change. The spurious clitic *se* just behaves as the reflexive *se* in Ellipsis.

- (36) a. *María se criticó a ella/a sí misma.*
 M. SE criticized to her/to herself
 ‘María criticized herself’ (Torrego 1995:(14b))
- b. *Juan se regaló un libro a él/a sí mismo.*
 J. SE gave a book to him/to himself
 ‘Juan gave himself a book’ (Torrego 1995:(18a))

Summarizing so far, if it is unnecessary to stipulate a morphological rule to account for the binding possibilities of the reflexive clitic *se* in (29), why should we stipulate that the spurious clitic *se* is the product of a morphological operation? In fact, I have shown in Section 3.3 that dative clitic *le* and the spurious clitic *se* differs in terms of binding possibilities.²

The goal of this section was to show that the silent category construed with the spurious-*se* is not subject to Condition B, but the silent nominal construed with the dative-*le* is.

- (37) a. *Juan_i se lo compró todo Δ_{ij}*
 Juan SE 3smO bought all
 ‘Juan bought him(self)/her everything.’
- b. **Juan_i le_i compró todo Δ_i*
 Juan 3sIO bought all
 (intended) ‘Juan bought himself a book.’

2. It should be noticed that a consequence of this section is that the reflexive clitic *se* in Spanish is not inherently reflexive. In Alcaraz (2016) I analyze the third person reflexive clitic *se* as the product of person agreement and ‘reflexivity’ comes as a side effect.

5. Conclusion

In this paper I have claimed that the dative *le* and the spurious *se* cannot be syntactically equated, because the 3rd person Dative clitic *le* is able to give rise to new binding possibilities: (1) repairing of WCO effects, (2) violation of Principle C with post-verbal Subjects and (3) licensing of the distributed quantifier *sendos*. But, crucially, the spurious clitic *se* is not able to give rise to new binding possibilities. I have additionally shown that the spurious *se* and the dative *le* differ syntactically in a way in which the spurious *se* and the (properly) reflexive *se* do not. Consequently, if the (properly) reflexive *se* is not the product of any morphological operation, why should the spurious *se*?

This conclusion paves the way to resolve the tension between descriptive and explanatory adequacy that *impoverishment*-based operations like the SpuSe Rule in Spanish raise. As far I know, the first scholar warning that *impoverishment* operations do not comply with explanatory adequacy was Noyer (2001):

- (38) Since a child is presented only with positive evidence and has the morphological means to express non-neutralized forms, what is to prevent the child from acquiring an adult grammar with non-neutralized (i.e. overregularized) forms? In other words, how could such neutralizations be learned? (Noyer 2001:777)

There are – in principle – two ways to resolve this conflict: (a) *impoverishment* operations take place in syntax and signal the failure of an independent syntactic operation like Agree (Béjar 2003, Preminger 2014) or (b) *impoverishment* operations are barred from grammar altogether. The latter hypothesis – being the strongest one – will lead to an overall simplification of grammar. The former hypothesis is aimed to resolve a redundancy of the system. If – as Béjar (2003) and Preminger (2014) have claimed – φ -agreement fails under well-defined circumstances, such a failure in φ -agreement must involve a feature deletion mechanism dealing with the unvalued φ -features of the Probe.³ The problem here is more general and – as a matter of fact – is not necessarily linked to a contingent failure of the syntactic operation Agree (Béjar 2003, Preminger 2014). If non-interpretable features are deleted after being checked (Chomsky 1995), it means that deletion takes place twice. Once in Syntax (i.e. *checking*) and then again in Morphology (i.e. *impoverishment*). In any

3. This feature-deletion mechanism is explicit in Béjar (2003), where unmatched φ -features in the φ -Probe are deleted under Match (Chomsky 2000). In Preminger (2009), a failure of φ -agreement leads to the φ -features of the φ -Probe to be spelt out as a default. In a nutshell, this feature-deletion mechanism will be an *impoverishment* operation in Béjar (2003), but a Rule of Referral in Preminger (2009). In any case, these two mechanisms overlap with morphological impoverishment and have the potential to subsume it.

case, we are dealing with a similar deletion operation taking place twice. It is worth wondering whether one of these deletion operations can subsume the other. I have claimed that the SpuSe Rule in Spanish cannot be analyzed as a post-syntactic rule because the dative clitic *le* and the spurious clitic *se* in Spanish are not syntactically equivalent. In light of this conclusion, it turns out more natural to subsume morphological impoverishment into a syntactic-based impoverishment. Unfortunately, space limitations prevent me from developing an alternative syntactic analysis based on this hypothesis.

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Givenness and the difference between *wh*-fronted and *wh*-in-situ questions in Spanish

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In the last fifteen years, the literature on *wh*-questions has tried to understand speakers' intuitions regarding the meaning differences between *wh*-in-situ (WIQs) and *wh*-fronted (WFQs) questions. The different proposals agree in that WIQs require *givenness*, but there is no consensus on what notion of givenness is at stake. In this paper I argue that in Castilian Spanish WIQs presuppose that the WIQ is embedded in a specific discourse: what is *given* then is the (hierarchical) discourse-structure in which the question is embedded. Spanish illustrates a possibility on the spectrum of variation, imposing very specific discourse-structural conditions to allow WIQs. From a broader theoretical perspective, the proposal made in this paper makes a contribution to the study of presupposition, since I argue that there are conventional linguistic devices that target discourse-structure.

1. Introduction

It is well known that some Romance languages have two strategies available for *wh*-question formation: the *wh*-word can be left in-situ (WIQ) or placed at the front (WFQ). This is illustrated below for French (1), Brazilian Portuguese (2) and (Castilian) Spanish (3) (examples are in a WFQ/WIQ sequence).¹

1. Notice that the English paraphrase is misleading. As we will see below there is a meaning difference between WIQs and WFQs in Castilian Spanish and the same has been argued for some dialects of French and Brazilian Portuguese.

- (1) *Qu'est-ce que vous faites ce soir?* / *Vous faites*
 what QUES you do this evening / you do
quoi ce soir?
 what this evening
 'What are you doing tonight?'²
- (2) *O que você está lendo?* / *Você (es)tá lendo o quê?*
 what you are reading / you are reading what
 'What are you reading?'
- (3) *¿Qué hacéis esta tarde?* / *¿Hacéis qué esta tarde?*
 what do.2PL this evening / do.2PL what this evening
 'What do you do this afternoon?'

Part of the literature on the contrast between WIQs and WFQs in Romance languages has focused on investigating the underlying syntax allowing both distributions of the *wh*-word (see Bayer & Cheng (2017) for an overview). Another line of research in the literature tries to understand whether there is a meaning difference between the different strategies available to ask otherwise very similar questions. I am concerned here with the second issue, and leave for future research an exploration of possible consequences for the syntax.

The proposal I offer in this paper is based on (Castilian) Spanish data and the claims are argued to hold for this language. I argue that WIQs in Spanish have very specific discourse conditions: a WIQ presupposes that there is an immediately preceding discourse utterance with assertoric force. The WIQ is a follow-up inquiry related to such discourse move (see Roberts 1996, among others, for the notion of discourse move). The larger agenda in this paper is thus concerned with understanding the discourse function of the various questions that are members of the *wh*-question family. In Biezma & Rawlins (2012, 2017) it is claimed that *wh*-questions (WFQs in particular) can introduce a (new) question under discussion (QUD) (while non-*wh*-questions offer information about what are possible answers to an (implicit) higher question). This paper addresses the question whether WFQs and WIQs differ on this respect. A second part of this larger agenda would be to understand how pragmatic and discourse-level constraints interact in the construction of syntactic structure, but this will be set aside here for the future.

At the end of this paper we will be left with a challenging open question, namely, whether this proposal also accounts for data in other languages, and, if it does not, why not. *Prima facie*, we will see that the proposal presented here seems to handle at least some of the data found in the literature regarding other Romance languages, but empirical work needs to be done to find out whether this is indeed the case and if not,

2. A reviewer points out that *Que faites-vous?*, featuring inversion, is also possible.

how different languages vary. At any rate, it is not unexpected to find variation across languages regarding the meaning differences between WIQs and WFQs. Romance languages, for example, seem to have evolved from having only one strategy to form *wh*-questions, namely *wh*-fronting and subject-verb inversion, to both *wh*-fronted with subject-verb inversion and *wh*-in-situ without subject-verb inversion.³ In fact, synchronically, we find variation in frequency regarding the different strategies (for example, WIQs are more frequent in Quebecois French than European French) and in felicity conditions (e.g. in Quebecois French the difference between WIQs and WFQs seems to be less sharp than in European French). Hopefully, differences between languages will be explained by evaluating and taking into account the overall strategies available to speakers to convey different meanings.

The remainder of the paper is organized as follows: in § 2 I review the different notions of *givenness* proposed in the literature to account for the contrast between WIQs and WFQs in French and Brazilian Portuguese. In § 3 I provide new data showing that in Castilian WIQs trigger a discourse-structure presupposition, i.e. they are felicitous if they are integrated in a discourse-structure with specific characteristics. In this sense, what is *given* is a specific (hierarchical) discourse-structure. This special presupposition is discussed in § 4. I conclude with open questions and the sketch of a research agenda to investigate how this hypothesis could also be at play in other languages.

2. The meaning of *wh*-in-situ questions

2.1 French

Discussing (1) above, Déprez et al. (2013) noted that in asking the WIQ, the speaker is taking for granted that the addressee plans on doing something that evening (or that if they do not already have plans, they are likely eager to make some). However, such assumptions are not necessary in order to utter the WFQ version. The idea of taking something for granted (as *given*) when uttering a WIQ was first mentioned in Coveney (1989). According to Coveney (4a) is fine but (4b) is anomalous in the context described.

- (4) The speaker asks her friend, who is looking in through a shop window:
- a. *Qu' est-ce que tu veux?* WFQ
 What is-it that you want
 'What do you want?'

3. In some languages such as Dolomitic Ladin WFQs are possible without subject-verb inversion (Georg Kaiser p.c.).

- b. *Tu veux quoi?*
 you want what
 ‘What do you want?’

WIQ

By uttering (4b) the speaker is “...strongly presupposing that [her friend] wanted something, whereas [her friend] had not given any indication of this.” (Chang 1997). This inspired proposals such as Chang (1997) and Cheng & Rooryck (2000), according to which, at least in some dialects of French, WIQs occur in discourse contexts characterized as *strongly presuppositional*. These contexts would exclude negative answers such as *rien/personne* (‘nothing’/‘no one’). However, Adli (2006); Hamlaoui (2009, 2010) and Mathieu (2009) have offered counterexamples in naturally occurring speech showing that such responses are in fact allowed,⁴ opening the door to debates regarding the different notions of *givenness* that may underlie the contrast between WIQs and WFQs. Recent proposals have claimed that WIQs are felicitous when the non-*wh* part of the question is not *new* but given à la Schwarzschild (1999); Wagner (2006) (see Hamlaoui 2009, 2010 as well as Déprez et al. 2013 for a variation on this approach). From this perspective, neither (truth-conditional) presuppositions nor obligatorily positive answers characterize the contexts for *wh*-in-situ. *Givenness* in these proposals does not require having been mentioned either. The notion of *givenness* at stake is one in which “[m]arking a constituent as given requires that an appropriate antecedent is either salient or can be constructed from material salient in the current discourse” (Wagner 2006: 6).⁵

2.2 Brazilian Portuguese

The difference between WIQs and WFQs has also been studied in Brazilian Portuguese.⁶ For example, examining corpus data, Pires & Taylor (2007) showed that the distribution of WIQs is more constrained than that of WFQs. For example, WIQs are found when the speaker is requesting “more specific information about something mentioned immediately prior”. (In Pires & Taylor 2007 ↑ marks raising intonation and ↓ falling intonation).

4. See also Déprez et al. (2013) for further disassociation of the bias towards positive answers and the question-meaning, realized by (an abstract) intonation (morpheme).

5. Notice that this notion of *givenness* is not in opposition to discourse-*new*.

6. It has been claimed that in European Portuguese WIQs have an *echo*-interpretation (see Ambar & Veloso 2001, Pires & Taylor 2007 among others), but it seems that further examination of the data may lead to the conclusion that differences between WIQs and WFQs in European Portuguese are similar to those argued for below in Brazilian Portuguese (thanks to Gabriela Matos p.c. for discussion on this point).

- (5) The employee in a bakery is giving the manager the daily report.

Employee: I made desserts.

Manager: *Você fez [que ↑tipo de sobremesa↓]?* WIQ
 ‘You made what kind of desserts?’

WIQs are also possible if “further questioning for new information is expected, as in legal questioning”:

- (6) Attorney: *Você pode dizer o que aconteceu no dia 1o de janeiro de 2005, às 4 da tarde.*

‘Tell me what happened on January 1st, 2005 at 4 pm.’

Defendant: *Eu estava dirigindo na Avenida dos Andradas.*

‘I was driving along Andrews Avenue.’

Attorney: *E você estava dirigindo em que↑ direção↓?* WIQ
 ‘And you were driving in which ↑ direction↓?’

Furthermore, Pires & Taylor (2007) show that WIQs are not possible in general out of the blue:

- (7) You approach a colleague at work and ask, out of the blue:

B: *#Você conhece quem em São Paulo?* WIQ
 ‘You know who in Sao Paolo?’

On the basis of these and other examples, Pires & Taylor (2007) conclude that WIQs “are special in that the set of possible answers to them is part of the CG. [...] [*W*]*h*-in-situ in English and Brazilian Portuguese (in the more restrictive dialect we are considering) is possible when the information being requested is expected (by the speaker) to be part of the [Common Ground]” (Pires & Taylor 2007: 205–206). This is a different notion of *givenness*, though it is not entirely clear how the answer to the question could be part of the common ground in the examples above given that the questioner does not know the answer and is actually requesting it.⁷ In any case, the data shows clearly that WIQs are special and have a more restricted distribution than WFQs, which are possible out of the blue without constraints.

2.3 Interim summary and a look ahead

What we have seen so far is that at least for some Romance dialects there seems to be a difference in meaning between WIQs and WFQs, with WIQs having a more restricted distribution. Attempts to account for this meaning difference have tried

7. It has been claimed that in rhetorical questions the answer to the question is already part of the CG (see Caponigro & Sprouse 2007), but this does not apply here since the questions in (5) and (6) do not have a rhetorical reading in those contexts.

to cash it out in terms of *givenness*, and one of the great debates in this literature concerns the correct notion of *givenness* needed to explain the data.

In what follows I offer a description of the data in Castilian Spanish and argue that, here too, the difference between WIQs and WFQs can, in a sense, be characterized in terms of *givenness*. However, contrary to earlier proposals, I argue that, in Spanish, the relevant notion of *givenness* must be structural. In my proposal, the difference between WIQs and WFQs is stated in terms of presuppositional constraints on discourse structure (where discourse is understood as a hierarchical order of moves with internal rules, e.g. Roberts 1996). I argue that WIQs differ from WFQs in that the former trigger the presupposition that the move is part of a discourse structure with specific characteristics.

3. WIQs in Spanish

It has been claimed that WIQs in Spanish differ from French and Portuguese in that the *wh*-word has to be placed at the very end of the clause (see Uribe- Etxebarria 2002). However, the following examples are possible in Castilian Spanish,⁸ showing that in this language too the *wh*-word can appear in any position where the corresponding fleshed-out constituent could appear:

- (8) A: *¿Cuándo compraste todos estos instrumentos musicales?*
 ‘When did you buy all this musical instruments?’ WFQ
 B: *Compré la trompeta el lunes.*
 ‘I bought the trumpet on Monday.’
 A: *¿(Y) compraste (cuándo) la guitarra (cuándo)?* WIQ
 and bought when the guitar when
 ‘And when did you buy the guitar?’

While I will show that WIQs in Spanish have a narrower distribution than WFQs, they are actually very much like WFQs in many other respects. Like WFQs, WIQs can have either an information-seeking reading or a rhetorical one, and also as with WFQs, WIQs with multiple *wh*-words are possible:

- (9) B is making a thorough record of what has been bought for the party, and where.
 A: *Susana compró las bebidas en el supermercado mientras que Antonio compró la comida en el bar de la esquina.*
 ‘Susana bought the drinks at the supermarket whereas Roberto bought the food at the bar at the corner’.

8. All examples have been checked in a pilot study with native speakers of Castilian Spanish.

- B: *¿Y Juan compró qué dónde?*
 and John bought what where
 ‘And where did John buy what?’ WIQ

In addition, adopting a framework in which the meaning of a question is the set of its possible answers (Hamblin 1973), the semantics of WIQs must be the same as the semantics of WFQs since the possible answers are the same.

Given the discussion so far, differences between WFQs and WIQs must lie in their felicity conditions. In what follows I provide evidence indicating that WIQs’ felicity conditions in Spanish have to do with discourse-structure.

3.1 The discourse distribution of WIQs in Spanish

It has been noted for a long time that there is a meaning-contrast between WIQs and WFQs in Spanish, and several proposals have been put forward to account for the differences. Let us consider the example in (10):

- (10) My father, my mother and myself went to the store to get some eggs, milk and coffee.
 A: My mother bought the eggs.
 B: *¿Y tu padre compró qué?* WIQ
 and your father bought what
 ‘And what did your father buy?’

Jiménez (1997) (see also Etxepare & Uribe-Etxebarria 2005 among others for slightly different but similar proposals) argued that the domain the *wh*-word ranges over is very restricted in WIQs: the speaker presupposes that the variable introduced by the *wh*-word finds a value within a restricted set (above: {eggs, milk, coffee}). However, this claim is not confirmed by the data. The WIQ in (11) is felicitous despite the fact that there is not obviously a restricted set in which the *wh*-variable must find its value:

- (11) A: *Ana y Susana fueron ayer de compras. Ana se compró una falda preciosa!*
 ‘Ana and Susana went shopping yesterday. Ana got herself an amazing skirt!’
 B: *¿Y Susana se compró qué?*
 and Susana CL.3.SG bought what
 ‘And what did Susana buy?’

WIQs in Spanish cannot be uttered out of the blue. This explains the infelicity of the WIQ in (12), in which the WFQ is fine (context adapted from Coveney 1995):

- (12) Three friends are sitting at the table after finishing brunch on a Sunday afternoon. After a long pause during which people simply ate, A asks (initiating a new conversation topic):

A: ¿Qué hacéis esta tarde? WFQ
 what do.2PL this afternoon
 ‘What are your plans for the afternoon?’

A': ?#¿Esta tarde hacéis qué? WIQ
 this afternoon do.2PL what
 ‘What are your plans for the afternoon?’

The WIQ in (12A') would be felicitous if it had been preceded by an utterance spelling out what the speaker him or herself was doing that afternoon:⁹

- (13) A': Esta tarde voy a visitar a mi abuela. ¿Y vosotros esta
 this afternoon go to visit to my grandma and you this
 tarde hacéis qué? WIQ
 afternoon do what
 ‘This afternoon I’m visiting my grandma. And you guys?, what are your plans?’

The speaker in (13) does not necessarily expect the addressees to (already) have made plans. The important difference with the unacceptable example A' in (12) is that in (13) the topic of afternoon plans has been already introduced.

WIQs cannot be out of the blue, but not just any antecedent will do. In (11), for example, the utterance of the WIQ *y Susana compró dónde?* (‘and where did Susana get something?’) would not be felicitous, even though *buying something* invokes *buying somewhere* and could be *given* in Wagner’s (2006) terms. A more complex case is presented in (14), where we can clearly see that a notion of *givenness* à la Wagner (2006) would not be enough: the WIQ about the book John bought in (14) is not acceptable, even though under Wagner’s characterization of *givenness* that John bought X is *given*.

- (14) A: *No te lo vas a creer, vi a Juan comprando un libro.*
 You won’t believe this, I just saw Juan buying a book!
 B: ¿Qué libro compró Juan? WFQ
 ‘What book did John buy?’
 B': #¿Juan compró qué libro? WIQ
 ‘What book did John buy?’

9. According to data in Pires & Taylor (2007), it seems that in Brazilian Portuguese the extra-linguistic context would be enough to make the WIQ felicitous.

However, if the WIQ is about what A had seen, which is the ongoing topic of conversation in (14), the WIQ is felicitous, and of course the WFQ is (as always) felicitous.

- (15) B'': ¿Qué libro viste comprar a Juan? WFQ
 'What book did John see Juan buying?'
 B''': ¿[Pero] Viste a Juan comprar qué libro? WIQ
 '(But) What book did you see John buy?'

The discussion so far leads us to the following informal characterization:

- (16) WIQs are *follow-up moves* (Informal 1, revised below)
 The utterance of a WIQ is felicitous when requesting further information based on the immediately preceding utterance with assertoric force, or when asking for more information to obtain a complete answer to the ongoing questioning/line of inquiry.¹⁰

In what follows I formalize this proposal using the Question Under Discussion (QUD) discourse model, in which discourse is understood as hierarchical order of moves (see Roberts 1996, among others).

3.2 WIQs as follow-up moves

The QUD model is an intentional model in which there are conversational goals, with participants developing strategies in order to achieve them. In this conception, discourse is a cooperative inquiry (Grice 1975; Stalnaker 1978; Lewis 1979, among others), where an inquiry is the investigation of alternatives, i.e. the comparison of different possible ways things might be in order to determine which reflects better the way things are. Questions are the linguistic counterpart of inquiries and they are used to pose a subject matter for inquiry, that is, a set of alternatives to investigate, the semantic meaning of interrogative sentences (the canonical means for posing a question, but not the only one). Questions are then the formal objects reflecting the interlocutor's goals. Once participants agree on a communal inquiry, they commit to solving it, and their utterances (discourse moves) either attempt

10. Notice that this proposal is further supported by the fact that WIQs in Spanish can *always* be preceded by *y* ('and') or *pero* ('but'), which are in this case discourse markers (see Asher & Lascarides 2003 among others) indicating that the question is integrated in a larger discourse structure, while this is not the case for all felicitous WFQs. Examples above where the WIQ is infelicitous would not improve by the presence of these markers. Research on the exact meaning of these markers and their distribution, in particular in their licensing in WIQs/WFQs as well as non-*wh*-questions, is left for the future.

to resolve some QUD (*payoff* moves) or posit a question that could be answered by discourse participants (*set-up* moves) and would contribute to solving the main question (the *Big Question*). The assumption is that “All that is given at the sentential level, conventionally, are certain sorts of presuppositions about the place and function of the utterance in the information structure of the discourse in which it occurs” (Roberts 1996: 2).

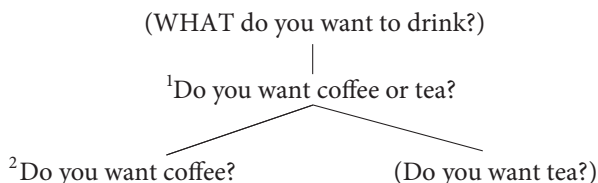
Hierarchical discourse models of this sort are designed to predict well-formedness in conversational exchanges and allow us to make predictions regarding question-answer sequences by assuming notions of relevance and congruence. The hierarchical structure of the dialogue in (17) is illustrated with the D(discourse)-tree in (18) (superscripts indicate the order of spelled-out moves while moves between parenthesis are implicit moves).

(17) A¹: I can offer you something to drink; do you want coffee or tea?

B: Hmm! I don't know.

A²: Do you want coffee?

(18) (WHAT do you want to drink?)



Following Biezma & Rawlins (2012, 2017), I take it that only constituent questions can introduce new QUDs (*what do you want to drink?* in (18)) while non-*wh* questions are tools to discover some or all of the alternatives that are possible answers to a QUD: they are strategies to answer the QUD, i.e. sub-questions that help find an answer to the QUD. Linguistic cues and discourse constraints such as question/answer congruence based on focus structure and relevance allow us to identify the QUD and predict discourse well-formedness (for the sake of simplicity, I set aside focus marking in what follows).

(19) **Relevance:** A move *M* is *Relevant* to a question *q* iff *M* either introduces an (at least) partial answer to *q* in context c_M (*M* is an assertion) or is part of a strategy to answer *q* (*M* is a question).

(20) **Answerhood:** (Assumption: Following Hamblin 1973, the semantic meaning of a question is the set of its possible answers.)

- a. A partial answer to a question *q* is a proposition which contextually entails the evaluation – either true or false – of at least one possible answer to *q*.
- b. A complete answer is a proposition that contextually entails an evaluation for each element in its semantic meaning.

The following algorithm (from Biezma & Rawlins 2017) identifies the closest dominating constituent question to serve as QUD. QUDs are functions from moves to question-denotations, i.e. $QUD(M)$ are semantically questions:

- (21) QUD percolation Where M is a move, a tree fragment containing M is licensed only if:
- a. (i) If M is an overt move, $Content(M) = \llbracket \alpha_M \rrbracket^{c_M}$, where α_M is the linguistic form uttered in move M and c_M is the context of utterance of M (a set of live worlds at the time of utterance, $c_M \subseteq W$).
 - (ii) Otherwise, $Content(M) \subseteq P(W)$. (\approx implicit moves are questions).
 - b. $Content(M)$ is relevant to $QUD(M')$ for every dominating move M' .
 - c. $QUD(M) = Content(M')$, where M' is the move immediately dominating M (if it exists and is not an assertion).
 - d. $QUD(M) = \emptyset$ (if there is no immediately dominating move; M is the first move in the discourse structure).

In this proposal, constituent questions can either introduce a new QUD or a relevant sub-question. Assertions introduce at least partial answers. Any other move preserves the QUD from their dominating move. With this machinery in hand we can revisit our proposal for WIQS as *follow-up* moves, cf. (22).

- (22) WIQs are *follow-up* moves: (Informal 2, to be revised)
 A M_{WIQ} (the utterance of a WIQ) is part of a strategy to obtain a complete answer to an ongoing QUD to which the immediately preceding payoff move is a partial answer, or to request undisclosed information about the immediately preceding payoff move.

In order to properly cash out this notion we need some more details regarding the semantics of questions. I adopt a Hamblin (1973) approach to questions in which the denotations of interrogative clauses are sets of propositions, each corresponding to a possible answer to the question, cf. (23).

- (23) Let M be the move of uttering a declarative clause and e a variable ranging over eventualities (I will informally use ‘ P ’ as a place-holder for what would intuitively be recovered as the main event predicate in the clause, setting aside complex cases for future research): $\llbracket M \rrbracket = \{\lambda w. \exists e. P(e)(w)\}$

We can then informally characterize the associated argument-based questions and adjunct-based questions as in (24) (where ‘ Q ’ stands in for an adjunct predicate).

- (24) Let M_q be the move of uttering a *wh*-interrogative clause (either in-situ or fronted), and y any type:

Argument question:

$$\llbracket M_q \rrbracket = \{p_{\langle s,t \rangle} \mid \exists x \in D_{\langle y \rangle}; p = \lambda w. \exists e P(x)(e)(w)\}$$

Adjunct question:

$$\llbracket M_q \rrbracket = \{p_{\langle s,t \rangle} \mid \exists Q \in D_{\langle y \rangle}; p = \lambda w. \exists e (P(e)(w) \& Q(e)(w))\}$$

Felicity conditions for WIQs will be stated in terms of *follow-up questions* as in (25).

- (25) Let M_{WIQ} be the move made by the utterance of a WIQ, and M_{WFQ} its WFQ parallel.

a. $\llbracket M_{WFQ} \rrbracket = \llbracket M_{WIQ} \rrbracket$

b. Felicity conditions: M_{WIQ} is felicitous iff M_{WIQ} is a *follow-up question*.

- (26) **Follow-up questions:** Let $QUD(M_1)$ be a question in a discourse tree dominating a payoff discourse move M_1 (where QUDs can remain implicit):

M_{FU} is a follow-up question iff M_1 immediately precedes (the utterance of) M_{FU} ,

M_1 is an answer to $QUD(M_1)$, and either

- a. There is a QUD immediately dominating $QUD(M_1)$,

i.e. a Higher QUD dominating M_1 ,

$$QUD(QUD(M_1)) = H\text{-}QUD(M_1), \text{ s.t. } \llbracket M_{FU} \rrbracket \in H\text{-}QUD(M_1)$$

Paraphrase: M_{FU} is a question that is part of a strategy to answer the closest yet un-answered QUD.

or

- b. Given $\llbracket M_1 \rrbracket = \{\lambda w. \exists e P(e)(w)\}$,¹¹

i. $\llbracket \ulcorner M_1 \rrbracket \rrbracket = \lambda w. \exists e P(x)(e)(w)$,

$$\llbracket M_{FU} \rrbracket = \{p \mid \exists x \in D_{\langle y \rangle}; p = \llbracket \ulcorner M_1 \rrbracket \rrbracket = \llbracket ?\ulcorner M_1 \rrbracket \rrbracket$$

or

ii. $\llbracket \ulcorner M_1 \rrbracket \rrbracket = \lambda w. \exists e (P(e)(w) \& Q(e)(w))$,

$$\llbracket M_{FU} \rrbracket = \{p \mid \exists Q \in D_{\langle y \rangle}; p = \llbracket \ulcorner M_1 \rrbracket \rrbracket\} = \llbracket ?\ulcorner M_1 \rrbracket \rrbracket$$

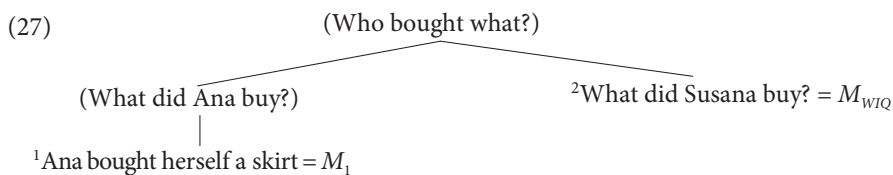
Paraphrase: M_{FU} is a question requesting further (argument or adjunct) information regarding the event described in M_1 .¹²

The proposal is that WIQs are follow-up questions as defined in (26). Let us see now how this proposal can handle the data we have seen above. Obviously the first prediction is that WIQs are not possible out of the blue, since there is no immediately

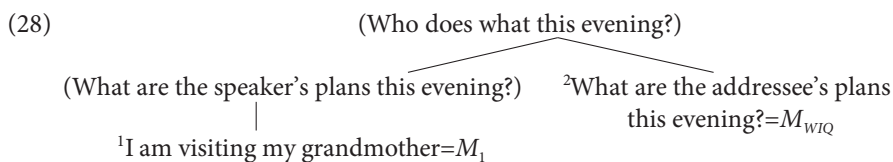
11. $\llbracket \ulcorner M_1 \rrbracket \rrbracket$ is an auxiliary definition.

12. It remains for future work to investigate whether and, if so, how, WIQs are related to *sprouting*, a subtype of sluicing in which the remnant of ellipsis has no overt correlate in the antecedent clause, e.g. *She applied for the position but nobody could figure out why* (see Chung et al. 2011 for an overview of various approaches to the phenomena) and whether variation with respect to WIQs across languages is related to variation on language-specific constraints on sprouting.

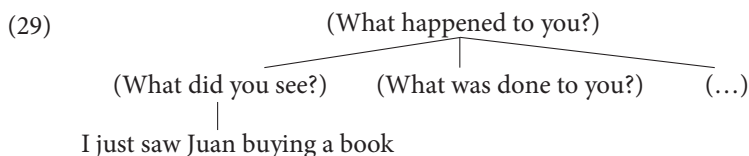
dominating move with assertoric force (e.g. (12)). In the case of (11), B's utterance signals that the discourse has the following structure:



The WIQ is felicitous because M_{WIQ} is part of a strategy to answer the closest QUD dominating M_1 that has not been completely answered ($\llbracket M_{WIQ} \rrbracket \in H\text{-}QUD(M_1)$). M_1 answers the (implicit) question *what did Ana buy?*, and the follow-up is a question that contributes to obtaining a complete answer to the (immediately) higher question *who bought what?*, namely, *what did Susana buy?* (the in-situ word order merely signals that the inquiry is already ongoing). (28) represents the same discourse structure that the WIQ in (13) signals:



The utterance of the M_{WIQ} is felicitous, and it is predicted to be so, since the discourse model can easily generate a discourse structure like (28), reflecting speakers' intuitions regarding (13). Let us now consider the D-Tree in (29), corresponding to the dialogue in (14) before the WIQ is uttered.



(30) Deriving infelicity:

- a. $\llbracket M_{WIQ} \rrbracket = \{p \mid \exists x \in D_{\langle y \rangle}; p = \lambda w. \exists e. \text{Juan buy}(x)(e)(w) \ \& \ \text{book}(x)\}$
 $\llbracket \text{What book did Juan buy?} \rrbracket$
- b. $H\text{-}QUD(M_1) = \{\llbracket \text{What did you see?} \rrbracket, \llbracket \text{What was done to you?} \rrbracket, \dots\}$
Hence $\llbracket M_{WIQ} \rrbracket \notin H\text{-}QUD(M_1)$
- c. $\llbracket M_1 \rrbracket = \{\lambda w. \exists e \exists e' \text{A_saw}(\text{Juan_buy_book}(e'))(e)\}$
 $\llbracket ?^r M_1 \rrbracket = \{p \mid \exists x \in D_{\langle y \rangle}; p = \lambda w. \exists e \exists e' \text{A_saw}(\text{Juan_buy}(x)(e'))(e)\}$
Hence $\llbracket M_{WIQ} \rrbracket \neq \llbracket ?^r M_1 \rrbracket$

The WIQ in (14) is infelicitous because it is not a *good* follow-up question: it does not follow up on a yet unanswered question (the dominating yet- unanswered QUD

at the time of utterance of M_1 is about what happened to A, not about what Juan did or bought) and the WIQ is not about the main event that M_1 predicates about, i.e. what A saw (the WIQ is not an adjunct question of M_1 either). We predict that a WIQ about what A *saw*, B''' in (15), should be felicitous, and this prediction is indeed borne out, (see (31)–(32)).

- (31) A: You won't believe this, I just saw Juan buying a book!
 B: ¿Viste a Juan comprar qué libro? M_{WIQ}
 'What book did you see John buy?'
- (32) $\llbracket M_{WIQ} \rrbracket =$
 $\{p \mid \exists x \in D_{\langle y \rangle}; \lambda w. \exists e. \exists e'. \exists x. A_saw (Juan_buy(x)(e'))(e) \ \& \ book(x)\} =$
 $\{A \text{ saw Juan buying Emma; A saw Juan buying 1984 } \dots\}$
 $\llbracket ?^r M_1 \rrbracket =$
 $\{p \mid \exists x \in D_{\langle y \rangle}; p = \lambda w. \exists e \exists e' A_saw (Juan_buy(x)(e'))(e) \ \& \ book(x)\}$
 Hence $\llbracket M_{WIQ} \rrbracket = \llbracket ?^r M_1 \rrbracket$

In sum, WIQs signal/trigger a discourse-structure presupposition: WIQs presuppose that there has been a previous discourse move of a certain type (I further develop this idea in Section 4). This property explains the difference in discourse function with respect to WFQs: contrary to WFQs, WIQs cannot introduce a new QUD and explicitly signal that they are embedded in an ongoing discourse with specific characteristics.¹³

This proposal appears, in principle, to be able to handle much of the data in French and Brazilian Portuguese that was presented in § 2, but further research would be needed to have a complete understanding of the data in those languages and to evaluate whether this proposal fully applies to them. At any rate, it would not be surprising to find differences across languages, with (Castilian) Spanish presenting one possibility in the spectrum.

13. The current theory accounts for the licensing of WIQs and appeals to discourse (structural) constraints. Notice, however, that a WFQ is always possible when a WIQ is licensed. The reasons as to why a speaker decides to conventionally indicate, by uttering a WIQ, that her/his question requests further (yet undisclosed) relevant information in the ongoing discourse may vary: WIQs can be used to naively request further information or, e.g. to object to inferences triggered by a previous claim by requesting this information (B''' in (15) may use the WIQ to raise his/her suspicions that Juan does not consume *prestigious* literature). At any rate, just as with other constructions, additional meanings are a byproduct of the conventional meaning of WIQs together with other indicators of the speaker's attitude, such as prosody, and the interaction of the utterance with the particular context (including background information).

3.3 A brief note on echo-questions

Before discussing the status of discourse-structure presuppositions, I will say a brief word about *echo*-questions, often related to WIQs in the literature. According to the proposal made here, echo-questions would not be an instance of WIQs as follow-up moves, since there are cases of echo questions that follow a question, not an assertion (as required for WIQs in (26)).

- (33) A: ¿Qué traje María de la fiesta? WFQ
 what brought María of the party
 ‘What did María bring from the party?’
 B: ¿Qué traje María de dónde? Echo Question
 what brought María of where
 ‘What did María bring from where?’

In a way, it is not surprising that echo questions are not what we are calling WIQs here. Echo questions require very specific discourse and intonational constraints, i.e. they require parallelism with the previous utterance as well as a particular intonational contour in the *wh*-word, not found in regular WIQs. On the semantic side, they do not introduce the so called existential presupposition triggered by *wh*-questions¹⁴ and their meaning contains propositions expressing the (potential) content of what the speaker said (asked because either s/he did not hear it or could not believe it) or was about to say but did not (because s/he changed her/his mind or got interrupted).¹⁵ One could in principle speculate that a language that syntactically allows *wh*-words to remain in situ also allows echo-questions like (33), but their semantics is not the same. Echo questions resemble cases of *expression focus*.¹⁶

14. Notice that this so called *existential presupposition* in questions is an entailment of the disjunction of the possible answers (assuming that the semantics of a question is the set of its possible answers) and not a speaker’s presupposition in the Stalnakerian sense (see Stalnaker 2014: 74, footnote 23, for discussion).

15. For example, for (33), the meaning of the echo questions is the set containing the proposition that A asked what María brought from the party, that A asked what María brought from her house etc.

16. Krifka (2007) provides the following definition for *expression focus*:

- (i) A property F of an expression α is a focus property iff F signals
- The alternatives of (part of the expression) α or Expression focus
 - alternatives of the denotation of (parts of) α are relevant for the interpretation of α . Denotation focus

The utterance *They live in [BerLIN]F (not BERlin)* in response to *They live in BERlin* illustrates an instance of expression focus.

4. Discourse-structure presupposition

In the sections above I have shown that by uttering a WIQ the speaker presupposes that there has been a previous utterance, i.e. a manifest event of the speech-act kind, with assertoric force of a certain type.¹⁷ In this sense, WIQs are presupposition triggers, that is, the use of a WIQs triggers the presupposition that there is discourse structure of a certain kind (a payoff move) immediately dominating it. This aligns strictly with Stalnaker's idea of speakers' presuppositions according to which "[t]o say that a certain expression "triggers" a presupposition ϕ is to say something like this: the data suggest that the expression is normally inappropriate or infelicitous when used in contexts in which the speaker is not presupposing (taking it to be common ground) that ϕ ." (Stalnaker 2014:7) The notion of a presupposition trigger, in this characterization, is a descriptive notion used to characterize some data that needs to be explained, and not a concept in any theory used to explain the data, allowing for variety in the phenomena. WIQs are then questions that trigger a discourse-structure presupposition and are what Simons (2005) called *dedicated presupposition triggers*: the sole difference between WIQs and WFQs is that WIQs trigger a discourse-structure presupposition.

As presupposition triggers, WIQs are special. They differ from other (traditionally considered) presupposition triggers with respect to what they presuppose. They presuppose discourse structure, i.e. that there has been a manifest event of the speech act kind with assertoric force, and these manifest events cannot be accommodated (accounting for the difference in behaviour between this type of trigger and those that can be accommodated). What is presupposed is that there has been an assertion of a certain kind immediately preceding the WIQ. Thus, such hierarchical information needs to be considered as part of the Stalnakerian CG, entailing that the information in the CG needs to be hierarchically structured (see Roberts 1996), i.e. the CG does not store information in a 'flat' fashion: the CG does not contain just a record of what has been said, it also contains information regarding the shape of the exchange in which it was said.

17. "A manifest event is something that happens in the environment of the relevant parties that is obviously evident to all. A goat walks into the room, or all of the lights suddenly go out. In such a case, it immediately becomes common knowledge that the event has happened that there is a goat in the room, or that the lights have gone out. Speech acts will themselves be manifest events (at least when all goes well): when one produces an utterance, it becomes common ground that it has been produced, and when the semantics of the language is common ground, it will be manifest that an utterance with a certain meaning has been produced" (Stalnaker 2014:47).

5. Looking forward: WIQs in other languages

Given the specific discourse conditions for WIQs in Spanish, WIQs are bound to be less frequent than WFQs, whose distribution is not constrained in the same way and can be uttered in any circumstances in which their *wh*-question-meaning is felicitous (via relevance). Full comparisons between the meaning and distribution of Spanish WIQs and WIQs in other languages need to be made on the basis of data other than general text-corpora, which may not contain utterances in the required discourse-context. Investigations based on corpora built experimentally via elicitation tasks capitalizing in specific discourse conditions, as well as hypothesis testing where negative evidence can be found to support the proposal made, are crucial for such comparison. This line of research is left open for future work.

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The building blocks of Catalan ‘at least’

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This paper deals with the meaning of a Catalan expression that is partially analogous to English *at least*, namely *si més no* (literally ‘if more not’). We aim to derive its concessive and epistemic readings, and explain its lack of complete overlap with *at least* by appealing to *si més no*’s building blocks: a conditional, an additive morpheme, and negation. Specifically, we argue that ‘*si més no* φ ’ is a biscuit conditional whose consequent contains a VERUM operator. It conveys that if it is not true that there is a ψ such that $\psi + \varphi$ holds, there is a relevant assertion that it is indeed true that φ . The epistemic and concessive readings are pragmatically derived by appealing to the relevance of the assertion of the consequent under the circumstances described by the antecedent.

1. Introduction

The goal of this paper is to provide an analysis of an apparent counterpart of English *at least* in Catalan, namely the expression *si més no* [SMN henceforth], illustrated in (1).¹

- (1) *Si més no, el llibre és entretingut.*
SMN the book is entertaining.
‘At least, the book is entertaining.’

The motivation for this study is twofold. For one, SMN is a complex expression including rich building blocks, specifically, conditional *si* (‘if’), additive and comparative morpheme *més* (‘plus, more’) and negation *no* (‘no/not’). We thus aim to gain a better understanding of SMN and to derive its meaning by examining the combination of the meanings of *si*, *més* and *no*. Second, this analysis can provide us with some insights about a more general semantic theory of *at least*.

1. For the sake of brevity, from now on, we omit glosses.

2. Data: Semantic properties of SMN

SMN is ambiguous between an epistemic (EPI) and a concessive (CON) reading, similarly to English *at least* (AL henceforth) (Nakanishi & Rullmann 2009). In the EPI reading of Example (2), the speaker is not certain about what medal Mary won. She might have won silver or maybe gold. In the CON reading of (2), the speaker knows that Mary has won silver, she knows this is not the perfect outcome – this would have been the gold medal – but she still identifies silver as a satisfactory outcome.

- (2) Mary at least won a silver medal.

The same two readings can be identified in (1). In the EPI interpretation, the speaker is not sure whether the book is something more than entertaining; it may be interesting or fascinating, as well. In the CON interpretation, the speaker knows that the book is only entertaining, and although it is not the perfect outcome, it is still deemed satisfactory.

There is an important difference between epistemic AL and SMN. Unlike AL, SMN is infelicitous with lexically-induced scales in its EPI reading. That is, (3a) can only be interpreted as conveying that Joan won 7 medals, and (3b) only has the reading in which the speaker is certain that Mary won the silver medal and nothing more. In both sentences, the speaker conveys that these outcomes fall short of the intended goal.

- (3) a. *En Joan va guanyar si més no 7 medalles.*
 ‘John won SMN 7 medals.’
 b. *La Maria ha guanyat si més no la medalla de plata.*
 ‘Mary won SMN the silver medal.’

One important property of CON readings is that, unlike what happens in EPI readings, the target proposition is entailed. That is, (3b) entails that Mary won the silver medal. Another difference is that the CON reading is compatible with the falsehood of higher values (see (4)), whereas this is not the case for the EPI reading.² Finally, the CON reading triggers three inferences which are missing from the EPI reading. First, it conveys that higher values are preferred, and so (5) is odd because it suggests that firing more employees would have been more satisfactory. Second, it conveys that there is an alternative worse than the target proposition: (6) conveys that although the current state of affairs is not the preferred one, it is not the worst one. Third, it triggers a so-called ‘settle for less’ inference: it conveys that the target

2. In all our examples, we translate *si més no* as SMN, except in Examples (4)–(7), in which concessive *at least* and *si més no* carry the same inferences.

proposition falls short of an intended goal. Thus, (7) is odd since it suggests that winning eight medals is not a good result.

- (4) *La Maria no ha guanyat l'or, però si més no ha guanyat la plata.*
‘Mary didn’t win gold, but she won at least silver.’
- (5) *Si més no, la Maria ha despatxat cinc treballadors.*
‘At least Mary fired five employees.’
- (6) *Està núvol, però, si més no, no plou.*
‘It’s cloudy, but at least it’s not raining.’
- (7) *Si més no, Phelps va guanyar vuit medalles d'or.*
‘At least, Phelps won eight gold medals.’

To finish this section, we will present some naturally-occurring examples for the two interpretations. Let’s start first with Example (8), in which SMN appears at the beginning of the clause³ and has an EPI interpretation. The speaker asserts that the situation under discussion is at least evidence for certain disagreements and she is unsure of whether another alternative (i.e., whether the situation indicates the political end of the head of state) holds or not.

- (8) *Aquesta situació sol ser l'escenari que mina el cap de l'Estat i prepara el seu final polític, o si més no és la prova de les dissensions que existeixen entre el poder polític i el militar.*
‘This situation usually is a scenario that undermines the Head of State and prepares his political end, or SMN it is the proof of the disagreements that exist between the political and military powers.’

In contrast, Example (9) shows an example of CON SMN. Here, the stronger alternative is known to be false: the agreement does not do more than establish a minimal regulation. Moreover, it is conveyed that the stronger alternative is preferred and that the asserted alternative is better than some other weaker alternative.

- (9) *El Comitè d'Empresa s'ha hagut de conformar amb la signatura d'un acord que, si més no, estableix una mínima regulació del procés de contractació.*
‘The works council had to settle for the signature of an agreement that, SMN, establishes a minimal regulation of the hiring process.’

3. SMN can appear in several positions in the sentence. It very often appears clause-initially and clause-finally, but it may also occur immediately preceding the constituent it is associated with through focus.

3. Previous proposals on *at least*

Nakanishi & Rullmann (2009) analyze AL and propose one denotation for each of its readings. Building on Krifka (1999), Geurts & Nouwen (2007), and Büring (2008), Nakanishi and Rullmann propose the denotation in (10) for epistemic AL, where p is intended as the prejacent (i.e., the clause that is the argument of AL). Epistemic AL has a truth-conditional meaning whereby there may be some proposition q that is stronger than the target proposition p that is true. In addition, there is a conventional implicature according to which it is epistemically possible that some higher proposition on the scale is true.

- (10) a. Truth-conditionally: $\exists q \in C [q \geq p \wedge q(w) = 1]$
 b. Conventional implicature: $\exists w' [\text{Epist}(w, w') \wedge \exists q \in C [q > p \wedge q(w') = 1]]$

In contrast, Nakanishi & Rullmann claim that, while concessive AL is semantically vacuous (11a), it comes with a number of non-truth-conditional inferences (see (11b)).

- (11) a. Truth-conditionally: $p(w) = 1$
 b. Conventionally implicated:
 i. $\forall r, r' \in C [r' > r \leftrightarrow r'$ is preferred to $r]$
 (Scalar ranking reflects a preference ranking)
 ii. $\exists q \in C [q > p]$ (There is a q that ranks higher than p)
 iii. $\exists q \in C [q < p]$ (There is a q that ranks lower than p)

Our assessment of Nakanishi & Rullmann's view is that it is capable of pinning down the two readings of AL, which had not been captured before. However, this comes at a cost; namely they propose two different and unrelated entries for the same lexical item AL.

Biezma (2013) is a more recent analysis whose aim is precisely to address this drawback. Biezma's analysis builds on Büring's (2008) claim that ignorance is a scalar implicature associated with disjunction, and relies on the fact that AL is a focus sensitive operator and is, therefore, expected to trigger alternatives to the target proposition. In Example (12), for instance, focus alternatives to *Alice*, which is not a scalar item by itself, are entertained. Crucially, depending on the context, we generate a scale with alternatives to *Alice* such that he might know as well some of the alternatives. Biezma's proposal is that context determines whether an epistemic or a concessive reading obtains. That is, there is only one AL, whose denotation is shown in (13).

- (12) He knows at least [Alice]_F

- (13) Let α be a proposition, and $[\alpha]_{A,i}$ the set of alternatives of α ordered according to \leq_i , where \leq_i is a contextually salient order of alternatives and $\forall \gamma \in [\alpha], \gamma \in \text{QuD}$.
- $$[[\textit{at least } \alpha]] = \lambda w. \exists \beta, \gamma \in [\alpha]_{A,i} \text{ such that } \gamma <_i \alpha <_i \beta$$
- $$\wedge [\alpha(w) \vee \beta(w)] \wedge \forall \mu \in [\alpha]_{A,i}, \mu <_i \alpha, [\neg \mu(w) \vee \alpha \text{ entails } \mu]$$

In prose (13) states that AL merely indicates that the prejacent is considered within a scale in which there are stronger alternatives (which may or may not be true given what we know) and weaker alternatives. Alternatives that are ranked lower on the scale are either false or else entailed by the prejacent (in the case of entailment scales). The different alternatives in the scale and the way they are ordered need not be lexically generated but can also be contextually provided. Specifically, if we take the goal of the utterance into consideration, and hence the speaker’s attempt to address the (immediate) Question under Discussion (QUD), then we do not need any additional machinery to generate the relevant alternatives to α . Whenever it is the case that $\neg\beta(w)$ (stronger alternatives are false) and the scale is valorative, then CON AL obtains. Since the higher values are known to be false, then the upper bound implicature (i.e., the exact reading) can be easily generated. Whenever the speaker is not clear whether $\alpha(w)$ or $\beta(w)$ holds, then Büring’s disjunction-based account for EPI AL explains the interpretive outcome.

4. Analysis

Our analysis builds on the previous literature. From Nakanishi & Rullmann we take the properties of the two readings of AL. From Biezma, we take the idea that the two readings can be derived pragmatically. We adopt her insight and apply it to SMN with the proviso that SMN is not AL’s exact counterpart. Instead of insisting in a parallelism between SMN and AL, we will concentrate here on the building blocks of SMN (*if more not*).

4.1 A (biscuit) conditional

Even though SMN is a lexicalized expression (pronounced as a single word), our aim is to derive its two readings from its original building blocks. This means generating the desired output out of a conditional structure. Specifically, the *if*-clause will contain an additive expression and negation, and the consequent will correspond to the prejacent. Let us begin with an example that can have both EPI and CON readings, (14).

(14) *Si més no, el castell és curiós.*

‘SMN the castle is curious.’

EPI: The castle is at least curious.

CON: At least, the castle is curious.

Our claim is that we can carve out a conditional construction out of SMN that yields the two readings found in each specific context. The paraphrase we propose for (14) is the one in (15).

(15) If the castle is **not** something **more**, it is curious.

Note that the antecedent includes *if not more*; the consequent includes *verum focus* on *is*, which has been characterized by Höhle (1992) as expressing that the proposition it embeds is indeed true/the case. So, if the castle is not something more than what it actually is (i.e., just curious), it is nevertheless true that the castle is curious.

This is not a regular hypothetical conditional. In classic analyses, such as Stalnaker (1975), this would amount to stating that the consequent is true only in the worlds maximally similar to the actual world in which the antecedent is true. This does not seem right, since the truth conditions for (15) cannot be that the castle is curious only in those worlds in which the castle is curious and nothing more. Rather, we posit that the strategy to make sense out of (15) would be similar to what is proposed for so-called *biscuit conditionals*, such as the ones in (16) (DeRose & Grandy 1999, Siegel 2006).

- (16) a. There are biscuits on the sideboard if you want them.
 b. If you are hungry, there is pizza in the fridge.

Here, again, (16a) is not intended to describe a situation in which the biscuits are in the sideboard in those worlds in which you want them (and if you don't want them, they are elsewhere). Rather – and we assume here Siegel's (2006) proposal for simplicity – these conditional constructions are treated as conditional assertions, further refined as potential literal acts. In Siegel's terms, in (17) the existence of a relevant assertion is dependent on the content of the antecedent.

- (17) If you're hungry, there is a (relevant/salient) assertion that there's pizza in the fridge.

Likewise, our claim is that we can make sense out of (15) by assuming that the assertion that the castle is curious becomes relevant in those worlds in which the castle is nothing more than curious. More generally, we propose the schematic paraphrase for SMN in (18). That is, in those circumstances where there is no ψ that can be added to ϕ ,⁴ it is relevant to make the assertion that ϕ is the case.

4. The antecedent of the conditional is motivated by *si* 'if', negation, by the occurrence of *no* 'no, not', and the addition (+) corresponds to the contribution of *més* 'more, plus'.

- (18) If not $\psi + \varphi$, there is a (salient/relevant) assertion that VERUM φ .

This, in other words, characterizes a situation in which it is relevant that the speaker expresses that it is indeed true that φ holds in those worlds where a stronger proposition $\psi + \varphi$ happens to be false. Interestingly, as is the case for most biscuit conditionals (but see Siegel for some exceptions), the consequent is entailed, because its truth does not directly depend on the truth of the content of the antecedent. Hence, the consequent of biscuit conditionals is usually treated as a plain assertion. This can be easily reconciled with the fact that SMN does not seem to modify the truth conditions of the proposition it precedes in any way.

We take this paraphrase as the first step towards capturing the two readings of SMN and their conditions of appearance. Starting from this biscuit conditional, we derive EPI and CON through the semantics of VERUM, information structure, the inferences that we can draw from *if*-clauses, and the maxim of Relevance. We tackle each of these factors in turn.

4.2 VERUM and contrast

For the sake of brevity, here we rely on Höhle’s paraphrase for VERUM as “is indeed true/the case”.⁵ VERUM encodes a manipulation of the epistemic state of the speaker to the effect that it expresses an overwhelming certainty that φ is the case.

VERUM is realized in different ways across languages. In our paraphrase, we assume it is realized as contrastive stress on the auxiliary verb, as in so-called *verum focus*.⁶ In what follows, we aim to show that VERUM bears contrastive topic (CT), which makes explicit what kind of QUD an SMN construction is addressing.

Following Büring (2003), we take CT-marking, like the one in (19a), as indicating that the proposition denoted by the sentence is addressing a set of questions: this set is created by first replacing the focus by its alternatives (19b) and, next, replacing the CT by its alternatives (19c). A CT-marked utterance indicates a strategy to answer the QUD: i.e., the question in (19c) is answered proceeding by people (and not by food).

- (19) a. FRED_{CT} ate the BEANS_F.
 b. What did Fred eat? = {‘Did Fred eat the beans?’, ‘Did Fred eat pasta?’, ‘Did Fred eat fruit?’, ...}

5. But for a fully-explicit analysis, see e.g. Romero & Han’s (2004) denotation, which turns the proposition it embeds as the strong belief of the subject that this proposition should become part of the Common Ground.

6. In Catalan and Spanish, VERUM is often realized as *sí (que) φ* .

- c. Who ate what? = {'What did Fred eat?', 'What did Peter eat?', 'What did Pia eat?', ...}

Likewise, going back to the paraphrase in (18), we argue that VERUM bears CT and there is a constituent within φ bearing the main focus. In Example (15), the element under focus is *curious*. Since VERUM raises the question of whether the proposition is true or false, we follow Krifka (1999) in assuming that a VERUM-marked sentence addresses a yes-no question of the form “is it the case that p ?”. Putting the pieces together, we represent the speaker’s strategy as the following multiple question:

- (20) a. Is it the case that the castle is WHAT? = {'Is it the case that the castle is curious?', 'Is it the case that the castle is curious and impressive?', ...}
 b. Is it not the case that the castle is WHAT? = {'Is it not the case that the castle is curious?', 'Is it not the case that the castle is curious and impressive?', ...}

Importantly, in our SMN scenario, VERUM contrasts with negation in the *if*-clause, such that both propositions address the same multiple question. While the antecedent is an answer to (20b), the consequent is an answer to (20a). It is not the case that the castle is curious and something else (e.g. impressive), and it is the case that the castle is curious. So, there are two parameters in which antecedent and consequent contrast: on the value of VERUM (it is vs. it is not the case) and on the value of the focused constituent (something more than curious vs. just curious).

Before turning to the next subsection, let us recall that even though antecedent and consequent stand in a contrastive relation, they form part of a conditional construction whereby the relevance of the assertion of the consequent depends on the truth of the antecedent. We turn now to further effects of treating the content of a proposition as a conditional antecedent.

4.3 Speaker ignorance

It has long been known (at least since Gazdar 1979) that the antecedent of an indicative conditional gives rise to a defeasible ignorance inference, according to which the speaker is not certain whether p is the case, when p is placed under *if*. In our case, this is a desirable outcome, since we can thus derive from here that EPI or CON will obtain depending on whether we take the speaker to be ignorant about the content of the antecedent (i.e., the negation of the stronger proposition $\psi + \varphi$) or not. Let us go step by step.

Returning to (15), without a richer context, it is not clear whether the speaker agrees that the castle is not something more than just curious or whether she is

ignorant about it. In the first case, there is no inference of speaker ignorance, whereas in the second case, ignorance does arise. These two options are summarized in (21).

- (21) For any ψ that could be added to φ ,
- a. The speaker agrees with the truth of the antecedent (i.e., she knows that $\varphi + \psi$ does not hold).
 - b. The speaker does not know whether the antecedent is true (i.e., she does not rule out the possibility that $\varphi + \psi$ holds).

Recall that the speaker is absolutely certain that the consequent holds, but she may not subscribe the content of the antecedent. In both cases, though, the assertion of φ is relevant under the situation described by the antecedent (i.e., ‘not $\psi + \varphi$ ’). In the next subsection, we will show how we can pragmatically derive EPI and CON by resorting to Relevance.

4.4 Deriving the concessive and epistemic readings

We will now go back to examples previously presented, repeated below: (22) may receive an EPI interpretation, while (23) can only be interpreted as CON. If we apply our paraphrase to them, the result is in (24) and (25), where the b versions are somewhat more elaborate.

- (22) *Han dominat un castell si més no curiós.* [EPI]
 ‘They have controlled a SMN curious castle.’
- (23) *La Maria ha guanyat si més no la medalla de plata.* [CON]
 ‘Maria has won SMN the silver medal.’
- (24) a. If the castle is not something more, it is curious.
 b. If the castle is not curious and something more, there is a relevant assertion that the castle is curious.
- (25) a. If Maria has not won something more, she HAS won silver.
 b. If Maria has won silver and not gold, there is a relevant assertion that she HAS won silver.

While the paraphrases are identical for both readings, the epistemic state of the speaker in each case, along with contextual information, will allow us to derive the expected outcome. We propose to appeal to Relevance. Why would I assert that the castle is curious given the circumstances? And why would I assert that Mary won the silver medal given the circumstances? Let us start with (22). The most natural way to answer the question is to think the speaker believes the assertion is

informative and relevant for the purposes of conversation. We do not know whether she thinks that the castle is something more, but she is committed to the truth of the castle being curious. Regarding (23), ‘silver medal’ being a scalar item (in a ranking scale) and the speaker being certain that the higher values do not hold, it is natural to infer that the actual state of affairs (i.e., not winning gold) is suboptimal. And yet, the speaker decides to assert silver. Why? It is easy to reason that she does so not only because she thinks it is informative, but also because she thinks it is a satisfactory outcome anyways (the ‘settle for less’ inference in Nakanishi & Rullmann 2009). By appealing to Relevance, we thus derive the EPI and CON readings out of this biscuit conditional. Next, we address why the EPI reading should be more restricted than the CON one.

4.5 The missing epistemic reading

As noted in Section 2, SMN will not yield the EPI reading when the constituent associated with focus is not a member of a natural scale (be it an entailment or ranking scale). This should be unexpected if we approached SMN as the Catalan counterpart of AL. This behavior is not so surprising if we understand that SMN is a biscuit conditional structure whose pair of sentences stand in a contrastive relation, though.

One important factor in triggering one or the other reading is the epistemic state of the speaker. Additionally, we argue that the type of alternative-triggering item also plays a role in licensing the EPI reading. We must take into consideration the variability in which the scalar implicature (exhaustive interpretation) arises in assertions depending on the type of element in focus. Following recent research (van Tiel et al. 2016), we assume that exhaustive readings are triggered at different rates depending on the kind of lexical scale we are considering. The relevant distinction that we are proposing here is between scalar items like *seven* (entailment scale) or *silver medal* (ranking scale), and constituents that are not inherently ordered but which can yield alternatives through focus (Krifka 1999), (26).

- (26) a. John saw [Alice]_F.
 b. *El castell és [curiós]_F.
 ‘The castle is curious.’*

The claim that we make is that exhaustive readings from non-inherently ordered constituents like names and certain adjectives are not as easily triggered as from scalar terms. In other words, plausibly, the potential implicatures in (26) are not triggered. That is, the speaker in (26a) may not have meant that John saw *only* Alice, and the speaker in (26b) may not have meant that the castle is *only* curious. When we utter the sentences in (26), we are fully committed to the truth of the

pronounced proposition, but not necessarily to the negation of their alternatives. By contrast, the exhaustive readings in (27) are quite automatic. That is, it naturally follows that Betty bought exactly three T-shirts, and that Mary won silver but not gold. To complete the picture, note that SMN licenses the EPI reading whenever the *at least* reading of scalar items is the default case, as in (28).

- (27) a. Betty bought three T-shirts.
 b. Mary won the silver medal.
- (28) *Per aprovar l'examen has d'aprovar si més no tres preguntes.*
 ‘To pass the exam you have to get SMN three questions right.’

In this modal context, the natural reading is one where you must get 3 questions right (but you will also pass if you get more than 3 right). Note that here, the speaker does not believe that you do not have to get more than 3 questions right, and it is hardly the case that she may consider that not getting more than 3 questions right is a bad outcome. Hence, when we ask the question as to why the speaker would assert that it is true that you have to get 3 questions right, we naturally reason that she thinks it is just informative.

Interestingly, in cases like (28), SMN only has an EPI reading. Thus, SMN *can* take a scalar argument, but depending on the context (exhaustive vs. non-exhaustive), either the CON or the EPI reading will be licensed. Since scalar items tend to force an exact reading, the EPI reading of SMN will be highly restricted. By contrast, non-scalar items being less prone to exhaustive readings will more easily license EPI SMN.

In deriving the two readings, we have noted the epistemic state of the speaker as a key factor. If the speaker knows that the stronger values are false, then we are dealing with an exhaustive interpretation, which is naturally triggered by scalar items. If the speaker is potentially accepting that higher values are not false, then the context is non-exhaustive, which is the natural environment for non-scalar items. The CON reading is also triggered by non-scalar items when it is plausible that the speaker knows that the stronger alternatives are false, and the EPI interpretation is possible with scalar items in non-exhaustive contexts.

It is thus clear that SMN is semantically different from AL in that the former is not able to turn an exhaustive context into a non-exhaustive one. Rather, the interpretation that is yielded by SMN partly depends on whether the assertion in which SMN occurs naturally triggers an exhaustive interpretation. In contrast, SMN and AL share the same CON interpretation.

5. Conclusions

This paper has contributed to the debate on the characterization of scalar particles such as English *at least*, here instantiated with a Catalan particle, *si més no* (lit. ‘if more not’). Studying SMN has proven interesting, because it has rich building blocks that have tailored the proposed analysis, and a non-total overlap with the distribution of AL. Specifically, SMN does not yield an epistemic reading when the constituent under focus is a scalar term.

We have reconstructed a plausible paraphrase for SMN ϕ that we have analyzed as a conditional structure whose consequent is VERUM ϕ . The two readings arise as a function of the following factors: the epistemic state of the speaker, the reason as to why the speaker takes ϕ to be relevant, and the scalar or non-scalar nature of the element under focus.

While the building blocks of SMN cannot motivate a compositional analysis for AL, its study raises an interesting theoretical question, namely whether we can further empirically test variability of scalar implicature depending on whether focused items are scalar or non-scalar.

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On *ben* in Trentino regional Italian

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The aim of the present article is to discuss the syntactic distribution and semantic/pragmatic interpretation of the discourse particle *ben* (lit. ‘well’) as used in the Trentino regional variety of Italian. Regarding its distribution, the results of our investigation with native speakers show that *ben* is admitted in any of the tested TAM contexts (save for non-root embedded clauses) and always sits between the lexical/auxiliary/restructuring verb and the non-finite form. As for its interpretation, it is shown that *ben* is used to negate an implicit or explicit negative presupposition, i.e. it is primarily connected with negation. These syntactic and interpretative properties are captured by claiming that *ben* sits in NegPresuppositionalP, where it is licensed by the (c)overt operator *no* located in ForceP.

1. Introduction

The aim of the present article is to provide a theoretically-informed description of: (i) the syntactic distribution, and (ii) semantic/pragmatic interpretation of the phonetically reduced form *ben* (derived from the full manner adverb *bene* ‘well’) when used as a discourse particle in the Trentino regional variety of Italian (henceforth Tr.). Following Zimmerman’s (2011) semantic criterion, we define discourse particles as elements which convey information about the epistemic state of discourse participants and do not contribute to the descriptive content of the utterance.¹ During the discussion, the behaviour of semantically related elements (cf. high/low *sì/no* ‘yes/no’ and the construction *sì/no che*, lit. ‘yes/no that’) will be also touched upon.

Following a common trend for manner adverbs, which are known to have developed discourse values both in Romance (Belletti 1990, 1994; Lonzi 1991; Cinque 1991, 1999; Vinet 1996; Waltereit & Detges 2007; Coniglio 2008; Hernanz

1. Elsewhere, Italian *ben* has been classified as a modal particle, following a syntactic criterion (e.g. Coniglio 2008; Cardinaletti 2011).

2010; Cardinaletti 2011; Padovan & Penello 2014, among others) and Germanic (Weydt 1969; van Baardewyk-Resseguier 1991), Italian (henceforth It.) *ben* has also developed usages distinct from its prototypical manner reading, as shown in the examples in (1), to be compared with the full manner counterpart in (2).²

- (1) a. *Ci deve ben pur essere una scorciatoia*
 ‘There MUST be a shortcut’ (Coniglio 2008:123)
- b. *Gianni ha ben dimostrato di avere ragione*
 ‘Gianni indeed proved to be right’ (Cardinaletti 2011:506)
- c. *Avrai ben già cenato*
 ‘You will have indeed already eaten’ (Cinque 1999:171, fn.20)
- (2) *Gianni ha cantato bene questa sera*
 ‘Gianni has sung well tonight’

As for the exact semantic/pragmatic content of the discourse value conveyed by *ben*, previous proposals on Romance have focused their attention on the *emphatic/assertive* meaning of this particle, analysed as an element reinforcing the assertion (Belletti 1990, 1994) and expressing the speakers’ confidence about the propositional content of their assertion (Coniglio 2008; Cardinaletti 2011), thus operating on the positive polarity of the sentence (Battllori & Hernanz 2013 on Spanish *bien*). Conversely, we claim that the core property of Tr. *ben* is that of denying the interlocutor’s negative presupposition (cf. also Waltereit & Detges 2007 on French and Hernanz 2010 on Spanish), i.e. *ben* can only occur in (syntactically positive) contexts in which the negative counterpart of the proposition expressed by the sentence is part of the common ground (cf. Cinque 1991 on *mica*):³

- (3) a. Speaker A: *Nicola non l'avrebbe neanche toccata quella roba*
 [negative presupposition]
 ‘Nicola wouldn’t even have touched that stuff’
- b. Speaker B: *Nicola l'avrebbe ben mangiata la carne*
 ‘Nicola would have eaten the meat’

2. See Cruschina (2010) on the distinction between modal particles and sentential adverbs and Munaro & Poletto (2004) for a discussion about sentential particles in Veneto dialects with different interpretive effects. The translations provided in (1) are those offered in the cited works. The meaning of *ben* and related elements investigated in the present work (high/low *si/no* ‘yes/no’ and *si/no che*, lit. ‘yes/no that’) does not correspond to a straightforward translation into English. The closest approximations to *ben* would be either an emphatic stress on the verb or the use of *indeed*, e.g. *Gianni comprerà ben qualcosa per cena* ‘John WILL buy/will indeed buy something for dinner’. Because of the lack of correspondence, the translations below will not include the rendering of such elements. Glosses will be provided only when relevant for the discussion.

3. See von Stechow (2008) for a technical definition of (different types of) presupposition and common ground and further references.

Descriptively, *ben* thus represents the counterpart of It. *mica* ‘not’ (Belletti 1990: 39–41; Cinque 1991; see also comments in Cinque 1999: 171, fn.20; Zanuttini 1997: 69,135), which is also negative and presuppositional, but operates on a positive presupposition and, syntactically, occurs in a negative sentence, cf. (4).

- (4) a. Speaker A: *Nicola l'avrebbe mangiata quella roba* [positive presupposition]
 ‘Nicola would have eaten that stuff’
 b. Speaker B: *Nicola non l'avrebbe mica mangiata la carne*
 ‘Nicola would not have eaten the meat’

As for its syntactic distribution, Cognola & Schifano (2015, 2018) show that the occurrence of *ben* across distinct Tense-Aspect-Mood (henceforth TAM) contexts and verb forms is subject to a set restrictions, which allow the identification of three main geographical groups in the Italian peninsula, i.e. Group 1 (Trentino), Group 2 (mainly Venetan varieties) and Group 3 (Rovigo, Friuli Venezia Giulia, Lombardy, Piedmont, Emilia Romagna, Lazio, Marche, Puglia). Group 1, which belongs to the productive isogloss, will be the object of study of the present article.⁴ More specifically, it will be shown that Tr. *ben* is only subject to one of the three restrictions affecting its distribution in the other two groups, while its syntactic placement in the admitted TAM contexts is the same (§ 2). As for its interpretation (§ 3), it will be argued that: (i) *ben* contributes to the expressive level of the proposition (§ 3.2); (ii) its semantics is negative (§ 3.3); (iii) it is compatible with both an explicit and implicit presupposition (§ 3.4). Henceforth, it will be suggested that *ben* is located in NegPresuppositionalP in the lower space of the IP, where it is licensed by a negative operator sitting in ForceP. Because of its incompatibility with operators (e.g. wh-items, focalised elements), it will be argued that FocusP and PolarityP are also involved in its syntax (§ 3.5).

2. The data

In order to test the syntactic distribution of *ben* in the Trentino regional variety of Italian, 9 speakers of mixed age, gender and education from Trento (5 speakers), Cles (3 speakers), and Civezzano (1 speaker) were asked for grammaticality judgments (five-point scale) on 67 sentences, testing the compatibility of *ben* across a variety of verb forms (cf. transitive vs unaccusative lexical verbs, auxiliary verbs,

4. The reader is referred to Cognola & Schifano (2015, 2018) for a discussion of Group 2 and 3. In the present article, parallels will be drawn only with respect to the least productive group, i.e. Group 3, as the transitional area represented by Group 2 requires further investigation. For a preliminary comparison with earlier attestations of *ben* in Italo-Romance, see Cognola & Schifano (forthcoming).

restructuring verbs) and TAM contexts (indicative: present, imperfect, simple future, future perfect, present perfect, pluperfect; conditional: present, perfect; subjunctive: present, pluperfect; imperative), both in pre and postverbal positions, as well as before and after the non-finite form selected by functional verbs. Whenever possible, the same verb form has been tested with different interpretations (e.g. present indicative with present vs future interpretation). The results of this investigation are summarised in Table 1, where we observe that 90.3% of the tested TAM contexts were judged fully grammatical (cf. 5) by the speakers (with *ben* in postverbal position, see discussion below).

Table 1. Judgements in Group 1 (*n* total sentences: 67, *n* total speakers: 9)

	1 (ungrammatical)	2	3	4	5 (fully grammatical)
Trento (speaker1)	4%	0%	1.4%	0%	92%
Trento (speaker2)	0%	0%	4.3%	2.8%	91%
Trento (speaker3)	2.8%	0%	4.3%	1.4%	91%
Trento (speaker4)	1.4%	0%	0%	0%	98%
Trento (speaker5)	1.4%	0%	5.7%	4.3%	87%
Cles (speaker1)	4.3%	2.8%	2.8%	8.6%	79%
Cles (speaker2)	1.4%	0%	2.8%	7.2%	88.4%
Cles (speaker3)	5.7%	0%	0%	1.4%	91%
Civezzano	2.9%	0%	1.4%	0%	95.6%
Total %	2.6%	0.3%	2.5%	2.8%	90.3%

A short selection of sentences exemplifying the occurrence of *ben* in a variety of accepted contexts is given in (5).

- (5) a. *Gianni compra ben qualcosa per cena quando può*
 ‘Gianni buys something for dinner when he can’
 b. *Gianni comprava ben qualcosa per cena quando poteva*
 ‘Gianni used to buy something for dinner when he could’
 c. *Gianni comprerà ben qualcosa per cena quando siamo via*
 ‘Gianni will buy something for dinner when we are away’
 d. *Gianni avrà ben comprato qualcosa per quando noi torniamo*
 ‘Gianni will have bought something for dinner by the time we come back’
 e. *Gianni comprerebbe ben qualcosa per cena, se potesse*
 ‘Gianni would buy something for dinner, if he could’
 f. *Compra ben qualcosa per cena!*
 ‘Buy something for dinner!’

The interesting question amounts therefore to the identification of the excluded contexts. Leaving aside cases of expected individual variation, our data show that in

Group 1 *ben* is unanimously excluded in the only two non-root embedded clauses included in the questionnaire, featuring a present (6a) and pluperfect subjunctive (6b), respectively (henceforth *Restriction 1*).

- (6) a. **Gianni vuole che Marco compri ben qualcosa per cena*
 ‘John wants that Mark buys something for dinner’
 b. **Gianni avrebbe voluto che Marco avesse ben comprato qualcosa per cena*
 ‘John would have wanted that Mark had bought something for dinner’

This result sharply contrasts with the scores gathered for Group 3, where two additional restrictions can be identified, i.e. *ben* mainly occurs in TAM combinations involving a non-finite form (i.e. participle or infinitive, as selected by functional verbs) (cf. *Restriction 2*); among restructuring verbs, *potere* ‘can’ is widely accepted, *volere* ‘want’ is more restricted, and *smettere* ‘stop’ is largely ruled out (cf. *Restriction 3*) (see discussion in Cognola & Schifano 2018).⁵

As for its syntactic placement, the results show that in all the three groups *ben* sits in a position which is lower than the one targeted by the lexical, auxiliary, and the restructuring verb, but higher than the one targeted by the non-finite form selected by functional verbs.⁶

- (7) a. [_{IP} (*ben) V_{lex} **ben**]
 b. [_{IP} (*ben) Aux **ben** Prt]
 c. [_{IP} (*ben) V_{restr} **ben** V_{non-fin}]

As shown in Table 2, the preverbal placement of *ben* is systematically excluded across all the groups, as the 92.7% of the tested orders *ben* – V_{lex} / AUX / V_{restr} were judged ungrammatical (cf. 1), regardless of the TAM combination.

Table 2. Judgements on *ben* – V_{lex} / AUX / V_{restr} across all groups
 (*n* total sentences: 67, *n* total speakers: 28)

Judgement	1	2	3	4	5
Total %	92.7%	4.5%	2%	0.3%	0.3%

5. Group 3 includes 9 speakers, while the intermediate group (Group 2), not discussed here, includes 10 speakers. All the speakers from the three groups (total of 28) were tested on the same set of 67 sentences.

6. We are here glossing over the placement of *ben* after the non-finite verb form selected by functional verbs, which is the only position where the three groups show variation. See instead Zanuttini (1997: 135) for the distribution of *ben* with true and suppletive imperatives.

To sum up, our investigation shows that the usage of *ben* as a discourse particle is widespread in the Trentino regional variety of Italian. Unlike the other regions under investigation, Trentino allows *ben* in all the tested verb combinations, with the only exception of non-root embedded clauses, while it patterns with the other areas in systematically excluding its placement to the left of the inflected verb forms.

3. Towards an analysis for Trentino *ben*

3.1 Previous works on Italian *ben*

Existing analyses of It. *ben* agree that this particle has the function of reinforcing the assertion (Lonzi 1991: 361ff.; Belletti 1990, 1994). Accordingly, its semantic import is claimed to be emphatic. Coniglio (2008) and Cardinaletti (2011), for example, propose that *ben* is used to emphasise the speaker's confidence towards the proposition, hence functioning like German *ja* and Italian *sì*. Conversely, works on It. *ben* have not acknowledged the fact that this element is endowed with a *pre-suppositional* value, i.e. by emphasising the truth of the proposition, it denies the speaker's negative presupposition, as exemplified in (3) (see Hernanz 2010 on the same effect for Spanish *bien*).

As for its syntactic placement, the parallel between *mica* and *ben* (cf. discussion in § 1) led Belletti (1990, 1994: 29) to propose that the two particles are hosted in two adjacent FPs, i.e. NegP and PositiveP, respectively. The fact that the two particles are in complementary distribution is captured by assuming that the former is licensed by negation, whereas the latter is only compatible with non-negated sentences. Elsewhere, it is suggested that *ben* is located in a dedicated FP distinct from NegP. Cinque (1999: 171, fn.20) and Coniglio (2008: 123), for example, argue that *ben* appears in the same sentential area where negative adverbs (e.g. *mica*, *affatto*) are hosted, i.e. between habitual adverbs and *già* 'already', as supported by the examples in (8).

- (8) a. *Lui ha (*ben) di solito ben mostrato di apprezzare la musica*
 'He has usually indeed shown he appreciates music'
 (Cinque 1999: 171, fn. 20)
- b. *Avrai ben già (*ben) cenato*
 'You will have indeed already eaten' (Cinque *ibid.*)

Conversely, Cardinaletti (2011) proposes that *ben* is hosted in the Spec of a dedicated FP in the high Mood/Mod-field of IP, whose lowest possible placement is between *usually* in Asp_{Habitual} and *again* in Asp_{Repetitive}.

Coniglio (2008) and Cardinaletti (2011) also claim that, as all discourse particles express the speaker's attitude towards the propositional content of the clause, they must be licensed by ForceP (see also Zimmermann 2004, 2011 and below). The claim that ForceP is always present to license discourse particles is confirmed by some asymmetries in the distribution of adverbs and particles, i.e. while the former are compatible with both main and embedded clauses, the latter are restricted to main clauses, as well as embedded clauses with root properties, i.e. those where ForceP is available (Haegeman 2006). As shown by Coniglio (2008: 124), this asymmetric distribution is shared by It. *ben* too, as this particle is also excluded in non-root embedded clauses.

To sum up, all the existing studies share the insight that It. *ben* is a discourse particle conveying information about the speaker's attitude towards the proposition (cf. assertion/emphasis). Syntactically, *ben*, is assumed to be hosted in the IP area, on a par with other discourse particles, and is restricted to main clauses and embedded clauses with root properties. In what follows, we focus our attention on Tr. *ben* only and we propose an analysis which accounts for the properties of this discourse particle in this regional variety.⁷

3.2 Propositional vs expressive level

First of all, we claim that Tr. *ben* does not operate at the propositional (i.e. descriptive) level of the utterance, but rather at the expressive one (cf. those more elusive aspects of semanto-pragmatic meaning that link the proposition expressed to the context of utterance, Zimmerman 2011: 2013).⁸ Evidence for this comes from the behaviour of Tr. *ben* in imperative and interrogative clauses. According to Zimmerman (2011: 2019), “[...] discourse particles are invisible to the sentence-type operators IMP[erative] and INT[errogative], which take propositions as arguments and map them to semanto-pragmatic objects with a particular illocutionary force, that is, the meaning of [discourse particles] does not enter the content of the command

7. The analysis that we develop below for Tr. *ben* contrasts with previous accounts for It. *ben* and Sp. *bien*. It is not our aim to assess the validity of the latter for the corresponding languages and we simply note here that they cannot be extended to Tr. *ben*, which exhibits a peculiar behaviour, as shown by the data presented in this work (see also discussion in § 3.5).

8. Coniglio (2008: 123) claims that, in some cases, It. *ben* can be part of the propositional content of the utterance, rather than the expressive one. However, such cases are not exemplified. This does not seem to be the case in Trentino.

itself, unlike all propositional material”. Interestingly, this seems to be the case also for Tr. *ben*, as shown by the examples in (9).⁹

- (9) a. *Parla ben con Maria prima di andare a casa!*
 you.speak.IMP BEN with M. before of go.INF to home
 ‘Speak with Mary before you go home!’
- b. *Vieni ben domani?*
 you.come BEN tomorrow’
 ‘You are coming tomorrow, aren’t you?’¹⁰
- c. *Non parlare! / Non vuoi venire?*
 not speak.INF not you.want come.INF
 ‘Don’t speak! / Don’t you want to come?’

Ben in (9a) indicates that the speaker fears that the addressee will not execute the command (cf. also Cinque 1991 on *mica* in imperatives) and does not interfere with the command itself. Likewise, the presence of *ben* in (9b) expresses that the speaker fears that the addressee will not come, and does not interfere with the question. This contrasts with the behaviour of an element such as the negator *non* ‘not’, which does operate at the propositional level of the utterance, as it interferes with the command encoded by the imperative and with the question (cf. (9c)). Therefore, we take the data in (9a)–(9b) to indicate that *ben* operates at the expressive level of the utterance, rather than the propositional one, as expected under an analysis of *ben* as a discourse particle (Coniglio 2008; Zimmermann 2011).

3.3 The semantic contribution

In what follows we try to define the exact semantic contribution of Tr. *ben*. By doing so, we also provide evidence that *ben* differs from the discourse particle *sì* also appearing in the IP area in this regional variety. According to Coniglio (2008: 121), It. *sì* is used to “assert with strength the truth of a proposition that has previously been negated, either implicitly or explicitly” (see also Pecoraro & Pisacane 1984: 62 and Lonzi 1991: 361ff.). Furthermore, he claims that It. *ben* has a function similar to that of *sì*, since “by using this particle, the speaker usually wants to emphasize that he or she feels (or encouragingly strives to feel) confident about a certain fact” (Coniglio 2008: 123). Therefore, *ben* and *sì* are considered to be nearly synonyms in Italian.

9. Judgements regarding the interpretative requirements of *ben* reported in § 3 do not form part of the judgement task described in § 2, but are based on one of the authors’ intuitions and double-checked with native speakers.

10. See § 3.5 on the occurrence of *ben* in wh-interrogative clauses.

If we turn our attention to Tr. *ben*, we observe that its semantic contribution is that of negating an implicit or explicit (i.e. made explicit by a sentence in the discourse) presupposition, as already mentioned in § 1 and further exemplified below, where we observe that a sentence with *ben* is felicitous in a context in which the presupposition is negative (10) but not positive (11).¹¹

- (10) a. [(implicit/explicit) negative presupposition: ‘Mario has not eaten the apple’]
 b. Speaker:
Mario ha ben mangiato la mela
 M. has BEN eaten the apple
 ‘Mario has eaten the apple’
- (11) a. [(implicit/explicit) positive presupposition: ‘Mario has eaten the apple’]
 b. Speaker:
 #*Mario ha ben mangiato la mela*
 M. has BEN eaten the apple
 ‘Mario has eaten the apple’

The fact that Tr. *ben* is only compatible with an (implicit or explicit) negative presupposition contrasts with the behaviour of the Trentino discourse particle *si* (henceforth low *si*).¹² As shown in (12), a sentence with low *si* (12b), but not with *ben* (12c), is compatible with an explicit positive presupposition (12a). Conversely, when the explicit presupposition is negative (13a), only *ben* can be employed (13b vs 13c).

- (12) a. Speaker A:
Battiston arriverà, secondo me [explicit positive presupposition]
 B. will.arrive according to.me
 ‘Battiston will arrive, I think’
- b. Speaker B:
Arriverà si
 he.will.arrive YES
- c. Speaker B:
 #*Arriverà ben*
 he.will.arrive BEN
 ‘He will arrive’

11. In standard Italian, the same semantic contribution of *ben* can be achieved by stressing the finite verb and via a special intonation (see Zimmermann 2011 and Cardinaletti 2015).

12. Note that the data below only apply to Tr. *si*, while other regional varieties of Italian behave distinctly (see discussion on related elements in Cognola & Schifano 2018).

- (13) a. Speaker A:
Non arriverà Battiston, secondo me
 not will.arrive B. according to.me
 ‘Battiston will not arrive, I think’ [explicit negative presupposition]
- b. Speaker B:
 #*Arriverà sì*
 he.will.arrive YES
- c. Speaker B:
Arriverà ben
 he.will.arrive BEN
 ‘He will arrive’

The data in (12) and (13) indicate that both *ben* and *sì* have a similar function in Trentino, but they are not in free distribution. More specifically, *ben* is specialised for contexts in which the speaker wants to negate a negative presupposition making it positive, whereas *sì* is only allowed when the speaker wants to confirm a positive presupposition.

The fact that Tr. *ben* is connected with negation is further confirmed by the data below. The above discussion has shown that Tr. *ben* occurs in a sentence denying a negative presupposition, such as the one expressed in (13). Now we also observe that a sentence containing *ben* can be introduced by the adverb *no* (henceforth high *no*), whereas the adverb *sì* (henceforth high *sì*) is ruled out (cf. (14)).

- (14) a. Speaker A:
Battiston non arriverà nemmeno oggi, secondo me
 B. not will.arrive even today according to.me
 ‘Battiston will not arrive today either, I think’
- b. Speaker B:
*No (/ *sì), arriverà ben*
 NO / YES he.will.arrive BEN
 ‘No, he will arrive’

Conversely, low *sì*, which is compatible with a positive presupposition only (cf. 12a), must be introduced by high *sì*, cf. (15).

- (15) a. Speaker A:
Battiston arriverà oggi, secondo me
 B. will.arrive today according to.me
 ‘Battiston will arrive today, I think’
- b. Speaker B:
 (*No /) *sì, arriverà sì*
 NO / YES he.will.arrive YES
 ‘Yes, he will arrive’

The relationship between the adverbs high *no* and high *sì* and the discourse particles *ben* and low *sì* can be summarised as in (16).

- (16) high *no* → *ben* [negative presupposition]
 high *sì* → low *sì* [positive presupposition]

3.4 On anaphoricity

The above discussion has shown that Tr. *ben* is only compatible with contexts involving a negative presupposition and that it can co-occur with high *no* but not with high *sì*. These properties distinguish *ben* from low *sì* in Trentino. The two particles differ with respect to another property, i.e. anaphoricity. The examples below show that *ben* is compatible with both anaphoric and non-anaphoric contexts, i.e. contexts in which the negative presupposition is explicit since it is introduced in the discourse by a sentence (17), and contexts in which it is not (18) (examples adapted from Zimmerman 2011:2017ff.).

- (17) a. Speaker A:
Sai che è finita la birra?
 you.know that it.is finished the beer
 ‘Did you know that there is no beer left?’
 [explicit negative presupposition: <there is no beer left>]
- b. Speaker B:
No, ce ne è ben ancora birra. Apri il frigo se
 No LOC of.it it.is BEN still beer you.open.IMP the fridge if
ne vuoi un'altra
 of.it you.want one = other
 ‘No, there is still some beer. Open the fridge if you want more’
- (18) Context: one person is leaving the party. Speaker A thinks that (s)he is leaving because there is no beer left. [implicit negative presupposition: <there is no beer left>]
 Speaker A:
Ce ne è ben ancora birra, non andare già via
 LOC of.it it.is BEN still beer not go.INF already away
 ‘There is still some beer, don’t leave already’

Conversely, low *sì* is compatible with anaphoric (19) but not with non-anaphoric (20) contexts.

- (19) a. Speaker A:
 È finita la birra, credo
 it.is finished the beer I.believe
 ‘There is no beer left, I think’
 [explicit positive presupposition: <there is no beer left>]
- b. Speaker B:
 Sì, è finita sì!
 YES it.is finished YES
 ‘Yes, it is finished’
- (20) Context: one person has a scheduled appointment with Battiston. On arriving at his office, Speaker A lets her/him in, knowing that Battiston will be arriving soon [implicit positive presupposition: <Battiston is arriving>]
 Speaker A:
 #Entra pure, Battiston arriverà sì
 you.come.IMP ahead B. will.arrive YES
 ‘Come along, Battiston is arriving’

To sum up, the comparison between the properties of *ben* and low *sì* discussed in the examples above indicates that low *sì* and *ben* differ in Trentino, i.e. while *ben* is compatible with both implicit and explicit (negative) presuppositions, low *sì* appears to only have an anaphoric value.

3.5 On emphatic polarity

We have seen that Tr. *ben* is a discourse particle which is compatible with a negative presupposition. How do such properties emerge? Hernanz (2010) and Battllori & Hernanz (2013) propose that the properties of the Spanish discourse particle *bien*, whose semantic contribution is very similar to Tr. *ben*, follow from the fact that *bien* is located in PolarityP (Laka 1990). Accordingly, Sp. *bien* is analysed as an emphatic polarity particle whose expressive contribution (cf. emphasis on the truth value of the sentence and presuppositional content) derives from the fact that it operates on the positive polarity of the sentence. However, a direct extension of this analysis to Tr. *ben* does not seem to be on the right track. On the one hand, we have shown that Tr. *ben* does not operate at the propositional level, where polarity belongs, but rather at the expressive one (§ 3.2), thus calling into question the validity of an analysis which crucially relies on PolarityP. On the other hand, the claim that *ben* is not directly connected with polarity is supported by empirical evidence. In Trentino regional Italian it is possible to answer a positive or negative question with

si che, lit. ‘yes that’ and *no che*, lit. ‘no that’.¹³ While the former answer occurs in a positive sentence, the latter occurs in a negative one, as shown in (21) and (22).

- (21) a. *Arriverà Battiston alla fine?*
will.arrive B. at.the end
‘Will Battiston arrive eventually?’
b. *Sì che arriverà*
YES that he.will.arrive
‘Yes, he will arrive’
c. *No che non arriverà*
NO that not he.will.arrive
‘No, he will not arrive’
- (22) a. *Non arriverà Battiston, quindi?*
not he.will.arrive B. then
‘Will not Battiston arrive then?’
b. *Sì che arriverà*
YES that he.will.arrive
‘Yes, he will arrive’
c. *No che non arriverà*
NO that not he.will.arrive
‘No, he will not arrive’

Let us now consider the distribution of *ben* in *si che/no che* sentences. The examples below show that Tr. *ben* can occur in a *si che* answer to a negative question (23b), whereas *no che* is excluded (23c).

- (23) a. *Non arriverà Battiston, quindi?*
not he.will.arrive B. then
b. *Sì che arriverà ben*
YES that he.will.arrive BEN
‘Yes, he will arrive’
c. **No che (non) arriverà ben*
NO that not he.will.arrive BEN
‘No, he will not arrive’

The data in (23) do not undermine the claim that Tr. *ben* is only compatible with a negative presupposition, in combination with high *no* (cf. 16), but rather indicate that *ben* (which is a lexically positive element) is compatible with a positive sentence whose positive polarity has been stressed by *si che*. Accordingly, we claim that *si che* in (23) lexicalises PolarityP, and that the adverb *si* (like its negative counterpart

13. See Poletto (2008) on these constructions in Venetan regional Italian.

no) preceding the complementiser *che* (cf. *si che*) does not appear in the same position as high *no* and high *si* discussed in (14)–(15). This claim is confirmed by the examples below, where we show that *si che*, when used to answer a negative or positive sentence, can be preceded by high *no* (24) and high *si* (25), respectively. We propose that *no* in (24b) is the same element showing up in (14) agreeing with *ben*.

- (24) a. *Battiston, credo che non arriverà oggi*
 B. I.believe that not will.arrive today
 ‘I do not think that Battiston will arrive today’
 b. *No, si che arriverà*
 NO YES that he.will.arrive
 ‘No, he will arrive’
- (25) a. *Battiston, credo che arriverà oggi*
 B. I.believe that will.arrive today
 ‘I think that Battiston will arrive today’
 b. *Si, si che arriverà*
 YES YES that he.will.arrive
 ‘Yes, he will arrive’

To sum up, we claim that *si che/no che* lexicalise PolarityP (see Laka 1990 and Zanuttini 1997 for the idea that PolarityP can host both negative and positive polarity elements), and that *ben* is not directly connected with this functional projection. We propose that all sentences containing *ben* are positive from the point of view of polarity, and that *ben* it is not licensed by polarity, but by a higher negative element, i.e. high *no* (cf. 14). More specifically, we analyse high *no* as a negative operator hosted in ForceP which licenses *ben* in the IP area (see Zimmerman 2004, 2011; Coniglio 2008 and Cardinaletti 2011 for the idea that discourse particles are licensed by an operator in ForceP in the left periphery). The fact that *ben* is licensed by an operator in ForceP explains the reason why non-root embedded clauses are the only contexts where *ben* is ruled out in Trentino (cf. *Restriction 1*), which is a typical property of discourse particles (cf. also Cinque 1999: 228, fn.14 on *mica*; Coniglio 2008: 106; Hernanz 2010: 35). By virtue of its presuppositional character and its syntactic placement (i.e. between the lexical/auxiliary/restructuring verb and the non-finite form, cf. § 2), we propose that *ben* is hosted in NegPresuppositionalP in the lower space of the IP (also hosting *mica*, cf. Zanuttini 1997; Cinque 1999). We assume that the operator high *no* sitting in ForceP is obligatory in all sentences featuring *ben*. Whenever *ben* is present and high *no* does not surface (e.g. 23b), we assume that high *no* is covertly realised in ForceP, cf. (26).¹⁴

14. Only the relevant projections are represented in (26). The reader is referred to Ledgeway (2010) for an overview of existing proposals regarding the internal decomposition of the CP-layer.

- (26) [_{CP} [_{ForceP} no [_{TopicP} [_{FocusP} [_{PolarityP} *sì che* [_{IP} [_{NegPresuppositionalP} *ben*]]]]]]]]]

The structure in (26) indicates that *ben* is licensed in NegPresuppositionalP by the negative operator high *no* sitting in ForceP through an Agree relation. Note that the polarity of the sentence is positive. This depends on the fact that the lexical item *ben* is positive, but by virtue of its location in the head of NegPresuppositionalP and its combination with the negative operator in ForceP, it contributes to a negative interpretation of the sentence.¹⁵

The claim that high *no* is hosted in ForceP is supported by the examples in (27), where we observe that *no* must precede topicalised constituents (cf. underscored constituents in (27b) vs (27c)), which in turn precede *sì che* (cf. 27d vs 27e) (as well as *no che*, which is irrelevant here, since it is incompatible with *ben*).

- (27) a. *Non inviterò Mario al matrimonio*
not I.will.invite M. to.the wedding
'I will not invite Mario to the wedding'
- b. *No, Mario, al matrimonio, lo invitiamo ben*
NO M. to.the wedding him = we.invite BEN
- c. **Al matrimonio, Mario, no, lo linvitiamo ben*
to.the wedding M. NO him = we.invite BEN
- d. *No, Mario, al matrimonio, sì che lo invitiamo ben*
NO M. to.the wedding YES that him = we.invite BEN
- e. **(No,) sì che, Mario al matrimonio, lo invitiamo ben*
NO YES that M. to.the wedding him = we.invite BEN
'No, we will invite Mario to the wedding'

It is also interesting to note that Tr. *ben* is not compatible with sentences containing an operator, such as a wh-element (28) or a focalized constituent (cf. constituent in capital letters in (29b)).

- (28) a. **Chi arriverà **ben** domani?*
who will.arrive BEN tomorrow
'Who will arrive tomorrow?'
- (29) a. Speaker A:
*Mario, **lo** **vedrò** **al** **tuo** **matrimonio***
M. him = I.will.see to.the your wedding
'As for Mario, I will see him at your wedding'

15. We thank an anonymous reviewer for pointing this out.

b. Speaker B:

*No, LUCA invito *ben* al mio matrimonio, non Mario
 NO L. I.invite BEN at.the my wedding not M.
 ‘No, it is Luca that I will invite to my wedding, not Mario’

The ban on the co-occurrence of *ben* and an operator is apparently unexpected under the analysis proposed above, which captures the semantic and the syntactic properties of Tr. *ben* by assuming a key role of ForceP, where the negative operator licensing *ben* is located, without any involvement of FocusP. We thus propose that the ban on the co-occurrence of *ben* and operators follows from the fact that FocusP and PolarityP (as proposed for Spanish in Batllori & Hernanz 2013) are also involved in Tr. constructions with *ben*. Batllori & Hernanz (2013) argue that Spanish constructions featuring the discourse particle *bien* involve emphatic polarity. Following Holmberg’s (2001) analysis of polarity elements, they suggest that emphatic polarity constructions and operator constructions are very close both semantically (cf. presence of an operator that takes two arguments, i.e. presupposition and assertion) and syntactically (cf. involvement of the left periphery). Accordingly, they propose that Sp. *bien*, which is incompatible with operators like its Trentino counterpart, starts out in Spec of PolarityP and then moves to Spec of FocusP where emphatic polarity is encoded. In accordance with these works, we propose that the ban on the co-occurrence of *ben* and operators in Trentino follows from the same mechanism. As illustrated in (30), we suggest that Tr. *ben* constructions involve the activation of PolarityP, which can (but does not have to) be lexicalised by *si/no che* (cf. (24)–(25)), and of FocusP, where the positive/negative polarity element is raised.¹⁶

(30) [CP [ForceP no [TopicP [FocusP si/no [PolarityP *t* che [IP [NegPresuppositionalP *ben*]]]]]]]]

The proposal that FocusP and PolarityP are both involved in sentences in which *ben* appears does not imply that Tr. *ben* is directly connected with PolarityP, contrary to previous proposals on *ben*. Our suggestion is that *ben* primarily interacts with the expressive level of the sentence, just like *mica*, which, according to Cinque (1991: 315), negates the content of a presupposition, not of an assertion. This has been captured by suggesting that Tr. *ben* is licensed by an operator (cf. high *no*) hosted in ForceP (which can be overt or covert), which is only homophonous with the *no* preceding the complementiser. Crucially, the two *no* can co-occur (cf. *no, Mario no che non lo invito* ‘no, I will not invite Mario’, see also examples (24)–(25) with *si che*) since they perform different functions. High *no* connects the

16. See also Poletto (2008) for the analysis of *si che / no che* in Venetan varieties involving Focus.

proposition to the discourse (cf. expressive level) and directly licenses an element in NegPresuppositionalP, whereas the *no* preceding the complementiser *che* (as its positive counterpart *si*) is emphatic and operates on the sentence polarity (cf. propositional level). We propose that the emphatic value of *ben* follows from the presence of a kind of double negation (one in ForceP, one in NegPresuppositionalP) in a proposition, which makes the proposition positive. What is hidden behind Tr. *ben* constructions is at best paraphrased by a sentence with a bi-clausal structure (*non è che non viene* ‘it is not the case that he is not coming’) which is semantically positive (‘he is coming’) (cf. two negations in a biclausal structure, making the sentence affirmative).¹⁷

4. Conclusions

In the present paper we have investigated the syntactic distribution and semantic/pragmatic interpretation of the Trentino discourse particle *ben*. As for its distribution, we have shown that: (i) Tr. *ben* is admitted in any of the tested TAM contexts and is only excluded from non-root embedded clauses; (ii) it sits between the position targeted by the lexical/auxiliary/restructuring verb and the non-finite form. As for its interpretation, we have argued that Tr. *ben* does not operate at the propositional level, but rather at the expressive one, as shown by the fact that it is invisible to sentence-type operators such as IMP and INT, on a par with the behaviour of other discourse particles. Furthermore, we have shown that it is employed to negate an explicit or implicit negative presupposition. Accordingly, we have argued that Tr. *ben* is primarily connected with negation, rather than with emphatic affirmation as previously suggested for Italian. This is also supported by the fact that it can be introduced by the sentence-initial negative element *no* (cf. high *no*), but not by the positive *si* (cf. high *si*). In order to account for these syntactic and semantic properties, we have argued that Tr. *ben* sits in NegPresuppositionalP, where it is licensed by the overt/covert operator *no* (cf. high *no*) sitting in ForceP. We have also shown that Tr. *ben* constructions involve the activation of both FocusP and PolarityP in the left periphery, as proposed for Sp. *bien*, indicating that both presupposition and assertion are involved in Trentino. We have argued that presupposition is encoded in ForceP (the FP directly connected with the licensing of *ben* in the IP area), whereas PolarityP and FocusP are involved in emphatic polarity and assertion. The negative interpretation of the sentence follows from the fact that the lexically positive discourse particle *ben* lexicalises the head of NegPresuppositionalP and

17. Two negations do not necessarily make a sentence positive, as shown by the phenomenon of negative concord.

holds an agreement relation with the negative operator in ForceP. This result is particularly important because it indicates that the superficial assertive value of Tr. *ben* follows from the presence of a double negation (high *no* in ForceP and *ben* in NegPresuppositionalP).

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Matrix complementisers and ‘speech act’ syntax

Formalising insubordination in Catalan and Spanish

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This paper discusses apparent cases of Catalan and Spanish non-embedded clauses headed by the subordinating complementiser *que* ‘that’, sometimes referred to in the literature as cases of *insubordination* (Evans 2007, 2009). Three interpretatively distinct types of ‘insubordinate’ QUE are identified, but only one of these types, viz. quotative QUE, is shown to be formally identical to the subordinating complementiser. The other two types, viz. exclamative and conjunctive QUE, exhibit the formal behaviour of speech acts, following Krifka’s (2001, 2003) diagnostics. It is argued that, from a cartographic approach, the three types of ‘insubordinate’ QUE cannot be accommodated within the split CP, and that, given their formal properties, exclamative and conjunctive QUE are instead operative within an articulated layer above Force dedicated to encoding ‘speech act’ syntax, a domain argued for in Speas & Tenny (2003), Haegeman & Hill (2014), Haegeman (2014).

1. Introduction

This paper departs from the observation that complementisers, the chief lexical exponent of Chomsky’s (1986) Complementiser Phrase (CP), do not always carry out their canonical task of subordination, but can be repurposed to encode a variety of illocutionary meaning. Thus in informal, conversational Catalan and Spanish, the item normally known as the finite complementiser *que* ‘that’ has been reharnessed to introduce matrix (i.e. non-embedded) clauses with various discourse-oriented functions, descriptively labelled here as quotative (1a), exclamative (1b) and conjunctive (1c) *que*.

- (1) a. A: *Tio, estava dubtant i això.*
 ‘Mate, I wasn’t sure n’ stuff’
 B: *Eh?*
 ‘Huh?’
 A: *Que no ho tenia molt clar tampoc*
 QUOT not it=have.IMPF.3SG much clear neither
 ‘(I said) I wasn’t very sure either.’ (Catalan; COR)
- b. *¡Ay que me pica y no me puedo rascar!*
 PRT EXCL me=itch.3SG and not me=can.1SG scratch.INF
 ‘Ohhh, it itches and I can’t scratch it!’
 (Pamplona, Spain; *YouTube* video, uploaded 1 November 2009)
- c. *Espera, que te’n sés anada al bar de*
 wait.IMP CONJ you=PART=be.2SG gone.FEM to.the bar of
la Marina
 the Marina
 ‘Wait, you’ve gone to Marina bar’ (Algherese Catalan; AIEC)

The non-subordinate, illocutionary functions of the complementiser (henceforth QUE, to distinguish between these illocutionary values and the regular subordinating function of the complementiser *que*) in (1a–c) contravene the expected distribution of such items in Ibero-Romance. That is, ordinarily, zero marking in C constitutes an overt signal of a declarative matrix structure (2a), whereas the presence of the complementiser formally marks out an embedded clause (2b).

- (2) a. **(Que) Bolivia nunca más será colonia de Chile.*
 that Bolivia never again be.FUT.3SG colony of Chile
 ‘*(That) Bolivia will never again be a colony of Chile’
- b. *Evo dice *(que) Bolivia nunca más será colonia de Chile.*
 Evo say.3SG that Bolivia never again be.FUT.3SG colony of Chile
 Evo says that Bolivia will never again be a colony of Chile’
 (Bolivian Spanish; *Correo del Sur*, 12 April 2016)

Following Evans (2007, 2009), instances of apparently formally subordinate clauses which nonetheless appear in matrix contents, as illustrated in (1a–c), are sometimes referred to in the literature as cases of *insubordination*, which are typically attested “in situations where a high degree of intersubjective alignment between speaker and hearer can be presupposed” (Evans 2009: 11). Indeed, the term *insubordinate* has previously been applied to the use of the finite complementiser for various discourse-oriented and interactional functions in Spanish (Gras 2016).

The present paper investigates whether the illocutionary (uses of the) complementisers in (1a–c) do indeed qualify as ‘insubordinate’ phenomena. We show that, in fact, only one of the three types of ‘insubordinate’ QUE, viz. quotative QUE,

is formally identical to a subordinating complementiser. The other two instances of 'in subordinate' QUE (*viz.* exclamative and conjunctive QUE) exhibit fundamentally different characteristics which, we argue, are best accounted for within a revised and extended clausal left-edge that encodes dynamic utterance, or 'speech act', information in a dedicated domain *above* the CP. Moreover, exclamative and conjunctive QUE are interpretatively and formally distinct not only from their homophonous subordinating counterpart in C, but also from each other, lexicalising distinct projections within the dedicated speech act space.

After establishing our theoretical assumptions in § 1.1, we outline the basic interpretative contribution of each type of 'in subordinate' QUE (§ 2), before examining and comparing their sentence-typing (§ 3) and speech act properties (§ 4). It will be shown that, whereas quotative QUE does *not* show the properties of a speech act, patterning like a regular C-head (*viz.* the subordinating complementiser *que*), exclamative and conjunctive QUE behave differently, exhibiting the formal characteristics of speech acts as defined in Krifka (2001, 2003). Finally, we describe the sentential distribution of the illocutionary complementisers (§ 5), demonstrating that an internally-articulated CP cannot satisfactorily accommodate all instances of 'in subordinate' QUE. Instead, we argue that quotative QUE lexicalises Force^o (Rizzi 1997), whereas conjunctive and exclamative QUE are operative in an utterance-oriented field above Force (Speas & Tenny 2003, Haegeman & Hill 2013, Haegeman 2014).

The paper thus aims to make the following contributions: (i) to introduce novel empirical data of 'in subordinate' QUE phenomena in Spanish and Catalan varieties; (ii) to show that (at least) three formally distinct types of 'in subordinate' QUE can be discerned, each with different syntactic and interpretational properties, corresponding to separate functional projections within a revised left periphery; and (iii) that the three distinct types of in subordinate QUE can be further categorised according to their interaction with 'speech act' diagnostics, supporting the recent postulation (Speas & Tenny 2003 and others) of a formally distinct, dedicated 'speech act' layer above the CP.

1.1 Theoretical preliminaries

The analysis here adopts a 'cartographic' approach to the structural representation of the clause, wherein each semantico-pragmatic unit of meaning is mapped onto the syntax via a dedicated, non-recursive functional projection, following a universal hierarchy (*cf.* Cinque 1999). Specifically, we hold that the clausal left-edge can be decomposed into a hierarchy of discourse-oriented projections, adopting a (reduced) version of Ledgeway's (2012) cartography for the left periphery with certain

projections re-labelled after Rizzi's (1997) 'split' – i.e. internally-articulated – CP, cf. (3).¹

(3) CP cartography (based on Ledgeway 2012: 179):

$$[_{\text{Force}} [_{\text{Topic}} [_{\text{Pol(ar)-int(errogative)}} [_{\text{Excl(amative)}} [_{\text{Wh-int(errogative)}} [_{\text{Focus}} [_{\text{Fin(iteness)}} [_{\text{IP}} \dots]]]]]]]]]]]]]$$

Over the years, further investigation into and refinement of the clausal left periphery has culminated in the proposal of an additional layer of functional structure, dedicated not to information packaging and clause-typing (as is the case in the CP) but to anchoring the sentence to interlocutor interaction and the utterance context. This dedicated 'speech act' field is known as the *Speech Act Phrase* (SAP), following Speas & Tenny (2003), and is the locus of 'rigidly root' phenomena (cf. Haegeman & Miyagawa 2016 for a recent overview). On the view that speech acts are complex and dialogical (Beyssade & Maradin 2006), codifying the interaction between speaker and addressee (Haegeman 2014; Wiltschko & Heim 2016), we further assume that the speech act domain reflects this complexity in its internal articulation.² Specifically, we adopt Haegeman's (2014) proposal that there are two layers of the utterance domain: a higher, outward-looking projection encoding performative, 'dynamic' and 'directional' values (ibid.: 135), and responsible for activating the discourse and the speaker-addressee relation; and a lower, inward-looking projection responsible for discourse 'bonding', consolidating the already-established speaker-addressee relation and encoding attitudinal values. We label Haegeman's (2014) layers as *SpeechActHighP* (SAHighP) and *SpeechActLowP* (SALowP) respectively, cf. (4).

(4) $[_{\text{SAHigh}} [_{\text{SALow}} [_{\text{Force}} [_{\text{Topic}} [_{\text{Pol-int}} [_{\text{Excl}} [_{\text{Wh-int}} [_{\text{Focus}} [_{\text{Fin}} [_{\text{IP}} \dots]]]]]]]]]]]]]]]$

2. Three types of 'in subordinate' QUE

Spanish exclamative QUE constructions are finite indicative root clauses, which are typically but not necessarily structurally declaratives (cf. § 3), and which have exclamative illocutionary force, following Martins' (2013: 88) definition of an

1. Some phrases have been collapsed vis-à-vis Ledgeway's (2012: 179) full cartography. The affected projections are not at stake for the analysis of 'in subordinate' QUE. Declarative clause-typing via the finite complementiser *que* occurs in the topmost C-position, referred to as Decl(arative) in Ledgeway (2012) and Force in Rizzi (1997).

2. See also Wiltschko & Heim's (2016) 'conversational layer' of the universal spine hypothesis and Corr's (2016) Utterance Phrase (UP) for alternative structural proposals for the encoding of complex speech act information.

exclamative sentence as one in which “the speaker expresses an emotive attitude towards the content of his/her utterance”, cf. (5).

- (5) a. *Ai que estic cansat!*
 PRT EXCL be.1SG tired
 ‘Oh I’m tired!’ (Catalan; COR)
- b. *uff, que qué putadón Coronil, cuida ese cuerpo*
 uff EXCL what bugger Coronil look.after.IMP that body
 ‘Ufff, what a bugger, Coronil, look after that body!’
 (Spanish; *pescasub.com* [retrieved 13 April 2016])

Exclamative QUE constructions also involve a non-neutral exclamative prosodic contour (cf. Corr 2016: 93, which follows Bocci 2013 in assuming a non-trivial, non-isomorphic mapping between discourse-oriented prosody, interpretation and syntax).

Quotative QUE constructions (cf. Etxepare 2008 et seq.; Demonte & Fernández-Soriano 2013, 2014 on Spanish; also Corr 2016 on Ibero-Romance quotative QUE) are defined here as root clauses with a quotative function where, crucially, there is no need for a communication verb to be retrievable from the surrounding context, as shown in (6).³

- (6) A: *¿Estáis liados?*
 ‘Are you hooking up?’
 B: *¿Perdona?*
 ‘Pardon?’

3. As determined by comparison with other Ibero-Romance languages, which do not permit a quotative usage of finite *que* when this is unselected by a *verbum dicendi*. Compare the following two conversations in European Portuguese, where only the latter (ii) but not the former (i) involves an explicit *verbum dicendi*:

- (i) A: *Aqui se celebram o carnaval.*
 ‘Here they celebrate Carnival.’
 B: *Como?*
 ‘Pardon?’
 A: **Que aqui se celebram o carnaval.*
 ‘(*I said) here they celebrate Carnival.’ (European Portuguese)
- (ii) A: *Sabes o que me disseram?*
 ‘Do you know what they told me?’
 B: *O quê?*
 ‘What?’
 A: *Que aqui se celebram o carnaval*
 ‘That you celebrate Carnival here.’ (European Portuguese)

- A: *Que si te enrollas con mi padre.*
 QUOT if you=hook.up.2SG with my father
 ‘I asked if you’re hooking up with my dad’
 (Spanish; *Desaparecida*, episode 9, RTVE)

Thirdly, conjunctive *QUE* introduces a non-embedded finite declarative clause which contextualises utterance information – as perceived relevant by the speaker – for the benefit of the addressee. In cases where there is a preceding associated clause separated by a prosodic break, as in (7a), the contextualised information made explicit by the complementiser is the discourse connection between the previous speech act and the conjunctive *QUE* clause. Alternatively, when conjunctive *QUE* appears in isolation, the contextualised information can be a non-linguistic situation, as in (7b).

- (7) a. *Digue'm, que te'ls donaré*
 tell.imp=me CONJ you=them=give.FUT.1SG
 ‘Tell me, I’ll give you it [the money]’ (Catalan; COR)
- b. Context: the addressee is trying to switch on the light.
Que está estropeada.
 CONJ be.3SG broken
 ‘It’s broken’ (Spanish)

As such, the licensing of conjunctive *QUE* constructions is not reliant on the presence of a linguistic antecedent in Catalan and Spanish.

3. Sentence typing

The mapping between the complementiser and its clause’s sentence type shows considerable variation between the three types of insubordinate *QUE*, from high levels of syncretism in the case of quotative *QUE* – which patterns identically to the subordinating complementiser of so-called *de dicto* complements in Catalan and Spanish –⁴ to an almost one-to-one mapping in the case of conjunctive *QUE*. Here, we take sentence typing to be the pairing of a formal or grammatical (viz. morpho-syntactic) clause type with a (pragmatic-semantic) illocutionary force potential.

The subordinating complementiser of *de dicto* complements can license all major clause types in Spanish and Catalan with the exception of ‘true’ imperatives. The same sentence-typing properties are exhibited by quotative *QUE*, which

4. Certain predicates (usually but not always *verba dicendi*) can select for either *de dicto* – which hold intensionally – or *de re* – which hold extensionally – complements in Catalan and Spanish, a contrast which incurs a number of syntactic and interpretative effects (cf. González i Planas 2014 and references therein).

can introduce indicative declaratives (8a), polar- (8b) and wh-interrogatives (8c); wh-exclamatives (8d); non-finite (8e) and subjunctive (8f) clauses.

- (8) a. *Que no ho tenia molt clar tampoc* (Catalan, COR)
 QUOT not it=have.IMPF.3SG much clear neither
 '(I said) I wasn't very sure either.'
- b. *Que si vols sortir aquesta nit*
 QUOT if want.2SG go.out.INF this evening
 '(I asked) do you want to go out tonight' (Catalan)
- c. *¿Que qué (cojones) estáis intentando hacer con Mägo?*
 QUOT what (bollocks) be.2PL try.PTCP do.INF with Mägo
 '(I asked) what (the hell) are you trying to do with Mägo?'
 (Zaragoza, Spain; Facebook post)
- d. *Que quin gos més bonic*
 QUOT what dog more lovely
 '(I said) what a lovely dog' (Catalan)
- e. *Que ¡a correr!*
 QUOT to run.INF
 '(I said) run!' (Spanish)
- f. *Que em diguis*
 QUOT me=tell.SUBJ.2SG
 '(I said) tell me' (Catalan; COR)

Exclamative QUE, by contrast, can only introduce declaratives (9a), and – subject to idiolectal, microparametric variation –⁵ wh-exclamatives (9b); and rhetorical (9c–d) but not genuine information-seeking (9e–f) polar and wh-interrogative structures.

- (9) a. *Ay que estamos allí, nos tienen puestos en el bar*
 ay EXCL be.1PL there us = have.3PL put in the bar
 'We're here, they've set us up at the bar!' (Leonese Spanish; RTVcyl)
- b. *¡Hala, que menudo tocho te he colocado!*
 INTJ EXCL what tome you=AUX.1SG put.PSTP.PTCP
 'Gosh, what a tome I've written you' (Spanish; blog comment)
- c. *Ay fill que et sembla que tinc tot el (puto) dia?!*
 ay son EXCL to.you = seem.3sg that have.1SG all the effing day
 'Oh son, do you think I've got all (effing) day?!' (Catalan)

5. See Corr (2016) for examples and discussion.

- (11) a. **Vamos al parque, que ¿quieres invitar a Juan?*
 go.1PL to.the park CONJ want.2SG invite.INF DOM Juan
 (Spanish)
- b. **No parlis més, que què (coi) has fet ara?*
 not speak.2SG more CONJ what (hell) AUX.2SG do.PST.PTCP now
 (Catalan)
- c. **Nos vamos de espicha, que ¡qué día más bonito hace!*
 we=go.1PL of cider.party CONJ what day most nice make.3SG
 (Spanish)

Again, the contrast in the felicity of polar interrogatives with conjunctive QUE appears to be a result of the illocutionary force of the utterance (i.e. genuine questions are disallowed). Note, however, that none of the types of 'in subordinate' QUE under discussion can introduce 'true' imperatives (12a–c), and that only quotative QUE (12a), but not exclamative (12b) or conjunctive QUE (12c), can introduce subjunctive imperatives as a surrogate form.

- (12) a. *Que {*digue'm / em diguis}!*
 QUOT tell.IMP=me me=tell.SUBJ.2SG
 '(I said) tell me!' (Catalan)
- b. **Ai que {casa't / et casis} amb mi!*
 ohh EXCL marry.IMP=you you=marry.SUBJ.2SG with me
- c. **Vamos al parque, que ¡ {invita / invites} a Juan!*
 go.1PL to.the park CONJ invite.IMP invite.SUBJ.2SG DOM Juan

The sentence-typing properties of 'in subordinate' QUE are summarised in Table 1.

Table 1. Sentence-typing properties of Catalan and Spanish 'in subordinate' QUE

	Exclamative QUE	Conjunctive QUE	Quotative QUE	Subordinating <i>que (de dicto)</i>	Examples
Declaratives	✓	✓	✓	✓	8a, 9a, 10a
Polar interrogatives	✗	✗	✓	✓	8b, 9e, 11a
Wh-interrogatives	✗	✗	✓	✓	8c, 9f, 11b
Rhetorical polar	✓	✓	✓	✓	9c, 10b
Rhetorical wh	subset	✗	✓	✓	8c, 9d, 11b
Wh-exclamatives	subset	✗	✓	✓	8a, 9b, 11c
Positive imperatives	✗	✗	✗	✗	12a–c
Subjunctive imperatives	✗	✗	✓	✓	8f, 12a–c
Non-finite clauses	✗	✗	✓	✓	8e

We thus observe that quotative QUE patterns identically with the homophonous complementiser of *de dicto* complements (cf. fn. 4), licensing a range of clause types, including subjunctive and non-finite clauses. By contrast, exclamative and conjunctive QUE are sensitive to both mood and finiteness, licensing indicative finite clauses only. They are also much more sensitive to clause type than quotative QUE or the *de dicto* complementiser, being attested predominantly with structural declaratives. However, given that exclamative and conjunctive QUE can license other clause types (i.e. polar interrogative and, in the case of exclamative QUE, wh-clauses), this mapping is not one-to-one, and illocutionary force potential is a factor in determining whether these types of ‘in subordinate’ QUE are compatible with a given sentence type.

4. Speech act properties

Following Krifka (2001, 2003), we understand the illocutionary force of a sentence to be semantically represented by a speech act operator, and syntactically represented, following Speas & Tenny (2003), in the SAP (cf. § 1.1). Given the role of illocutionary force in licensing ‘in subordinate’ QUE (§ 3), and the distinct interpretative properties of these items (§ 2) vis-à-vis the subordinating complementiser *que*, this section tests ‘in subordinate’ QUE’s compatibility with formal properties associated with speech acts, following the diagnostics established in Krifka (2001, 2003, 2014), Faller (2006), Etxepare (2010) and Corr (2016). Here, we assume speech acts to be non-embeddable, and incompatible with conjunction and disjunction, exhibiting a formal contrast with C-heads such as the subordinating complementiser (13), which *is* compatible with these operations.⁷

- (13) *tal vez piensas que exagero y/o que lo invento*
 maybe think.2SG that exaggerate.1SG and/or that it=invent.1SG
 ‘Perhaps you think I’m exaggerating and/or that I’m making it up’
 (Spanish; adapted from *elaletss.tumblr.com*)

7. Embedding speech acts is assumed to be theoretically possible but in reality rare (cf. Krifka 2014). Krifka (2001, 2003) argues that speech acts can be conjoined, using data from English sentential conjunction. However, Corr (2016) shows that, from a syntactic perspective, Krifka’s data illustrate conjoined clauses (i.e. CPs) rather than conjoined speech acts (i.e. SAPs cf. § 5.1), the latter of which are shown to be resistant to conjunction. A further diagnostic for speech acts is negation, at test which is omitted here since it does not provide insight in terms of formal differences between these elements (namely, the subordinating complementiser *que* and all types of ‘in subordinate’ QUE are incompatible with negation).

As such, compatibility with the above diagnostics is understood to be indicative of operation at the level of the CP, whereas incompatibility is taken to indicate operation at the level of the SAP.

We thus observe that, whereas quotative QUE can be embedded (14a), the embedding of exclamative (14b) and conjunctive (14c) QUE is ungrammatical.⁸

- (14) a. *Los de Sabritas dijeron que a que no me podía*
 The of Sabritas say.PST.3PL quot a that not me = could.3SG
comer solo una Sabrita y LO HICE
 eat.INF only one Sabrita and it = do.PST.1SG
 ‘The Sabritas [crisp company] people said they bet I couldn’t eat just one Sabrita but I DID’ (Mexican Spanish; Twitter)
- b. **Vaig dir que en Mario va callar a la fi!*
 AUX.1SG say.INF EXCL the Mario AUX.2SG shut.up.INF at the last
- c. *Aixeca el peul, *vaig dir que m’estàs trepitjant!*
 lift.IMP the foot AUX.1SG say.INF CONJ me = be.3SG stepping

Note, however, that whilst exclamative QUE is incompatible with embedding, the sentence in (14b) is not incomprehensible, and can be rendered grammatical if uttered with non-exclamative prosody. That is, the same sentence, with neutral intonation, would be interpreted as an instance of declarative subordination. Conversely, the attempted embedding of conjunctive QUE renders the sentence nonsensical (or, if interpreted as a case of ‘regular’ declarative subordination, completely alters the intended meaning, viz. from discourse contextualisation to, in (14c), reported speech).

Similarly, clauses introduced by quotative QUE can undergo both conjunction and disjunction (15a), unlike those of exclamative (15b) and conjunctive (15c) QUE, which cannot.

8. This holds whether or not the finite complementiser is present for both exclamative (i) and conjunctive (ii) QUE:

(i) **Vaig dir (que) que en Mario va callar a la fi!*
 AUX.1SG say.INF that EXCL the Mario AUX.3SG shut.up.INF at the last
 (Catalan)

(ii) *Aixeca el peul, *vaig dir (que) que m’estàs trepitjant!*
 lift.IMP the foot AUX.1SG say.INF that CONJ me = be.2SG stepping
 (Catalan)

- (15) a. *Y él, que llegábamos tarde, que no se podía*
 and he QUOT arrive.IMPF.1PL late QUOT not se = could.3SG
salir con nosotros y/o que teníamos que
 go.out.INF with us and/or QUOT have.IMPF.3SG that
protestar por el retraso
 complain.INF for the delay

‘And he kept saying that we were late, that he couldn’t go out with us or that we should complain about the delay.’

(adapted from Demonte & Fernández-Soriano 2013: 37)

- b. **¡Ay que me pica y/o que no me puedo*
 PRT EXCL me = itch.3SG and/or EXCL not me = can.1SG
rascar!
 scratch.INF
- c. **Aixeca el peu!, que m’estàs trepitjant i/o que*
 lift.2SG the foot CONJ me = be.2SG stepping and/or CONJ
em fas mal!
 me = do.2SG bad

The above speech act diagnostics establish a clear division between exclamative and conjunctive *QUE*, which *are* incompatible with embedding, conjunction and disjunction, and quotative *QUE*, which is not. Quotative *QUE*’s behaviour is identical to that of the *de dicto* subordinating complementiser, which categorises the former as a C-head, and, further, suggests that these two items are one and the same element. By the same token, exclamative and conjunctive *QUE*’s distinct behaviour indicates that they cannot be analysed as C-heads, but pertain to a distinct formal domain, argued here to be (a version of) Speas & Tenny’s (2003) SAP. However, exclamative and conjunctive *QUE* do not pattern identically in all diagnostics (notably, embedding), suggesting that further differentiation between types of insubordinate *QUE* will be necessary, a hypothesis borne out in § 5.

5. Relative distribution in the Ibero-Romance left periphery

The diagnostics in § 4 suggest that the three types of insubordinate *QUE* investigated in the present paper belong to separate domains within an expanded left periphery. Namely, quotative *QUE*’s behaviour aligns with that of the finite subordinating complementiser in C, whereas exclamative and conjunctive *QUE* show the syntax associated with speech acts, understood to be formally encoded in the SAP. This section tests these predictions by examining the distribution of the illocutionary complementisers relative to left peripheral elements in the CP and SAP.

5.1 Distribution in the CP

Recall that we have adopted a version of Ledgeway's (2012: 179) left periphery, in which the topmost position is lexicalised by the subordinating complementiser *que* 'that' (cf. fn 1), as shown in (16).

- (16) [_{Force} *que*_{SUB} [_{Topic} [_{Pol-int} [_{Excl} [_{Wh-int} [_{Focus} [_{Fin} [_{IP} ...]]]]]]]]]]]

In the case of quotative and exclamative *QUE*, we have already observed that they appear higher than both wh-exclamatives and wh-interrogatives (cf. § 2), and so must accordingly lexicalise a head higher than the associated projections of these phrases (viz. ExclP and Wh-intP):

- (17) a. *Que* [_{Excl} *quina pallissa*] *que els van clavar*
 QUOT what battering that they AUX.3PL get.INF
 '(I said) what a battering they got' (Catalan)
- b. *Que* [_{Wh-int'} *cuántos*] *días] vas a estar fuera*
 QUOT how.many days go.2SG to be.INF away
 '(I said) how many days will you be away for' (Spanish)
- (18) a. *uff que* [_{Excl} *qué*] *putadón Coronil*
 uff EXCL what bugger Coronil
 'Ufff, what a bugger, Coronil' (Spanish)
- b. *Que* [_{Wh-int'} *qué*] *diablos te pasa mocosa inmatura*
 EXCL what devils to.you = happen.3SG snotty immature
 'What the hell's wrong with you, you snively kid!' (Spanish)

Additionally, quotative *QUE* appears in, and therefore must lexicalise, a position above Pol-intP, cf. (19).

- (19) *Que* [_{Pol-int} *si*] *vols sortir aquesta nit*
 QUOT if want.2SG go.out.INF this evening
 '(I asked) do you want to go out tonight' (Catalan)

The lack of interrogative illocutionary properties associated with exclamative and conjunctive *QUE* also rules out Pol-intP as a suitable candidate (cf. § 3).

The head of TopicP can also be discounted as a possible structural position for 'insubordinate' *QUE*, as verified by the observation that all three types of illocutionary complementiser precede topics, as in (20).

- (20) a. *Que* [_{Top} *a*] *Madrid] la MARÍA no hi ha estat*
 QUOT to Madrid the María not there = AUX.3SG be.PST.PTCP
 '(I said that) to Madrid, MARÍA hasn't been'
 (Catalan; de Prada Pérez 2009: 25)

- b. *¡Uau, que* [_{Top}*a esa guapa*], *la paparazzearon!*
 wow EXCL DOM that pretty her = paparazzi.PST.3PL
 ‘Wow, that girl, they paparazzied her!’ (Spanish.; Twitter)
- c. *No seas ingrata, que* [_{Top}*esta tremenda resaca*] *no*
 not be.SUBJ.2SG ungrateful CONJ this great hangover not
me la cura cualquiera
 me = it = cure.3SG anyone
 ‘Don’t be ungrateful, this terrible hangover can’t be cured by any old person’
 (Mexican Spanish, song)

The only remaining slot to the left of TopicP within the CP is therefore ForceP, whose head has been shown to be lexicalised by the subordinating complementiser in independent work (notably Rizzi 1997; Ledgeway 2012). From a cartographic perspective, the distinct interpretative and formal properties of the three types of ‘in subordinate’ QUE indicate that they cannot all share the same position within the functional structure. Moreover, if ForceP is the highest projection in the clausal architecture, then there is no space left to accommodate particles, such as the discourse-activating *ay/ai!* ‘ahh/ohh!’, which show the properties of heads not phrases (cf. Munaro & Poletto 2009). More structure is therefore required at the height of the left periphery to capture the relative distribution of illocutionary elements, including in subordinate QUE, within the clausal cartography.

5.2 Distribution in the SAP

The diagnostics presented in the present paper show that in subordinate QUE is located high in the left periphery. However, the split CP cannot accommodate all the attested instances of illocutionary complementisers which surface to the left of the Topic field. Given the utterance-oriented nature of these heads, we propose that the only satisfactory way to accommodate such elements is within an additional, internally-articulated functional layer *above* Force, viz. the SAP, which mediates between the sentence and its discourse setting via the following functional sequence (§ 1.1 gives details):

$$(21) \left[\text{SA}_{\text{high}} \left[\text{SA}_{\text{low}} \left[\text{Force} \left[\text{Topic} \left[\text{Pol-int} \left[\text{Excl} \left[\text{Wh-int} \left[\text{Focus} \left[\text{Fin} \left[\text{IP} \dots \right] \right] \right] \right] \right] \right] \right] \right] \right] \right]$$

In the present section, we examine the distribution of ‘in subordinate’ QUE relative to utterance-oriented elements such as interjections, discourse particles and vocatives which are understood to surface in the SAP. Following Hill (2014), we assume that, under the default intonational contour, interjections precede addresses (a hypothesis which is borne out in our findings). As such, we assume that interjections and discourse-activating particles lexicalise SpeechActHigh° and that vocatives, as

XPs, must surface in SpecSpeechActLowP (see also Corr 2016: Chapter 2). Thus we observe that quotative QUE (22a) and exclamative (22b) QUE obligatorily surface to the right of discourse particles.

- (22) a. **(que)* [_{SAhigh} *oye*], **(que)* *si has visto mis llaves*
 QUOT PRT QUOT if AUX.2SG see.PST.PTCP my keys
 'Hey, (I asked) have you seen my keys?' (Spanish)
- b. **(que)* [_{SAhigh} {*ai/apa*}], **(que)* *em poso vermella!*
 EXCL PRT EXCL me=put.1SG red
 'Oh/gosh, I've gone red!' (Catalan)

The same relative ordering is observed with vocatives, which must precede both quotative (23a) and exclamative QUE (23b).

- (23) a. **(que)* [SAlow' *Irene*], **(que)* *si has visto mis llaves*
 QUOT Irene QUOT if AUX.2SG see.PST.PTCP my keys
 'Irene, (I asked) have you seen my keys?' (Spanish)
- b. **(que)* [SAlow' *amor*] **(que)* *em poso vermella!*
 EXCL darling EXCL me = put.1SG red
 'Darling, I've gone red!' (Catalan)

When these particles and vocatives co-occur, it must be in the order particle-vocative-QUE, as illustrated in (24) for exclamative QUE.

- (24) **(que)* [_{SAhigh} *apa*] **(que)* [_{SAlow} *mama*], **(que)* *la tia Afra*
 EXCL WOW EXCL mum EXCL the aunt Afra
m'ha comprat una joguina nova!
 me = AUX.3SG buy.PST.PTCP a toy new
 'Wow mum, Aunt Afra bought me a new toy!' (Catalan)

Quotative QUE constructions adhere to a further restriction, since the in subordinate complementiser must follow the quotation source (here, *la peinadora*, 'the hairdresser'), where this is specified, cf. (25).

- (25) **(que)* [_{SAhigh} *Oiga*], **(que)* [_{SAlow} *señora Marquesa*], **(que)*
 QUOT PRT QUOT lady Marquis QUOT
*la peinadora *(que) no puede esperar*
 the hairdresser QUOT not can.3SG wait.INF
 'Listen, Lady Marquis, the hairdresser says she cannot wait
 (adapted from *Al natural*, Jacinto Benavente, 1905, apud Gras 2011: 277)

Conjunctive QUE, on the other hand, cannot co-occur with discourse particles (26a) or vocatives (26b).

Note that in the case of both conjunctive and exclamative QUE, the illocutionary properties of each complementiser (cf. § 2) correspond to the interpretative characterisation of their respective functional position. That is, the utterance contributions of conjunctive QUE and exclamative QUE align, respectively, with the 'outward' (i.e. connecting sentence to discourse) and 'inward' (i.e. expressing interlocutor attitude) orientations of the higher and lower layers of the speech act domain proposed by Haegeman (2014). Since conjunctive and exclamative QUE are licensing in exclusively matrix contexts, and are incompatible with embedding, we conclude that these items merely have the *appearance* of in subordinate elements. Consequently, such 'rigidly root' illocutionary complementisers should be regarded as distinct phenomena from the likes of *bona fide* in subordinate complementisers such as quotative QUE which *do* lexicalise C positions and participate in clausal subordination.

6. Conclusion

The present paper offers new empirical data from Catalan and Spanish illustrating three distinct types of 'in subordinate' QUE, providing a formal characterisation of each as distinct, but closely related, illocutionary complementisers. It has been shown that, despite its non-embedded appearance, quotative QUE exhibits the same formal properties as the subordinating complementiser of *de dicto* complements in these languages, i.e. the quotative particle lexicalises the same functional projection in the cartographic left periphery as the subordinating complementiser, viz. Force^o. Exclamative and conjunctive QUE, conversely, show distinct syntactic and distributional properties, exhibiting the formal characteristics of speech acts, and are satisfactorily accommodated only within a revised and extended left periphery that encodes utterance information *above* Force. As such, despite 'in subordinate' QUE's formally subordinate appearance, only one of the three illocutionary complementisers examined here, viz. quotative QUE, is in fact compatible with a subordinate status and can therefore be considered to be a case of *in subordination*. The other two types, viz. exclamative and conjunctive QUE, have been shown to be non-embeddable, i.e. 'truly' matrix clauses, which are *not* formally subordinate. The fine-grained syntactic distinctions between each type of illocutionary complementiser point to the utility of capturing microvariation via the cartographic approach to functional structure. More pertinently, however, the syntactic divergences between quotative QUE and the subordinating complementiser, on the one hand, and exclamative and conjunctive QUE on the other, reinforce the necessity of a clausal architecture which reflects these distinctions in the formal representation of discourse information, a contrast captured here by the division of the left periphery into the CP and the 'rigidly root' SAP.

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External possession in Brazilian Portuguese

Null possessors as null anaphors

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External possession, a phenomenon where the DP interpreted as possessor is a syntactic dependent of the clause, appearing outside a possessive structure, is instantiated in a variety of ways cross-linguistically. A number of recent proposals have understood these constructions to involve A-movement operations. This paper presents evidence that a movement approach to external possession in Brazilian Portuguese (BP) makes incorrect predictions about its locality restrictions, including island effects and sensitivity to discourse factors. I provide an analysis in which the dependency between possessor and possessum is mediated by null anaphors, which are also shown to display logophoric behavior.

1. Introduction: The phenomenon and issues

This paper is concerned with the syntax of external possession constructions, where a nominal that is a syntactic dependent of the verbal projection is also a semantic dependent of a nominal within that projection. External possession is a very common phenomenon cross-linguistically, and it is subject to an interesting range of variation (see Deal 2013 for an overview). The construction raises important theoretical questions, having to do with the nature of thematic relations, the nature of locality constraints, and many others. The locality issues arise especially if the relation between the external possessor and its nominal ‘host’ is always a movement relation, since then whatever locality constraints hold or fail to hold of the relation between the possessor and the DP-internal position should follow from the theory of movement in general.

I address these issues here by examining external possession in Brazilian Portuguese (BP), illustrated in (1), which is restricted to relational nouns that determine inalienable possession.

- (1) *O Pedro_i desenhou [as pernas/ irmãs ec_i]*
 the Pedro drew.3SG the leg.PL/ sister.PL
 ‘Pedro drew his legs/sisters’

I will restrict observations to body part and kinship term possessum DPs, since these are clearly productive in the language, and are cross-linguistically stable in expressing inalienable possession. Kinship is broadly construed here as any social relation between individuals, so that the relevant relational nouns will include items like *friend*, *advisor* and *boss*.

In (1) the DP *Pedro* is both a syntactic and a semantic dependent of the verbal projection: it controls person and number agreement on the verb, and it is interpreted on a par with any external argument of *desenhar* ‘draw’ outside of the construction. However, that DP is also interpreted as a semantic dependent of the nonimal in object position, though no overt element occupies the possessive-internal position.¹

I argue that the relation between the subject DP and the possessive-internal position is anaphoric rather than movement-based. More specifically, I argue that the possessor in cases like (1) is a null anaphor, bound whenever binding is in principle possible, and discourse-oriented otherwise. Moreover, null possessors in BP are shown to impose different locality restrictions on their antecedents based on the semantic class of the possessum. The locality restrictions are familiar from the study of anaphors, and refer to the presence of local subjects, rather than to island domains, as would be expected if the relation were movement-based.

Although the possibility of analyzing external possession in terms of anaphoric dependencies has precedents in the literature (Guéron 1985, Borer & Grodzinsky 1986), movement-based approaches have recently been common and influential (Landau 1999 for Hebrew, Lee-Schoenfeld 2006 for German, Deal 2013 for Nez Perce).

Brazilian Portuguese offers an important window into the space of cross-linguistic variation for external possession. Unlike dative possessors in French, Spanish, German and Hebrew, in BP the external possessor is a core argument of the verb. BP resembles these languages however in that external and internal possession are not semantically equivalent, unlike Nez Perce (Deal 2013), where

1. (1) alternates with the presence of an overt bound pronoun, as shown in (i), and a reflexive form in (ii).

- a. *O Pedro desenhou as pernas/ irmãs dele*
 the Pedro drew the legs/ sisters of-his
 ‘Pedro drew his legs/sisters’
- b. *O Pedro desenhou as próprias pernas/ irmãs*
 the Pedro drew the own legs/ sisters
 ‘Pedro drew his own legs/sisters’

the possessor is a core argument, but no affectedness entailment holds. Empirically then, the BP pattern demonstrates that it is possible to tease apart the answer to two questions sometimes confounded: (i) is external possession semantically equivalent to its internal counterpart? and (ii) is the external possessor a core argument?

Analytically, the BP pattern also shows that external possession is not always the result of movement. The external possessor may come to occupy its surface position via External or Internal Merge, and external possessor constructions are thus similar to other patterns of cross-linguistic variation in this respect (relative clause heads, for instance). Cross-linguistic variation in external possession constructions now emerges as an aspect of a larger known pattern of variation.

2. External possession in Brazilian Portuguese

My starting point is that there is some relation (semantic or syntactic) between the external and internal possessor positions. What are the properties of that relation? Both the movement and a variant of the binding account predict that the DP interpreted as the possessor must occupy a surface position from which it c-commands the possessive-internal position. This prediction is tested by asking whether it is possible to establish the possession relation in the absence of a c-command relation, considering two kinds of cases: (i) when the external possessor fails to command the internal position and (ii) more drastically, when there is no sentence-internal antecedent for the silent possessor. The data show that c-command is unnecessary in both cases, but also reveals a distinction between the locality requirements for null possessors of body part and those of kinship terms. Recognizing this distinction will be crucial later in order to eliminate certain confounds when we consider whether the possession relation can be established across island boundaries.

2.1 Discourse antecedents

Once the appropriate context is provided, sentences like (3a) and (3b), in which the internal possessor lacks a binder, are perfectly well-formed. Consider the following scenario. Speaker A utters (2), introducing Júlia as a salient referent in the discourse. (3a) or (3b) can then be offered as continuations.

- (2) A *Júlia₁ chegou em casa tarde ontem*
 the Júlia arrived at home late yesterday
 ‘Júlia got home late last night’

- (3) a. *Parece que foi porque [o pé ec₁] quebrou*
 seems that was because the foot broke.
 ‘It seems that it was because her foot broke’
- b. *Parece que [o pai ec₁] tinha até ligado para a polícia*
 seems that the father had even called to the police
 ‘It seems that her father had even already called the police’

At least for such cases a movement approach is not viable, since the possessor does not appear overtly either DP-internally or externally. These examples also show that if there is a null possessor in such cases, that element cannot require a sentence-internal binder. It may well be true that such null possessors are anaphorically dependent, but if they are, then that requirement can be satisfied by way of discourse-binding.

To distinguish those cases from those where the external possessor appears intra-sententially and maintain a movement approach, the argument position of the relational noun must not be projected in (3), in which case they are not interpreted as relational, but simply as entities. This is a possible interpretation for *foot*, in a context with disembodied body parts with unknown possessors for instance, but that is not how that DP is interpreted here. We will shortly consider additional evidence that speaks against this possibility.

2.2 Lack of c-command

Consider next whether an intra-sentential antecedent must c-command the possessive-internal possessor position. The answer is no. In (4), the external possessor is the subject of a clausal subject and cannot c-command the possessum object. Such examples would be uninterpretable if there is a command requirement on external possession relations, since the relational noun demands an argument of the individual type, and the clausal subject is not that. Yet these sentences are fully grammatical.

- (4) a. *[A Ana₁ não ter ido pra casa] chateou [a irmã ec₁]*
 the Ana not have gone to-the home upset the sister
 ‘Ana not having gone home upset her sister’
- b. *[A Ana₁ ter sentado torta por anos] danificou [a coluna ec₁]*
 the Ana have sit crooked for years damaged the spine
 ‘Ana having sat up crooked for years damaged her spine’

The examples in (5), given in Rodrigues (2010), seem to argue for the the opposite pattern. (5) only has the anomalous interpretation in which the snake bites its own

arm or that it bites its own sister. That is, only the whole possessive subject seems to be an available antecedent.

- (5) #*A cobra do Pedro₁ mordeu [o braço/ a irmã ec₁]*
 the snake of-the Pedro bit the arm / the sister
 intended: 'Pedro's snake bit his arm/sister'

The main distinction between (5) and (4) is that in (5) the intended antecedent, *Pedro*, is embedded within a DP subject, while in (4) the intended antecedent is embedded in a clausal subject. That is, in (5) the matrix subject is itself a possible antecedent, and that seems to make the in situ possessor inaccessible, or at least heavily dispreferred.

A second potential factor that differentiates between these examples is that in (5) the intended antecedent is itself the subject of the clausal subject, and the most prominent discourse antecedent. The next section asks whether these two factors, subjecthood and discourse salience, influence the accessibility of antecedents in general, even when c-command holds.

2.3 Intervention effects

A movement hypothesis predicts that only the closest c-commanding DP to the possessum may be interpreted as the possessor. This is also a prediction of an account in which null possessors are null anaphors which demand local antecedents. Rodrigues (2010) offers the examples in (6) as supporting evidence for movement.

- (6) a. #*A Ana₁ disse que o médico₂ fez a cirurgia [no útero ec₁]*
 the Ana said that the doctor.m made the surgery in-the uterus
 'Ana said that the doctor performed the surgery in his/*her uterus'
 b. #*O Pedro₁ disse que a cobra₂ mordeu [a prima ec₁]*
 the Pedro said that the.f snake bit the cousin
 'Pedro said that the snake bit her/*his cousin'

(6a), only has the (gender-normative) anomalous interpretation that the male doctor will perform the surgery on his own uterus. That is, the matrix subject is not an available antecedent. Rodrigues reports the same intuition for (6b): only the embedded subject seems to be able to be interpreted as the possessor of *cousin*.

Whereas the judgment for (6a) is quite clear, in the appropriate context, the matrix subject is indeed a possible possessor for kinship terms. This contrast between body part and kinship possessors can be made even sharper. The example in (7) is ambiguous between a reading where either *Pedro* or *Ana* can be interpreted as the

possessor of *friend*. Granted, there is a strong preference for the embedded subject in an out-of-the-blue context.

- (7) *O Pedro₁ disse que a Ana₂ viu [a amiga ec_{1/2}]*
 the Pedro said that the Ana saw the friend
 ‘Pedro said that Ana saw his/her friend’

Crucially though, this effect is not structural. When the properties of the embedded subject are manipulated so that the matrix subject is more discourse salient,² the preference observed in (7) shifts. In (8a) the embedded subject is indefinite, while in (8b) it is inanimate.

- (8) a. *O Pedro₁ disse que uma policial₂ bateu [na amiga ec_{1/2}]*
 the Pedro said that a policewoman beat on-the friend
 ‘Pedro said that a policewoman beat up his/her friend’
 b. *O Pedro₁ disse que o livro₂ caiu [na amiga ec_{1/#2}]*
 the Pedro said that the book feel on-the friend
 ‘Pedro said the book fell on his friend’

Given world knowledge, (8a) is more readily interpreted as Pedro reporting on the fact that his friend was beaten up by a policewoman, though the interpretation where the policewoman beats up a friend of her own is not ruled out. Similarly, if a grammatical principle banned the possibility of interpreting the matrix subject as antecedent, (8b) would only have the anomalous interpretation in which Pedro believes books have friends, but the non-anomalous interpretation is also available.

The same manipulation has no effect in the case of body part terms, as shown in (9), where (9a) is necessarily a report on the state of the policewoman’s forehead, and (9b) only has the anomalous reading that requires books to have heads.

- (9) a. *O Pedro₁ disse que uma policial₂ cortou [a testa ec_{*1/2}]*
 the Pedro said that a policewoman cut the forehead
 ‘Pedro said that a policewoman cut *his/her forehead’
 b. *#O Pedro₁ disse que o livro₂ caiu [na cabeça ec_{*1/#2}]*
 the Pedro said that the book fell on-the head
 intended: ‘Pedro said the book fell on his head’

These considerations lead us to an important first generalization. Although body parts and kinship terms both determine inalienable possession, they differ with respect to the possibility of finding non-local antecedents for their null possessors.

2. I am assuming here that proper names are in some way more prominent in the discourse than indefinite DPs in an intuitive way, though precisely what makes this be the case needs to be better understood.

Body part possessors must take the closest c-commanding subject as antecedent if there is one, but kinship possessors may link to long-distance antecedents. Moreover, the availability of long-distance antecedents is modulated by non-structural factors.

2.4 Island effects: The view from relative clauses

With this generalization in mind, let us consider the apparent island effects discussed by Rodrigues (2010). For reasons of space, I will consider here only relative clause islands, though similar observations hold for adjunct clauses, specific DPs and coordinations (for a full discussion of that data see Duek 2015).

The example in (10) seems to show that the possessum inside a relative clause may not establish a dependency with the matrix subject, *Maria*, but only with the head of the relative, *a menina*.

- (10) *A Maria₁ viu [a menina₂ [que beijou o namorado ec₂]]*
 the Maria saw the girl that kissed the boyfriend
 ‘Maria saw the girl that kissed her boyfriend’

Rodrigues takes this as an indication that the possession dependency is subject to the same constraints as, for instance, wh-movement, which is banned in such environments.

However, *a menina* is also the closest c-commanding subject to the kinship term. As we have already seen for non-island environments, long-distance antecedents can be dispreferred in out-of-the-blue contexts, but they are not ruled out by a grammatical principle. It is important then to ask whether manipulating the properties of the head of the relative clause reveals the same sensitivities to discourse factors as in the previous cases. It does.

In (11), the relative clause subject is inanimate. Rather than rendering the sentence anomalous, since statues do not typically have boyfriends, the presence of the inanimate DP in effect calls off what is perhaps a default preference for the closest antecedent.

- (11) *A Maria₁ quebrou a estátua₂ que caiu [no namorado ec₁]*
 the Maria broke the statue that fell on-the boyfriend
 ‘Maria broke the statue that fell on her boyfriend’

The structural relation between the matrix subject and the kinship term in (11) is nonetheless identical to the one in (10). Of course, substituting the head of the relative clause in (11) for the inanimate DP does not, as expected, have any effect, as shown in (12).

- (12) **De quem a Maria quebrou a estátua que caiu no namorado?*
 of who the Maria broke the statue that fell on-the boyfriend
 *‘Who did Maria break the statue that fell on the boyfriend of?’

Given these facts, we might also expect that if the possessum is itself the subject of the relative clause, so that the only subject that c-commands it is the matrix subject, the presence of the island boundary will not lead to ill-formedness. This is indeed the case, illustrated in (13).

- (13) *A Maria₁ gosta da menina₂ que [o namorado ec₁] conheceu*
 the Maria likes of-the girl that the boyfriend met
 ‘Maria likes the girl that her boyfriend met’

Further, we predict that when the possessive DP is the subject of the relative clause, there should be no contrast between body parts and kinship terms, but that in object position body part null possessors may not take the matrix subject as antecedent. This expectation is also met, as shown by the contrast between (14a) and (14b).

- (14) a. *A Ana₁ lembra do acidente₂ em que [a perna ec₁]*
 the Ana recalls the accident in that the leg
ficou paralisada
 got paralyzed
 ‘Ana remembers the accident in which her leg got paralyzed’
 b. *A Ana₁ gosta do cabelereiro₂ que cortou [o cabelo ec₂]*
 the Ana likes of-the hairdresser.m that cut the hair
 ‘Ana likes the hairdresser that cut *her/his hair’

Finally, (15) shows that it is possible to have multiple null possessors related to the same subject. The subject *Ana* establishes a dependency with *mother* in the direct object position, *aunt* in a PP adjunct and *grandmother* in a relative clause. Such sentences are easily accounted for if each DP includes a null possessor bound by the subject, but in a movement account it requires a number of extra stipulations.

- (15) *A Ana₁ visitou [a mãe ec₁] com [a tia ec₁] que mora*
 the Ana visited the mother with the aunt that lives
com [a avó ec₁]
 with the grandmother
 ‘Ana visited her mom with her aunt that lives with her grandmother’

In sum, relative clauses are opaque domains for movement in BP, but they do not block the relation between external and internal possessor positions. In addition, the same locality constraints that distinguish between body part and kinship terms when no island boundary is involved holds for relative clause environments as well.

Let us take stock. We find no commonality between the domains within which binding of the null possessor is possible and island domains. Rather, we find evidence for null anaphoric arguments in the internal possessor position of relational nouns. These null anaphors enter into binding relations which show sensitivity to a range of discourse factors. Further, if there is a local *c*-commanding subject, we find a distinction between body parts and kinship terms. Possessors of body part DPs are bound by the local antecedent, while possessors of kinship terms may find more distant antecedents. If there is no local *c*-commanding subject, then the distinction between the two classes is neutralized. Both types of nouns may link the null possessor with a subject across an island boundary.

Movement analyses of the internal-external possession relation encounter severe difficulties in understanding this pattern, both because they must distinguish locality requirements based on the lexical semantics of the relational noun, and because the pattern for kinship terms is the opposite of what would be predicted.

3. Null possessors as null anaphors: Binding and logophoricity

The evidence examined so far leads us to three important empirical generalizations. First, body part and kinship terms impose different locality restrictions on the interpretation of their null possessors. If the possessum's local domain includes a *c*-commanding subject, the local subject must bind the possessor, but kinship terms allow long-distance antecedents in the same configuration. The degree to which long-distance subjects are available for kinship possessors is modulated by discourse and world-knowledge factors. Second, the distinction between body part and kinship terms is neutralized when their local domains do not contain a *c*-commanding subject, in which case both accept more distant antecedents. Crucially, such binding relations may cross any number of island boundaries. Finally, in the absence of a *c*-commanding antecedent anywhere in the sentence, the null possessor of both body part and kinship terms rely discourse factors in seeking a binder, although they are not as flexible in this search as are free pronouns. The first generalization suggests that the null possessor of body part terms is subject to Condition A of the Binding theory (Chomsky 1981).

- (16) a. *Condition A*: An anaphor must be bound in its governing category
 b. *Governing category*: *b* is a governing category for *a* if and only if *b* is the minimal category containing *a*, a governor of *a*, and a SUBJECT

But we must also capture the fact that the absence of such a binder does not result in ungrammaticality. Rather it frees the interpretation of the null possessor to search for an appropriate antecedent in the discourse context, a search which is

modulated by certain pragmatic factors – the same factors, in fact, which play a role in the interpretation of the null possessor of kinship terms, which are always free of the stricter structural requirement (in effect, condition A of the binding theory). Crucially, however, the null possessor of kinship terms is also not as free as is an overt pronoun, in terms of the binding relations it can enter into.

We make sense of all these properties if Brazilian Portuguese has two lexically distinct null anaphors, which define distinct binding domains. Body-part possessors are subject to a condition much like the original formulation of Condition A of the Binding Theory. However, if such a requirement cannot in principle be met, then the null anaphor is free to search the discourse context for an appropriate binder. This might mean that it is coreferent with a *c*-commanding subject outside of its domain, with a non *c*-commanding DP somewhere in the sentence, or that it is discourse-bound.

The kinship-possessor imposes less strict requirements. It says only that it must be bound by some *c*-commanding subject in the sentence that contains it. Once again, if that requirement cannot be met, then coreference may be established via the discourse context.

This body of observations speaks strongly against both a movement-based account and an account in terms of pure (structural) binding, both of which greatly under-predict the observed data. It is important, of course, that none of the patterns we have discovered are unfamiliar, an issue to which we now turn.

The null possessor cannot be bound in all cases, if binding is defined as co-indexation plus *c*-command. But it has long been recognized that in many languages the presence of anaphors that fail to be bound in certain environments, and would therefore violate Condition A, does not lead to ungrammaticality. Such cases have been explored under two main perspectives: exemption (Pollard & Sag (1992), Reinhart & Reuland (1991) and logophoricity (Sells 1987, Charnavel & Sportiche 2016). Pollard & Sag (1992) start from the consideration of environments in which reflexive pronouns can be bound outside their governing category – the possessive or coordinated DP – as defined in (16b), cf. (17).

- (17) a. They liked [each other's/their siblings]
 b. Max boasted that [the queen invited [Lucie and himself/him]

Pollard & Sag (1992) and Reinhart & Reuland (1991) are led by these considerations to the notion of exempt anaphora. Though their proposals differ significantly in the particular mechanisms used, the common insight is that certain positions are outside of the scope of the structural binding requirement on anaphors.

Exempt anaphors may then take as antecedents non-local, non-commanding, intra-sentential DPs, or be discourse-bound. They are however subject to

discourse-based conditions, most notably to intervention effects and to a bias towards antecedents which refer to individuals whose perspectives are being taken in context. (18) shows the effects of a plausible intervenor.

- (18) a. Billy was furious. The photograph of himself in the National Gallery was being taken down.
 b. Billy remembered that Tom said that a photograph of himself would be on display in the National Gallery.

The complement of *photograph* is an exempt position in (18a). The reflexive is not bound sentence internally, but it is interpreted as coreferent with the subject of the previous utterance, which is a salient antecedent, and the perspectival center of the discourse. The anaphor occupies the same position in (18b) but there are two plausible antecedents, the matrix and embedded subjects. Speakers report a strong preference for interpreting the anaphor as coreferent with the embedded subject, *Tom*. This preference could also be understood as a bias towards the perspectival center if this calculation can be done locally, so that in the embedded clause only Tom's perspective is relevant.

The examples in (19) show the bias towards the perspectival center on its own. Billy is the individual from whose perspective the narrative is being reported. (19a) is a felicitous continuation, but (19b) is odd because the only antecedent that can satisfy the gender-based presupposition of *herself* is Elaine, who however is not the perspectival center.

- (19) Billy was going to get even with Elaine
 a. The picture of himself that he displayed would really get on her nerves
 b. #The picture of herself that he displayed would really get on her nerves.

Once the empirical landscape was explored more carefully, it became clear that the phenomenon of exempt anaphora shares many important properties with the logophoric pronouns of several West African languages discussed by Hagège (1974) and Clements (1975). In Igbo, for instance, the pronoun *yá* specifically marks coreference in the context of a reported speech.

The notion of logophoricity has since been extended beyond those systems in which logophoric pronouns are distinct morphological forms to cases of non-clause bounded anaphora more generally, since they seem to be sensitive to similar discourse factors. In Sells (1987) logophoric behavior for both logophoric pronouns proper and long-distance anaphora are treated as an interaction of primitive discourse elements, namely the source of a report, the person with respect to whose consciousness the report is made, and the person from whose point of view the report is made.

With this brief overview in mind, we may now return to the case of null possessors in Brazilian Portuguese. We have already seen that the null possessors of kinship terms are sensitive to discourse-based prominence, or intervention effects. The examples in (20) and (21) show that the interpretation of null possessors is affected by issues of perspective, in ways that are very familiar from the literature on logophoricity.

- (20) *O Pedro₁ estava irritado com a Ana₂. A foto [do filho ec₁] que a Bia postou era muito feia.*
 the Pedro was annoyed with the Ana The picture of-the son that the Bia posted was very ugly.
 'Pedro was annoyed at Ana. The picture of his son Bia posted was very ugly'
- (21) *A Ana₁ estava irritada com o Pedro₂. A foto [do filho ec₁] que a Bia postou era muito feia.*
 the Ana was annoyed with the Pedro The picture of-the son that the Bia posted was very ugly.
 'Ana was annoyed at Pedro. The picture of her son Bia posted was very ugly'

A similar manipulation can be done by selecting predicates that entail that different participants are the source of information relevant to the event, biasing the interpretation of the null possessor towards the matrix subject in (23) and to the embedded subject in (24).

- (23) *A Ana₁ mandou um email pro Pedro₂ dizendo que [o pai ec₁] está doente*
 the Ana sent an email to-the Pedro saying that the father is sick
 'Ana sent Pedro an email saying that her father was sick.'
- (24) *A Ana₁ recebeu um email do Pedro₂ dizendo que [o pai ec₂] está doente*
 the Ana received an email from Pedro saying that the father is sick
 'Ana got an email from Pedro saying that his father was sick.'

Though an investigation of the precise discourse factors that influence the interpretation of the null possessors in their logophoric uses must be left for a future occasion, the initial discussion here points very clearly to the need to recognize uses of the null possessor that are not subject to structural binding requirements, but which are sensitive to the same sorts of discourse factors observed in the behavior of long-distance anaphora and logophoric pronouns cross-linguistically. I will remain neutral here on the precise characterization of logophoricity (does it involve syntactically present operators, as in Charnavel & Sportiche (2016), or

does it employ the same mechanisms as indexical shifts more generally?). For the present purposes it is enough to demonstrate the role that such factors play in the domain of external possession.

Note however that an additional conclusion seems warranted. We must allow the possibility that anaphors may lexically determine different binding domains. We must admit this possibility because we have identified two distinct null possessor anaphors, one licensed by body part nouns and one licensed by kinship nouns. This conclusion is of course well-established (see especially Reuland (2011) and the work that it builds on). But the precise nature of these licensing conditions, and why it is that body parts seem to demand more stringent binding requirements, is an important question that is not explained by the account proposed here. In future research we may investigate for instance whether the difference in behavior between the two classes of nouns can be linked to a distinction in the syntax of the DPs they head, or the particular semantic relation established between body parts or kinship terms and possessors.

An additional important question is that of what principles constrain the distribution of the null anaphors we have identified in BP, and based on what evidence learners can draw the distinction between null forms beyond their interpretative consequences. Resolution of this question is made more complicated by a set of intricate interactions between external possession, person features and the determiner head, which bans third person antecedents of kinship null possessors, but not body part ones. The reader is referred to Duek (2015) for a discussion of these facts.

4. Conclusion

We began by asking how the possession relation is established in Brazilian Portuguese when the DP that is interpreted as the possessor appears outside of the DP that hosts the possessum, and how the BP pattern fits into a general typology of external possession. I have argued that external possession in BP is not plausibly analyzed as an instance of movement to a thematic position, and is therefore dissimilar to German, as treated by Lee-Schoenfeld (2006). In particular, I have shown that despite appearances, external possession in BP is not sensitive to the locality restrictions typical of movement, but rather to restrictions known to limit the range of anaphoric interactions.

I have argued that a null anaphor analysis offers a simpler explanation of the base facts, without the stipulation of extra mechanisms such as sidwards movement and null resumptive pronouns, as made necessary in Rodrigues (2010) and Floripi and Nunes (2009). To the extent that binding does not suffice itself, the appeal to logophoricity is a natural one, since it is clear that reflexives cross-linguistically

are amenable to being discourse-bound under these particular circumstances, in sharp contrast with pronouns and the unpronounced lower copies produced by A-movement.

Finally, the analysis proposed here has consequences for the view that all external possession may be treated as movement, be it to thematic positions or not. That is, even if a movement derivation is not ruled out by any grammatical principle in a particular language, binding is still an analysis that is in principle available. The availability of both analytic options we have seen is a further instantiation of the choice between meeting a particular grammatical requirement by way of External or Internal Merge. This is a very natural option in the context of current minimalist theory.

Acknowledgments

My gratitude to Jim McCloskey, Amy Rose Deal, Maziar Toosarvandani, Matt Wagers and Pranav Anand for their very helpful discussion of this material. Thank you also to the two anonymous reviewers for their helpful comments. All errors remain entirely my own.

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Spanish adjectives are PathPs

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The goal of this contribution is to explore the hypothesis that not all languages that have a lexical open class of adjectives project them syntactically as the same kind of object. Specifically, we will argue that Spanish adjectives syntactically project their scales as PathPs, while English adjectives are PlacePs of sorts which do not encode the potential syntactic differences between types of scales. We contend that three previously unrelated contrasts between English and Spanish can be elegantly explained through this hypothesis: (i) the availability of adjectives as strong result complements, (ii) the availability of positive degree adjectives as the base of degree achievements and (iii) the availability of comparison class PPs with semantically absolute adjectives. The proposal that adjectives can be projected differently in two languages is coherent with the claim that adjectives are not defined by UG, which is supported by the existence of languages that lack this category.

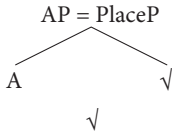
1. Introduction and main claims

Within the study of lexical classes adjectives occupy an unusual place: they have been claimed to be lacking in some languages, and in those languages that have them they are difficult to define through positive properties.

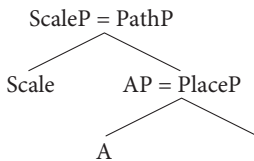
Assume for the time being that the claim that adjectives are not a universal category is right, and that Universal Grammar does not encode adjectives as lexical categories. The immediate question is how adjectives are built in languages where there is morphosyntactic evidence that there is a category ‘adjective’ distinct from verbs and nouns. This article deals with this question, and explores the way in which adjectives are projected in the syntax in two different languages, Spanish and English. We contend, following original insights from Hale & Keyser (2002) and Mateu (2002), that languages where there are adjectives build them using primitives that originally belong to the prepositional domain. However, languages vary with respect to whether adjectives are projected as PlacePs or PathPs (see Svenonius 2010 for a proposal according to which these two prepositional heads

have to be distinguished). Spanish is one example of a language where adjectives in the positive degree project as PathP, in practice projecting the scalar structure of the adjective as a syntactic object. English, on the other hand, projects adjectives as PlacePs, with the immediate consequence that scalar structure is not syntactically encoded, cf. (1) and (2).

- (1) English positive adjectives



- (2) Spanish positive adjectives



This syntactic difference explains three empirical contrasts between English and Spanish with respect to the distribution of adjectives in syntax: first, English allows adjectives as strong resultative (Washio 1997) modifiers, while Spanish famously rejects them, as illustrated in (3).¹

- (3) a. John hammered the metal flat.
 b. **Juan amartilló el metal plano.*
 Juan hammered the metal flat
 Intended: ‘Juan flattened the metal by hammering’

Second, in Spanish but not in English, positive degree adjectives can be the morphological base of degree achievement verbs, cf. (4).

- (4) a. *good-en
 Intended: ‘to become good/better’ (cf. *to better*)
 b. *a-buen-ar*
 to-good-V
 ‘to become healthier’

1. As it is well known (see particularly Mateu 2002), Spanish would use a gerund to express the manner component and use a verb to convey result: *Juan aplanó el metal martilleándolo*, lit. ‘Juan flattened the metal (by) hammering’.

Third, in English any adjective, independently of its scalar properties, allows for comparison class PPs, while in Spanish absolute adjectives reject them, as in (5).

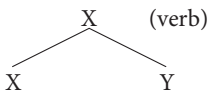
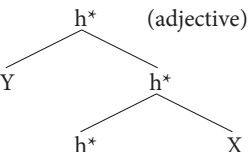
- (5) a. This glass is full for a wine glass.
 b. **Esta copa está llena para una copa de vino.*
 this glass is full for a glass of wine
 Intended: ‘This glass is full for a wine glass’

We will show that these three differences follow naturally if Spanish positive adjectives are already manifestations of PathP, or, in other words, if Spanish projects the scalar structure of the adjective in the syntax, while English does not. The article is structured as follows: in § 2 we shortly review the available evidence that ‘adjective’ is not a category defined by UG. In § 3, we discuss strong resultative adjectives; in § 4, we discuss the behaviour of adjectives inside degree achievements; in § 5, we move to comparison classes, and § 6 presents the conclusions of our study.

2. The non-universality of adjectives

There are some facts that suggest that, unlike nouns and verbs, adjectives are not categories imposed by UG. Adjectives, as a distinct morphological category, are lacking from some languages (as discussed in great detail in Stassen 1997, who shows that nouns or verbs are used instead). McCawley (1992) claimed that Mandarin Chinese lacks them; other languages without adjectives include Muna (van der Berg 1989), Swedish Sign Language (Bergman 1986), Acehnese (Durie 1985) and some varieties of Aleut (Golovko & Vaxtin 1990). That so many typologically unrelated languages have been diagnosed with lacking a category ‘adjective’, must mean that UG does not encode this category among the primitives of natural language.

Secondly, even in languages where there is a category called ‘adjective’, it has proven extremely difficult to characterise these objects as a natural class defined by positive properties. Baker (2003), in fact, defines adjectives as elements that lack the positive properties of verbs – able to introduce their subjects by themselves – or nouns – able to carry an index of identity –. Baker (2008) shows that adjectives are unable to agree in person cross-linguistically, and Kamp (1975) showed that adjectives, unlike nouns, cannot define kinds because they are fuzzy predicates that, before combining with degree, cannot define the set of objects included in their extension. Finally, others have proposed that adjectives are derived categories. Hale & Keyser (2002) argued that adjectives (X in (7b)) are derived parasitic categories roughly corresponding to the combination of a head and a relational head.

- (7) a.  (verb)
- b.  (adjective)

Mateu (2002) explicitly argues that adjectives behave structurally as nouns combined with prepositions: h^* in (7b) is a relational category that takes both a complement and a specifier, which is what characterises prepositions as categories in Hale & Keyser (1993, 2002). Mateu (2002) essentially claims that adjectives do not exist, and should be analysed as covert nouns introduced by prepositions. Here we develop Mateu's proposal by claiming that in some languages that preposition corresponds to Place, while in other languages it is Path.

Typologically, nobody has identified positive properties defining adjectives as universal categories (Bhat 1994); but even if we are more modest and restrict ourselves to one language or a language family, it is difficult to find a property that will do the job. Agreement with the noun is a typical property of adjectives in Romance languages, but note that other word classes, such as articles, also behave exactly in the same way (8). Some adjectives allow degree modifiers, but not all of them, cf. (9).

- (8) *l-o-s* *chic-o-s* *guap-o-s*
 the-m-PL boy-m-PL handsome-m-PL
 'the handsome boys'

- (9) *el* (**muy*) *previo* *ejemplo*
 the (very) previous example
 'the (**very*) previous example'

We take all these facts as evidence that adjectives are not objects defined by UG – that is, there is no A head –. When used, they are built derivationally drawing from other non-designated features. Specifically, here we will contend that in Spanish adjectives are built through PathP, while in English they are introduced as PlaceP.

The consequence of this is the following: while it is likely that semantically both English and Spanish associate scales to the denotation of adjectives, syntactically only some languages project those scales. Spanish uses PathP as a way to syntactically encode the series of ordered values (at least two) associated to the adjective's semantics, while English does not project the scale that is otherwise semantically interpreted.

This proposal – that English adjectives are PlacePs while Spanish adjectives are PathPs – throws light on three previously unrelated properties that differentiate Spanish from English with respect to the morphosyntax of adjectives: one fact about (i) their syntactic distribution; (ii) their morphological role, and (iii) the arguments they can introduce. In the following three sections we address each one of these properties in turn.

3. Contrasts I: Resultative phrases in Spanish vs. English

As it is well known, if we focus on strong result state complements – those that are not lexically entailed by the main verb and introduce a real result state, not a manner of the process (Washio 1997) –, both PPs and APs can play this role in English, while in Spanish this is restricted to PPs (see, among many others, Hernanz 1988, Suñer 1990, Leonetti & Escandell 1991, Mallén 1991, Starke 1995, Jiménez-Fernández 1998, Demonte & Masullo 1999, Son & Svenonius 2008, Acedo-Matellán 2012), cf. (10).

- (10) a. John broke the vase in one thousand pieces.
 b. *Juan rompió el jarrón en mil pedazos.*
 Juan broke the vase in one.thousand pieces
- (11) a. John shot Mary dead.
 b. *#Juan disparó a María muerta.*
 Juan shot A María dead
 ✓‘Juan shot Mary when she was already dead’ [depictive reading]
 *‘Juan shot Mary and as a result she died’ [strong resultative reading]

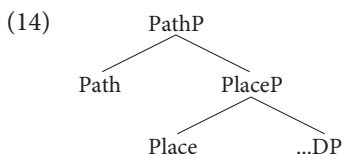
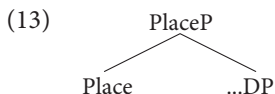
Let us focus for the time being on (10) as a window into the contrast in (11). Note a crucial property: the prepositions used in (10) above are place prepositions that only get interpreted as a result state by virtue of the syntactic context where they are introduced, namely the lexical properties of the main verb, as the contrast in (12) shows.

- (12) a. *entrar en la casa* [result location]
 enter in the house
 ‘enter the house, move inwards until you are in the house’
- b. *correr en la casa* [process location]
 run in the house
 ‘run while you are inside the house’

That is: when the main verb is at least telic, and can codify a result state, the place preposition *in/en* can be interpreted as identifying the result location (12a); if the

verb is atelic and does not define a result state, as in (12b), the place preposition locates the process.

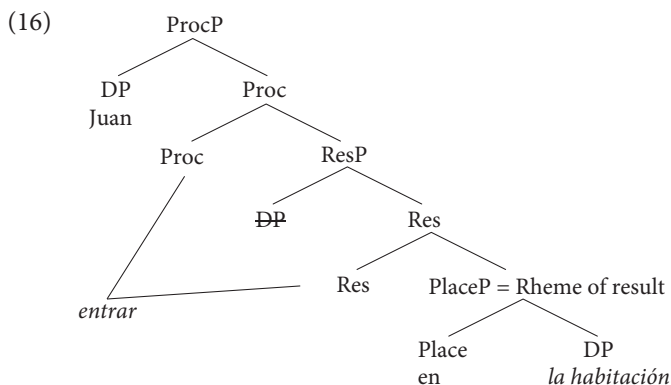
There is a growing consensus with respect to the analysis of the contrast in (12): the first ingredient is that two layers (at least) have to be differentiated in P (den Dikken 2010, Svenonius 2010, Pantcheva 2011, among many others): place, which identifies a region, and path, which defines a trajectory which involves that region – typically, as its ending point –. Paths are built over places, then, cf. (13) and (14).



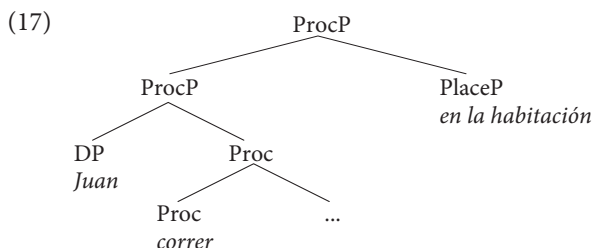
In an informal definition, a path involves a series of ordered points with an orientation (Lestrade 2012), while a place is a region which constitutes a point inside the set of points of a path. Note, furthermore, that languages differentiate, sometimes even morphophonologically, between place and path prepositions, the second being called ‘directional prepositions’ in most traditions, cf. (15).

- (15) towards the bridge
 ‘following a path that culminates at a point close enough to the bridge’

With the distinction between path and place prepositions, we can now make the claim that the result location reading of PlaceP depends on the structure introduced by the verb. This is studied in detail in Ramchand (2008), where she proposes that verbs have to be decomposed in different layers. The two that are crucial for our study are Proc(ess)P, which defines the dynamic part of the event, and Res(ult)P, that defines the state following the culmination of the dynamic part in a telic verb. Following Ramchand (2008), a PlaceP can only be interpreted as the result location when it is the complement of ResP, as in (16).



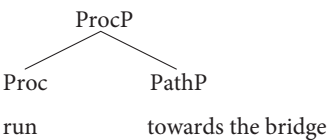
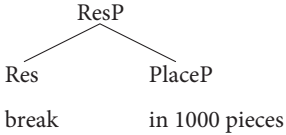
In contrast, the reading where PlaceP locates the process and lacks the result location reading emerges when it combines with ProcP; the specific structure associated to this reading is orthogonal to our purposes, but in (17) we represent it as adjunction.



Given (16), now we can diagnose whether ResP can take PathP as complement. It turns out it cannot: prepositions that are unambiguously directional are ungrammatical with verbs that trigger the result location reading into PlacePs (18b).

- (18) a. *correr hacia la casa* [No ResP → PathP fine]
 run towards the house
 b. **entrar hacia la casa* [ResP → *PathP]
 enter towards the house

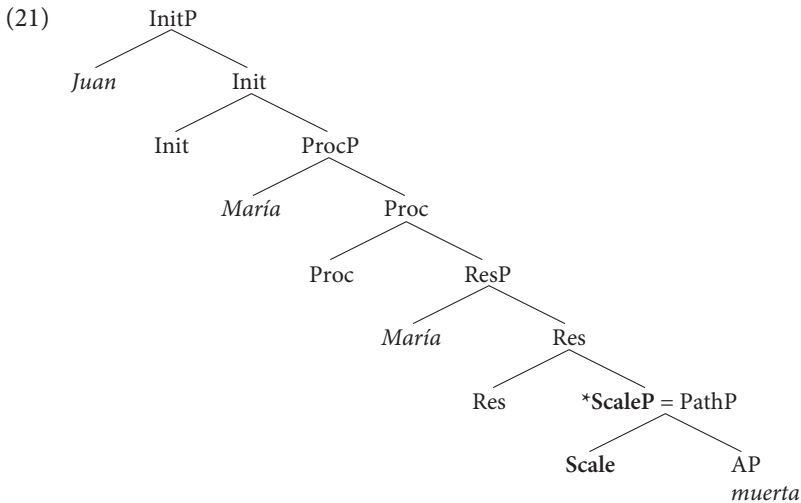
The contrast in (18) suggests something quite intuitive: ResP, being a stative projection, does not match well with a PathP, which defines a trajectory; ProcP, which encodes the dynamic progression of the event, has no problem combining with that trajectory, which in many cases, such as (18a), is used to co-define the Aktionsart of the predicate (Tenny 1987), cf. (19).

- (19) a. 
- b. 

Let us next consider the implications of this for adjectives. Here (following also Ramchand 2008) we interpret scales as a specific type of path. As (spatial) paths, scales involve an ordered set of points (values) and an orientation (positive or negative, Kennedy 1999). Scales, just like other paths, can be bounded (closed) or unbounded (open). In consequence, a language that projects the scalar properties of the adjective in the syntax would do so by projecting a PathP denoting the scale. This PathP/ScaleP would take the AP as its complement, defined as a PlaceP. Our claim is that Spanish projects ScaleP, while English does not. Spanish adjectives, then, would be paths, and English adjectives would be places. This difference immediately generates the predictions in (20).

- (20) a. English APs, lacking ScaleP, will be selectable by ResP because they are projected as PlacePs.
 b. Spanish APs, projecting ScaleP, will not be selectable by ResP.

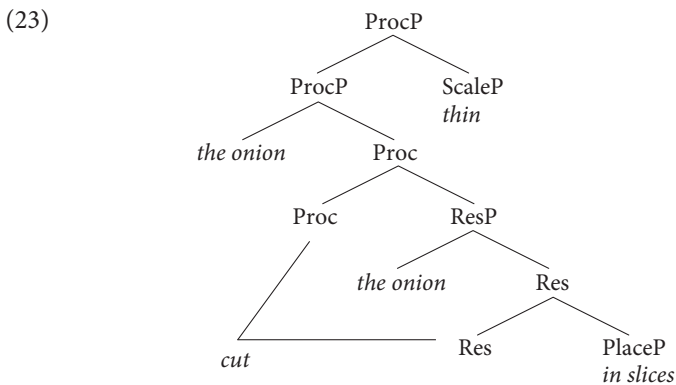
This is precisely what we find in our data. The strong result reading of **Juan disparó a María muerta* ‘Juan shot Mary dead’ is ungrammatical because to convey this meaning the AP would have to be in the complement of ResP (21). However, if APs are projected as PathPs in Spanish, (21) is ungrammatical for the same reason as (18b).



On the other hand, Spanish can project adjectives as spurious resultatives (Washio 1997), that in fact modify the manner in which the process takes place (and only by implication can be interpreted as affecting the object that undergoes a change). The sentence in (22) is one example of a spurious resultative. Note that *fina* ‘thin’ is compatible with a strong result PP *en rodajas* ‘in slices’, which shows that they are in different structural positions. Having diagnosed that the result interpretation of a PlaceP depends on it being the complement of ResP, this shows that the adjective must be outside ResP; the absence of an entailment that the onion became thin confirms this.

- (22) *Juan cortó [fina] [la cebolla] en rodajas.*
 Juan cut thin the onion in slices
 ‘Juan cut the onion thinly in slices’

We propose that spurious resultatives, allowed in Spanish, are merged as adjuncts to ProcP, where their being PathP does not produce ungrammaticality (23). From this position, they provide a property of the manner in which the cutting event takes place, but do not directly affect the result reading.



Hence, we have shown that the proposal that Spanish adjectives are PathPs directly explains why they cannot be merged as complements of ResP, thus unifying the distribution of Path and Place PPs with the distribution of adjectives in Spanish.

4. Contrast II: Change of state with adjectives in English and Spanish

Bobaljik (2012) claims that, cross-linguistically, if a degree achievement verb is derived from an adjective and the adjective uses a suppletive form for the comparative, that comparative distinct form has to be used. In this section we will argue that this claim is true for English, but not for Spanish, and the underlying reason is the same that we noted before: Spanish positive adjectives are already PathP and therefore provide a syntactically encoded scale that can be used in order to measure the gradual change.

Consider (24). In English, the comparative of *bad* is *worse*, and that is the form that is used when building the verb equivalent to ‘becoming worse’; the form *badden*, while attested, corresponds to the semantics of the comparative *badder*, restricted to a particular specialised meaning that is predictably kept in the derived verb. If the verb does not denote a gradual change (24b), the positive form of adjectives otherwise distinct in the comparative can be used. In general, degree achievement verbs cannot be formed with the positive degree adjective if there is a distinct comparative form (24c).

- (24) a. to worsen / #to badden
 b. to belittle (not change of state)
 c. *to small-en, *to good-(d)en

In Spanish there are also some verbs derived from the suppletive comparative form of the adjective, such as *mejor-ar* ‘better-V, to improve’ or *em-peor-ar* ‘im-worse-V, to worsen’. However, and contra Bobaljik, it can be shown that Spanish does have verbs that (i) denote gradual change; (ii) are derived from adjectives that have a suppletive comparative and (iii), however, use the positive degree morphology. Let us consider the sentence in (25).

- (25) *Chepita, que estaba maluca, ya se está abuenando* [Perú]
 Chepita, that was sickly, already SE is to-good-en-ing
 ‘Chepita, who was a bit sick, is already getting better’

The gradual change reading is obvious here: Chepita is not healthy yet, but healthier. The base form is the positive degree *bueno*, not the comparative *mejor*. This is unattested in English.

There are two potential counterarguments that we want to address. The first one is that Spanish also allows a regular comparative form of *bueno*, *más bueno* ‘more good’ in some meanings of the adjective. However, this counterargument does not apply because in the meaning that *bueno* has in (25), ‘healthy’, the regular comparative is not accepted by speakers: ‘healthier’ must be *mejor*.

- (26) #*El paciente se puso más bueno.*
 the patient SE became more good
 *‘The patient became healthier’
 ✓‘The patient became more attractive’

A second counterexample could be that (25) is built on the noun *bueno*, not the adjective. However, speakers reject the use of *bueno* as a noun in the meaning of ‘healthy person’ (27), so in the intended meaning of the verb the base must be an adjective.

- (27) **un bueno*
 a healthy
 Intended: ‘a healthy person’

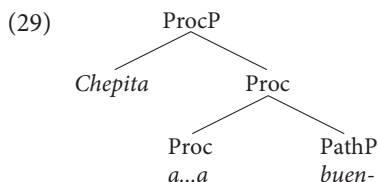
The fact is, then, that Spanish can use the positive degree adjective as a base to build a gradual change of state. Following a long tradition (cf. for instance Hay et al. 1999), the crucial property of degree achievements is that the scale underlying the base adjective is used as a path that measures the gradual change. Now, if, as we have proposed, APs in Spanish syntactically project their scales as PathP, the fact that the positive form is good enough to measure the change is readily explained. In contrast, if English APs are projections of PlaceP and therefore their scales are not projected in the syntax, we precisely expect that the adjective will have to be combined with degree morphology in order to define a process that involves a gradual change across the different values of the property denoted, which is necessary in order to build a degree achievement.

- (28)
-
- ```

 graph TD
 NP1[Mary] --- #ProcP[#ProcP]
 Proc1[Proc] --- #ProcP
 Proc2[Proc (-en)] --- Proc1
 NP2[good] --- Proc1

```
- \*‘Mary goodened’





### 5. Contrast 3: Syntactically-represented standards of comparison

Our final piece of evidence for the claim that English projects adjectives without their scales, as PlacePs, while Spanish already codifies the scale in the syntax as a PathP comes from the possibility of projecting a PP that denotes the class of comparison used to evaluate the adjective's extension. Consider absolute adjectives such as *drunk* or *straight*: these adjectives are interesting because their scales are associated with a maximal and/or a minimal value, which is taken by default as the standard value used to define its extension (Kennedy & McNally 2005). In English, even though there is a minimal or maximal value that can be used as a default, it is syntactically possible to redefine the standard value by defining a comparison class that can be syntactically projected as a PP, which in (30) is, respectively, what counts as the maximal value for a wine glass or what counts as drunk for an aviator (Rothstein & Winter 2004; McNally 2011; Sassoon & Toledo 2011).

- (30) a. This glass is full for a wine glass. [Absolute adjective]  
 b. This guy is drunk for an aviator.

Some semantic accommodation is still necessary, as the minimal or maximal value is not used in such cases to define the standard value: the glass is not full up to its border, and the aviator might not be maximally drunk, just drunk enough for what is acceptable for someone who has to pilot a plane. But the distribution of the comparison class PP is identical in absolute adjectives and relative adjectives (31), which denote completely open scales without maximal or minimal values.

- (31) a. This child is tall for a three year old. [Relative adjective]  
 b. This woman is pretty for a witch.

In contrast, in Spanish there is a syntactic difference between absolute and relative adjectives with respect to the availability of the comparison class PP: only relative adjectives allow them, cf. (32).

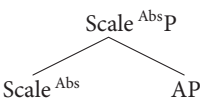
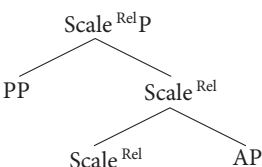
- (32) a. *Juan es alto para un chico de tres años.* [Relative]  
 Juan is tall for a boy of three years  
 b. *Morgana es guapa para una bruja.*  
 Morgana is pretty for a witch

- (33) a. *\*Esta copa está llena para una copa de vino tinto* [Absolute]  
 this glass is full for a glass of wine red  
 b. *\*Pedro estaba borracho para un astronauta.*  
 Pedro was drunk for an astronaut

This syntactic difference is, again, explained if Spanish syntactically projects scales as PathPs: in that case we expect that the distinctions between scales of different kinds, absolute and relative, is syntactically relevant. In English, scales are semantic objects only: as syntactic objects, all adjectives are the same because they all project as PlacePs, even if one semantic class needs accommodation and the other one does not.

There are different ways of implementing the syntactic difference between the two types of scale, and other evidence should be brought into the picture in order to decide between the two of them. At this point, we would just like to establish the fact that the distinctive syntactic behaviour of absolute and relative adjectives in Spanish supports the claim that Spanish syntactically projects scales as syntactic objects, PathPs, and we leave for further research to determine what is the best way of codifying this distinction.

Let us just remark that one option would be to say that there are two types of ScaleP, along the lines of Harley (1995), who argued for distinct flavours of little *v* with different selectional properties. As in Harley (1995), our two Scale<sup>0</sup> would be differentiated because one selects a PP argument and the other one does not.

- (34) a.   
 b. 

We would expect, making a comparison with Harley (1995), that some language would differentiate the two heads overtly in the morphology. To the best of our knowledge, such cases have not been documented. However, we think this is a line worthy of further exploration.

An alternative would be to keep only one Scale head and introduce the PP argument as the specifier of a higher projection that only selects scales that are unbounded (relative adjectives), in the same way that some auxiliaries just select for atelic predicates. Finally, it is conceivable that scales have to be treated as complex syntactic objects where the minimal and the maximal value that characterise absolute adjectives are treated as distinct projections. This would be similar to

Ramchand's (2008) decomposition of the verbal phrase into three projections: the set of values in the scale would correspond to ProcP, while the maximal value would be similar to InitP and the minimal value would correspond to ResP; a comparison class PP would be blocked in absolute adjectives because they already project either MinimalP or MaximalP and thus bind the variable with either of these two projections. In any instance, we leave these matters open for further research.

## 6. Conclusions and further extensions

In this article we have argued that adjectives, being a category not imposed by UG, can be projected in different ways in the syntax of the world's languages. Specifically, we have proposed that Spanish adjectives are projections of PathP, meaning that they syntacticise the scalar information of the adjective, while scalarity is not relevant for the syntactic behaviour of English adjectives, as they are projections of PlaceP.

It is of course tempting – as one anonymous reviewer suggests – to relate this distinction to the well-known difference between verb-framed languages and satellite-framed languages (cf. Talmy 2000 for an overview). Spanish, a verb-framed language, tends to express paths as verbs. Similarly, if what we have proposed is on the right track, Spanish would project adjectives as paths as well. Thus, the two main types of predicate in Spanish would have a tendency to be conceptualised as paths in contrast to English; this makes it plausible that the way in which adjectives are projected is not entirely independent of whether a language is satellite- or verb-framed.

There are potential extensions of our ideas to other domains, which we will not develop here. We just want to mention one of them in order to open potential new avenues of research. A way to interpret our distinction between English and Spanish is that the functional structure of adjectives is richer in Spanish than in English, as Spanish is projecting the scalar structure of the adjective above its lexical layer. It is tempting, although admittedly speculative at this point, to relate this to the well-known fact that Spanish adjectives show complete gender and number agreement with nouns, while English adjectives are invariable.

In any event, we believe to have been able to at least provide some convincing evidence that the claim that, unlike English, Spanish adjectives project as PathPs, interpreted inside the adjectival domain as scales, has some plausibility.

## Acknowledgments

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# Additive and aspectual *anche* in Old Italian

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In Modern Italian (MI), negative additives (e.g. *neanche* ‘neither/not even’) contain a negative morpheme *ne-* and obey negative concord (NC) with sentential negation. In Old Italian (OI), negative additives such as *neanche* are not attested. Instead, a non-negative additive, *anche*, combines with a negative marker: e.g. *né/non...anche* (‘neither/not even’). In OI (i) *anche* can be used both in negative, and positive contexts; (ii) *anche* can function either as an aspectual marker (= ‘(not) yet’), or as an additive focalizer (= ‘neither/not even’); (iii) different syntactic positions mirror its different interpretations. We suggest that the grammaticalization of *neanche* originates from the contexts in which additive *anche* occurs immediately right adjacent to the negative disjunction *né* (i.e. *né + anche > neanche*).

## 1. Introduction

To convey a negative additive meaning, languages resort to different morphosyntactic strategies. In many languages, additives and other focalizers can combine with the sentential negative marker. For instance, English combines a sentential negator (‘not’) with a focalizing particle such as ‘even’, see (1).

- (1) **Not even** Peter came to the party.

In addition to this syntactic strategy, a language may also express a negative additive meaning by purely morphological means. This option is also available in English, when ‘neither’ (= lit. ‘not + either’) is employed, see (2).

- (2) Peter didn’t come to the party, **neither** did Mary.

Modern Italian (MI) always employs morphologically complex negative additives that are derived by adding a negative prefix (*ne-*) to a positive additive focalizer, see (3).<sup>1</sup>

- (3) a. *Alla festa è venuto anche Pietro.*  
to.the party is come also Peter  
'Also Peter came to the party'.  
b. *Alla festa non è venuto neanche Pietro.*  
to.the party not is come not.even Peter  
'Not even Peter came to the party'.

As (3b) shows, the negative additive *neanche* obeys negative concord (NC) with the sentential negation *non*, since Italian is a non-strict NC language (see Zanuttini 1997, Zeijlstra 2004, Poletto 2014). However, a diachronic study we performed shows that in the Old Italian variety spoken and written in the Florence area between 1200 and 1370, henceforth OI, morphologically complex negative additives as those in (3b) are not attested.

In this paper we present a diachronic study of the negative additive focalizer *anche* in OI, and show that OI *anche* has different morphosyntactic properties from its MI counterpart.<sup>2</sup>

Specifically, *anche* has an aspectual interpretation in the postverbal position taking scope over a verbal phrase (vP), whereas it has an additive interpretation in the preverbal position taking scope over the entire clause. In this article, we argue that the additive and the aspectual interpretations are brought about in syntax. We account for the diachronic evolution from neg(ation) + *anche* in OI to *neanche* in MI by suggesting that *neanche* originates from a particular construction in which additive *anche* is immediately right adjacent to the negative disjunction *né* (i.e. *né + anche > neanche*).

The paper is structured as follows: in Section 2 we present data from MI; in Section 3 we briefly outline our research methodology, and illustrate and discuss the OI data; in Section 4 we show that additives and aspectuals in OI are merged in the left periphery of CP and vP respectively, and we suggest a plausible lexicalization path for *neanche*. Section 5 summarizes and concludes the paper.

1. We leave the study of further similar additive focalizers like *pure* 'also', *meno* 'less' etc. for future research.

2. The semantics of Old Italian *anche*, which plays a minor role in the present article, is treated in Franco et al. (2016).

## 2. (Negative) additives and aspectuals in MI

MI has a morphologically complex negative additive, see (4a'), which is derived from the positive additive in (4a) by adding the negative morpheme *ne-*.

- (4) a. *anche*                      a'. *neanche*  
       'also, too'                      'neither/not even'

As (3a) above illustrates, *anche* is licensed in positive contexts, whereas its negative counterpart in (3b) behaves like a strong negative polarity item (NPI), and needs to be licensed by an anti-veridical operator (Giannakidou 2011), e.g. the sentential negation, *non*, in (3b). Alternatively, the constituent that the additive modifies must be focus-fronted, (5), as is typical for the non-strict NC pattern of MI (Longobardi 1991, Zanuttini 1997, Herburger 2001, Zeijlstra 2004, Poletto 2014).<sup>3</sup>

- (5) *Neanche*                      *Pietro ho*                      *visto alla festa.*  
       neither/not.even Peter have.1SG seen at.the party  
       'I haven't seen even Peter at the party'.

In addition to the additives listed in (4), MI may also employ as additives other markers that generally have an aspectual reading. This is the case of *ancora* (= 'still/yet'), which may have an aspectual or an additive meaning as in the following examples ((6a) and (6b) respectively).

- (6) a. *Pietro sta*                      *ancora ballando.*                      (aspectual)  
       Peter AUX.PROG still                      dancing  
       'Peter is still dancing'.  
       b. *Prendo*                      *ancora caffè.*                      (additive)  
       take1.SG yet                      coffee  
       'I'll have more coffee'.

Although the additive meaning of *ancora* is not identical to that of *anche*, as the two items are not interchangeable (i.e. #*anche* in (6b), and #*ancora* in (3a)), the usage of one and the same lexical item in (6) suggests that the additive and the aspectual interpretations of *ancora* in MI (or *anche* in OI, as is shown in Section 3) have to be related, and, specifically, that both meanings might be derived from a

3. In this paper we use abbreviations as in the Leipzig Glossing Rule, plus the following ones: ANCHE = either aspectual/temporal or additive marker; ANCORA = either aspectual or additive marker; EMPH = emphatic; POL = politeness form, PRT = particle; SCL = subject clitic.



more general one. This intuition is also supported by further empirical facts that we illustrate in Section 4.2.<sup>4</sup>

### 3. Negative additives in OI

In this section we briefly illustrate our research methods and the OI data.

#### 3.1 Methods

For our study we ran a corpus search on the *Opera del Vocabolario Italiano* (OVI) database.<sup>5</sup> We restricted our search to the element *anche* in the Old Florentine variety, which is spoken and written in the area of Florence (Italy) between 1200 and 1370, and is conventionally referred to as OI in the literature (Renzi & Salvi 2010, Poletto 2014, among others).

#### 3.2 OI data: Positive and negative contexts

In OI, *anche* is only attested in its underived (positive) form, that is, *neanche* is not attested until the end of the 14th century according to our corpus study. More generally, the negative prefix *ne-* is absent from all negative additives until the end of the 14th century, but additives such as *anche* can be licensed in negative contexts, see (7).<sup>6</sup>

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4. One further difference between *anche* and *ancora* is that *anche* is only possible in positive contexts in MI, see (i), and the morphologically negative counterpart *neanche* is required in anti-veridical contexts. Instead, *ancora* can be used both as NPI, (ii a), or outscope negation, (ii b).

- (i) \**Pietro non è anche venuto.*  
Peter not is also come.
- (ii) a. *Pietro non è ancora venuto.*  
Peter not is yet come  
'Peter hasn't come yet'.
- b. *Pietro non sta ancora ballando.*  
Peter not AUX.PROG still dancing  
'It is not the case that Peter is still dancing'.

5. The database is available at the following website: <https://artfl-project.uchicago.edu/content/ovi>.

6. *Né anche* in (7c) only superficially resembles MI *neanche*, as *né* has the meaning 'and not' here.

- (7) a. *Perché altra è castità virginal, che non ebbe anche*  
 because other is chastity virginal that not had ANCHE (carnal)  
*uso d'uomo.*  
 use of man  
 'Because one thing is virginal chastity, which hasn't had sexual intercourse  
 with any man yet.' [Giamboni, *Vizi e Virtudi*, 35, p. 61]
- b. *Perché nel mondo non ne fue anche neuna sì crudele*  
 because in.the world not of.it was ANCHE no-one so cruel  
 'Because there hasn't been such a cruel [war] in the world yet'  
 [Giamboni, *Vizi e Virtudi*, 50, p. 86]
- c. *E quello cotale che assalisse, o percotesse, non possa*  
 and that such that assaulted or beat not can.3SG.SBJV  
*mai avere alcuno uficio, o beneficio, dalla detta, overo*  
 never have any function or benefit from.the said or  
*nella detta arte né anche debba essere aiutato.*  
 in.the said art and.not ANCHE must.3SG.SBJV be helped  
 'And the one who assaulted or beat [someone] shall never receive any  
 function nor benefit from the above-mentioned one, in the mentioned art  
 [association], and neither shall he be helped.'  
 [Statuto dell'Arte dei vinattieri, 91]

In all sentences in (7), *anche* is in a strong NPI context, as it is interpreted in the scope of negation (see the discussion on the semantics of *anche* in Franco et al. (2016)). This is a first important difference from MI, in which *anche* is only used in positive contexts (cf. (i) in fn. 4). The following examples show that OI *anche* was also productive in weak-NPI contexts (cf. Krifka 1995, Chierchia 2013 for weak NPIs):

- (8) *Vedestu anche neuno k' avesse uno amico intero?*  
 saw.you ANCHE no-one that had one friend whole  
 'Have you ever seen anyone who had a real friend?'  
 [Disciplina Clericalis, p. 75]

In (8) the NPI licenser is a non-veridical operator, and specifically a question operator (cf. Giannakidou 2011). Moreover, *anche* is equally attested in positive contexts, on a par with MI (with different word order, though), see (9).

- (9) *Ed anche siano tenuti li decti capitani di far diri*  
 and ANCHE are.3PL.SBJV obliged the said captains to make say  
*ongne giuovidi una Messa.*  
 every Thursday a Mass  
 'And the abovementioned captains shall also have a Mass celebrated every  
 Thursday.'  
 [Compagnia Madonna Orsammichele, p. 655]

We can conclude that OI *anche* may occur in weak and strong NPI contexts, as well as in positive contexts, as in (9).

### 3.3 OI data: Aspectual vs. additive interpretation

The translation of the sentences in (7) and (8) above reveals that *anche* does not have a unique interpretation. *Anche* may have an aspectual meaning, corresponding to ‘ever’ or ‘not yet’ in negative clauses, as in (7a–b) and (8). Alternatively, *anche* is an additive meaning ‘also’, or ‘neither’, in negative clauses such as (7c). For clarity’s sake we repeat (7a) below as (10), and we provide its enlarged context.

- (10) *Perché altra è castità virginal, che non ebbe anche*  
 because other is chastity virginal that not had ANCHE (carnal)  
*uso d’uomo, e altra è castità vedovale, che già uso*  
 use of man and other is chastity of widow that already (carnal) use  
*d’uomo ha avuto, ma or se ne astiene.*  
 of man has had but now REFL of.it refrain  
 ‘Because one thing is virginal chastity, which hasn’t had sexual intercourse with any man yet, and another thing is chastity of widows, which has already had sexual intercourse with men, but now refrains from it.’

[Giamboni, *Vizi e Virtudi*, 35, p. 61]

The discourse context in (10) shows that *anche* has an aspectual reading, since the sentence meaning is a contraposition between the virginal type of chastity, for which sexual intercourse has *not yet* occurred, and widows’ chastity, for which sexual intercourse has *already* occurred, but can no longer occur, since the partner is dead. A similar aspectual interpretation is assigned to *anche* in (7b), where the speaker talks about an exceptionally cruel war, which, in such degree of cruelty, was not attested before. The aspectual reading in (8) comes instead from the speaker questioning the addressee with a formula of the kind ‘have you ever...?’.

A relevant point for our analysis (Section 4) is that, in our corpus, all the examples in which *anche* has an aspectual reading are cases in which *anche* is in a structurally low position, as (7a, b) show. There, *anche* occurs after the finite verb. By contrast, in (7c), and, more generally, in all cases in our corpus with a (negative) additive reading, *anche* precedes the inflected verb. We may thus conclude that in OI the structural position of aspectual markers such as *anche* is different from that of (negative) additives.

In the next section we capitalize on this observation, and offer a syntactic analysis of *anche* that also accounts for the morphological process that led to the item *neanche* in MI.

## 4. Analysis

In this section we propose an analysis that accounts both for the double reading of *anche* (i.e. as (negative) aspectual and additive marker (Section 4.1)) and for the introduction of the negative additive focalizer *neanche* in MI (Section 4.2).

In our analysis we capitalize on Poletto's (2014) work on the vP-periphery in OI. Poletto shows that the verbal domain is separated from the inflectional domain by a functional area that structurally resembles the CP of OI (cf. Benincà 2006, Benincà & Poletto 2004, among others) and MI (Rizzi 1997, 2004, Belletti 2004). Specifically, Poletto (2014) shows that the OI vP periphery hosts an Operator head that encodes quantificational or focus features, see (11) below.

- (11) [vP [Topic1 [Topic2 [Topic3...[Operator...VP]...]]]] (from Poletto 2014: 55)

In the present analysis, we assume that the Operator head in the vP periphery is in fact a low Focus head, since it encodes a Focus feature, while we remain agnostic with regard to the possibility that this head might trigger movement of some other types of operator or quantifier. In Section 4.1 we argue that *anche* may merge as the specifier of this low Focus head in the vP periphery.

Alternatively, *anche* may directly merge in the specifier of (a quantificational) Focus head in the CP periphery, which is as in (12).

- (12) [Force [Topic [Focus [Mod [Fin] [TP...]]]]] (cf. Rizzi 2004)

In the next sections, we show that the assumption of a FocusP in the vP and CP periphery (cf. Poletto 2014) is confirmed by our data, as it is visible in the syntax (and has consequences for the semantics) of *anche*.

Moreover, we argue that MI *neanche* originates from the possibility of merging *anche* in CP Focus (see Section 4.2).

### 4.1 The syntax of OI *anche*

#### 4.1.1 *Anche as aspectual marker*

As we mentioned in Section 3.3, all instances of aspectual *anche* in our OI corpus are cases in which *anche* is merged in a structurally low position: after the negation marker and the finite verb, but before any postverbal object (13a), and before the non-finite predicate (13b).

- (13) a. *Tu si pare ch'abie ragione, ma qua' fatti*  
 you REFL seems that have.2SG reason but which facts  
*portino pregio e qual senno ti faccia degno*  
 you bring.3PL.SBJV prestige and which sense you make.SBJV worth  
*di ciò ch'adomandi, no lo 'ntesi anche da niuno.*  
 of this that ask.2SG not it heard.1SG ANCHE from nobody  
 'It seems that you are right, but I haven't heard from anybody yet which  
 facts are giving you a prestige and which opinion deems you worth of what  
 you are asking.' [De Amore, 13, p. 57]
- b. *Ma come pare a me, non credo che portiate trestizia*  
 but as seems to me not believe.1SG that bring.2PL sadness  
*per amante, perché non foste anche innamorata di niuno.*  
 for lover because not were.2PL ANCHE in.love of nobody  
 'But, as it seems to me, I don't think that you are sad for a lover, because  
 you haven't yet been in love with anybody.' [De Amore, 18, p. 151]

We propose that postverbal *anche* in sentences like those in (7a),(b) and (13) is merged in the specifier of a low Focus head in the vP periphery (which is analogous to the Operator head in Poletto 2014 in (11)). In (14) we provide the structure for (13b).

- (14) [<sub>IP</sub> ..*non foste* [<sub>LowFocP</sub> *anche* [<sub>LowFoc0</sub> Ø] [<sub>vP</sub> *innamorata di nessuno*]]]

A structure like (14) has never been proposed for aspectual adverbs, since it is usually held that they are either adjoined to the vP<sup>7</sup> or merged as specifiers of FPs with the same aspectual value,<sup>8</sup> but never in a FocusP. However, we propose that *anche* is not lexically aspectual, and, specifically, we surmise that it has the basic meaning of an additive focalizer. The aspectual interpretation of *anche* results from the type of element it takes scope over, namely vP, i.e. event structure.

This analysis easily accounts for the fact that MI *anche* is generally no longer used as an aspectual marker, since adverbs can no longer occur in a low vP Focus position, in MI. In MI the vP periphery is no longer as 'active' as it is in OI (see Poletto 2014, and Mensching 2012), that is, *anche* (or *ancora*) can no longer be merged in the specifier of a vP-peripheral Focus head, and, consequently, it cannot have the semantics of an aspectual marker (see Franco et al. 2016).

7. As standardly assumed in Minimalism, see Collins (1997) on adjunction.

8. See Cinque (1999), now standardly assumed in the cartographic approach.

#### 4.1.2 *Anche* as wide-scope focalizer

In contrast to the cases in which *anche* has an aspectual interpretation, examples like (7c), repeated as (15a), and (9) above, as well as (15b) below, show that *anche* may also be merged structurally higher in the clause. Negative additive *anche* may act as a wide-scope focalizer on the entire clause, see (15).

- (15) a. *E quello cotale che assalisse, o percotesse, non possa*  
 and that such that assaulted or beat not can.3SG.SBJV  
*mai avere alcuno uficio, o beneficio, dalla detta, overo*  
 never have any function or benefit from.the said or  
*nella detta arte, né anche debba essere aiutato.*  
 in.the said art and.not ANCHE must.3SG.SBJV be helped  
 ‘And the one who assaulted or beat [someone] shall never receive any function nor benefit from the above-mentioned one, in the mentioned art [association], neither shall he be helped’.

[*Statuto dell'Arte dei vinattieri*, 23, p. 91]

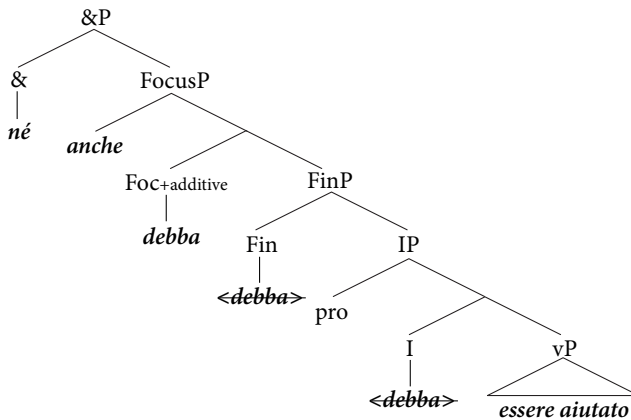
- b. *Dolcissima moglie, guarda che ttu non toccassi questo*  
 sweetest wife look that you not touch.2SG.SBJV this  
*vasello, né anche non bere i niuno modo, perciò*  
 cup and.not ANCHE not drink in not one way because  
*ch'ell'è cosa di veleno e contraria alla vita dell'uomo.*  
 that it is thing of poison and against to.the life of.the man  
 ‘My sweet wife, pay attention not to touch this cup, neither to drink [from it] in any way, because it contains something poisonous and against human life.’  
 [*De Amore*, 33, p. 321]

In (15a) *anche* clearly scopes over the entire clause it c-commands, since the clausal content corresponding to ‘he shall be helped’ is removed from (or, put differently, negatively added to) the set of given alternatives (in the specific case: ‘receive any function’, ‘receive any benefit’), by means of a negative disjunction (*né* = ‘and not’) whose projection we represent here as &P.

A similar type of construction is given in (15b), in which *anche* scopes over the clause *bere i niuno modo*. The semantic content of this clause is negatively added to the set that includes ‘touch this cup’ as another alternative.

Since OI was a V2 language, i.e. the inflected verb moves to a C position in root clauses,<sup>9</sup> it follows that in these cases *anche* is merged quite high in the structure, i.e. in the CP layer. We propose that in sentences like (15), where *anche* is a negative additive with wide Focus, the merging point is directly SpecFocusP in CP, see (16) as a representation of (15a).

9. See Benincà (2006), Poletto (2014). For another view see Mensching (2012).

(16) Wide-scope *anche*

From SpecFocusP, *anche* c-commands the entire clause it scopes over, hence its wide-scope semantics.

More generally, our analysis of the additive marker is uniform, as this marker is always merged in a Focus projection and takes scope over the structural portion it c-commands, as it is either merged in CP or vP.<sup>10</sup> Evidently, the interpretation changes depending on the semantics of the object over which the additive particle takes scope.

#### 4.2 Further support: *ancora* in OI

A further piece of evidence comes from the fact that *ancora*, which is almost exclusively employed as an aspectual marker in MI, displays exactly the same double semantic interpretation that characterizes *anche* in OI. This semantic split is mirrored in the syntax in the same way, see (17).

- (17) a. *Nulla è ancora fatto della cosa che non è tutta compiuta*  
 nothing is ANCORÀ done of.the thing that not is all finished  
*di fare.*  
 to do  
 ‘There hasn’t been done anything yet of the thing that has not been completed.’  
 [Giamboni, *Vizi e Virtudi*, 53, p. 89]

10. On the DP periphery, see Franco et al. (2016).

- b. *In quelli tempi i romani [...] le dette cittadi pigliaro e  
in those times the Romans the said cities took and  
posero alla guerra fine. E ancora i Prenestini [...], Tito  
put to.the war end and ANCORA the Prenestini Titus  
Quinto combattendo, vinsero.  
Fifth fighting won*

‘In that time, the Romans [...] invaded the above-mentioned cities and put war to an end. Also the Prenestini, after fighting Titus the Fifth, won.’

[Giamboni, *Orosio*, 3, p. 137]

The sentence in (17a) shows that *ancora* has an aspectual reading when it is merged between the finite and the non-finite verb, whereas (17b) shows that *ancora* has an additive semantics when it is merged in sentence-initial position. These facts thus confirm our hypothesis that additive vs. aspectual semantics is mirrored in the syntax, in OI.

We have also looked at the co-occurrence of *anche* and *ancora* (both orders possible) in the same clause, to determine whether these elements have indeed an equivalent semantics, and whether they may simultaneously lexicalize the additive and the aspectual focalizer. Put differently, our search was determined to find simultaneous occurrences of *anche/ancora* like in (18).

- (18) [CP [FocP *anche/ancora* Foc [IP [vP [FocP *anche/ancora* Foc [VP]]]]]]

In the whole corpus, see methodology in Section 3.1, we found 22 cases of co-occurring *anche/ancora*, but of these only in two cases were *anche* and *ancora* co-occurring within the same clause with two different functions. These examples are given in (19)–(20).

- (19) *Detti denari sono di messer Bindaccio da Ricasoli che li  
said money are of mister Bindaccio from Ricasoli that them  
dovea avere dal detto Uberto e ancora ne dà anche  
must have from.the said Uberto and ANCORA of.them must ANCHE  
avere da llui.  
have from him.*

‘The above-mentioned money belongs to mister Bindaccio from Ricasoli who should receive it from the above-mentioned Uberto and should also receive again [more] from him.’

[*Libro arancio*, p. 45]

- (20) *Ancora gli diede anche cibo.  
ANCORA to.him gave.3SG ANCHE food*

‘He also gave him food again.’

[*Leggenda Aurea*, 26, p. 244]



Although the co-occurrence of *anche* and *ancora* is not frequent, the examples in (19) and (20) attest that it is possible, and prove that *ancora* and *anche* may take an additive as well as an aspectual semantics.

### 4.3 Rise of the morphological negative additive

As we have mentioned in the introduction, *neanche* is not attested in OI grammar until the very end of the 14th century. At that moment, the system had probably already changed into a different one, as the progressive loss of V2, the changes in the negation and in the complementizer system, as well as in other domains of syntax indicate (cf. Poletto 2014, Franco 2015a and b).

In the 1200–1370 period, we have found several examples in which *anche* immediately follows the negative disjunction *né*, as in (15), and (21) below:

- (21) *Ecco, [fratello], che il diavolo, maligno nemico, non t'ha*  
 here.is brother that the devil evil enemy not you has  
*potuto la prima volta attrarre al peccato, né anche la*  
 can.PTCP the first time attract to.the sin and.not ANCHE the  
*seconda, ma la terza t'ha vinto.*  
 second but the third you has won

‘Indeed, [brother], the devil, an evil enemy, could not induce you to sin the first time, neither the second one, but he won you the third one.’

[*Leggenda Aurea*, 48, p. 408]

The clause containing *né* and *anche* in (21) has an additive semantics, rather than an aspectual one. Moreover, *anche* is interpreted as an NPI, thus in the scope of negation, which is expressed by the negative disjunction *né*.

According to our analysis in 4.1.2, in (15) and (21) *anche* is merged in SpecFocP in the CP domain and is linearly right adjacent to the negative disjunction *né* at PF, see (16). We propose that *neanche* arises via a process of lexicalization followed by grammaticalization. That is, the sequence *né anche* was interpreted as one unit by speakers of a certain stage of the language and added to lexicon as one item (lexicalization), see (22b). This process started from contexts in which *anche* is preverbal and immediately follows *né* like those in (15) and (21), see (22a). In MI *neanche* has been grammaticalized into a negative additive, see (22c), and may occur in a postverbal position where it obeys NC.<sup>11</sup>

- (22) a. [<sub>CP</sub> *Né*... [<sub>FocP</sub> *anche*... [verb... →

11. We still do not know the exact period in which *neanche* is lexicalized as a single word. We leave a more extended study of the history of Italian to future research.

- b. [<sub>CP</sub> *Neanche* (lexicalization) [verb ... →  
 c. [*Non*...[verb... [*neanche*... (grammaticalization)

In a first stage, *anche* was merged in SpecFocP, followed by *né* in &<sup>0</sup>, and both items result linearly adjacent at PF, see (22a).<sup>12</sup> Based on this structure, *neanche* is subsequently reanalyzed as one bimorphemic word, see (22b).<sup>13</sup> Once *neanche* was grammaticalized as a negative additive, it was able to be displaced elsewhere in the clause while maintaining the negative additive semantics, as shown in (22c).

In this perspective, the negative additive semantics is the compositional result of the semantics of negative *né*, and additive *anche*. This semantics is fixed in the lexicon in MI, whereas in OI it results from the syntactic configuration, because one and the same item (*anche*) can either be a positive/negative additive or aspectual, depending on its syntactic position and on the polarity of the clause.

## 5. Conclusions

In this paper we have explored the syntax of Italian *anche*, and our diachronic study has shown that this element could be used as either an additive or as an aspectual marker in OI, whereas it can only be used as an additive marker in MI. Moreover, the interpretation of OI *anche* is perfectly mirrored in the syntax: the element *anche* is always a Focus marker merged in a Focus position, and its interpretation is linked to the structural object it takes scope over (CP vs. vP). When *anche* is merged in a low sentential position, as the specifier of a Focus head in the vP periphery, it has an aspectual meaning. By contrast, when *anche* is merged in SpecFocP in CP, it has a (negative) additive semantics. Crucially, the different meanings of *anche* (additive and aspectual) do not correspond to two different lexical entries, but arguably result from the underspecification of the Focus semantics of *anche* (Franco et al. 2016). This underspecification is resolved in syntax, via merger of *anche* at different structural levels (in the CP or in the vP).

With regard to the diachronic changes that have affected the morphosyntax of *anche*, we have also traced its lexicalization-grammaticalization path through the history of Italian and proposed that the rise of *neanche* in MI starts out in those cases in which additive *anche* is linearly adjacent to the negative disjunction *né*. To account for the fact that MI *anche* is generally no longer used as an aspectual

12. By &<sup>0</sup> we refer to the head of &P.

13. In the Renaissance period (1370–1500), the negative additive corresponding to MI *neanche* is still written as two separate words, *né anche*, that are however always adjacent. This is clearly an intermediate stage towards the grammaticalization of *neanche*.

marker, we have argued, in line with Mensching (2012) and Poletto (2014), that in MI the vP periphery is no longer as ‘active’ as in OI and, consequently, ‘low’ *anche* cannot have the semantics of an aspectual marker anymore.

Elsewhere, Franco et al. (2016) show that a similar lexicalization process may affect aspectual markers in other varieties, such as some Venetan and other Italo-Romance and Gallo-Romance dialects. Hopefully, this study can be replicated for other (negative) additive markers in OI, as well as in other (old) Romance varieties, to assess whether our analysis can cover further facts.

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# The acquisition of variation

## Romance adjective placement in bilingual children

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Bilingual children do not have problems with variation across languages, one of the most convincing kind of evidence that they are able to separate their two languages from early on. Natural languages exhibit another kind of variation, namely intra-linguistic variation, as in the case of adjective placement in Romance (French, Spanish). The acquisition of the distribution of adjectives implies a fine analysis of different factors which determine the probability with which an adjective occurs pre- or postnominally. An analysis of 12 German-Romance (French, Spanish) or Romance-Romance (French, Spanish, Italian) bilingual children from birth from the age of 1;4 until the age of 5;4 and 3 adults (Spanish, French) shows that it is important to distinguish between French and Spanish. In French, the children are able to acquire the fine distinctions of the adult systems from early on, both with respect to variation across languages and intra-linguistic variation. The French bilingual data lack any signs of cross-linguistic influence. In contrast, bilingual children with Spanish do not always reflect the input frequencies.

### 1. Introduction

The observation that in the Romance languages French and Spanish attributive adjectives occur either before or after the noun has recently been studied in detail, however rarely for corpus data. Some researchers claim that the different adjective orders express scope differences (Cinque 2010, Ticio 2010, Waugh 1977, Bouchard 1998). In contrast, other studies suppose that no unique semantic property is associated with one position (Abeillé & Godard 1999, Fox & Thuilier 2010, Thuilier 2014) and other factors play a role. While French and Spanish provide two positions for adjectives, German allows only prenominal adjectives.

Adjective order is studied seldom in acquisition due to the rather low frequency of adjectives in any kind of register. Cardinaletti & Giusti (2010: 67) show for the LIP corpus of spoken Italian (containing 489,178 words and consisting of

five different types of conversation) that adjectives are the least frequent of the lexical categories, occurring with a frequency of 9.47%. Obviously, large corpora are necessary. Rizzi et al. (2013) review the scarce literature on early monolingual Spanish, French (Italian) and German children and astonishingly report a nearly “error-free” path.

Investigations of bilingual language acquisition deal with the question of whether cross-linguistic influence occurs. The results are heterogeneous. While researchers like Bernardini (2003) observe that bilingual acquisition of adjective order (in 2 Swedish-Italian children) differs from that of monolinguals, Nicoladis (2006) reports for bilingual French-English children that “the bilingual children were always more often correct in their adjective placement than they were incorrect” (Nicoladis 2006: 24). Rizzi et al. (2013) analyse a large database of bilingual German-Romance (French, Italian, Spanish) and Romance-Romance children who show no signs of cross-linguistic influence (cf. Kupisch 2014 for 19 bilingual German-Italian adults).

Until now, all acquisition studies have categorized the children’s adjective-noun strings by the labels “target-like” and “target-deviant”, basing their analysis on one of the following assumptions: either each adjective is associated with only one syntactic position categorically or the different positions express scope differences, without analysing these differences in the data from the children. In other words, we still do not know whether bilingual children exhibit problems with the kind of variation found in Romance languages since the acquisitionists have probably applied a too rigid system to child speech. The present article is an attempt to fill this gap and tries to look at child data from a more neutral perspective.

## 2. Variation and language acquisition

In Romance, adjectives can occur pre- and postnominally without always expressing different semantics. In other words, the input the children receive contains intra-linguistic variation. In a recent publication, Anderssen, Bentzen & Westergaard (2010) ask the question of whether semantically vacuous variation in the input matters to children, monolingual or bilingual. The kind of variation they address is true optionality, i.e. optionality which is semantically vacuous and exhibits the same lexical items. To illustrate true optionality, they take the following example from Norwegian particle verb constructions which are semantically equivalent and contain the same lexical items.

- (1) a. *Han kastet ut hunden*  
 b. *Han kastet hunden ut*  
 ‘He threw out dog-the.’ (Anderssen et al. 2010: 1)

They conclude that variation in the input does not seem to matter to children. True optionality can be handled in the same way as variation across languages, namely by the Theoretical Bilingualism Hypothesis (Roeper 1999) or Yang’s (2002, 2004) Variational Learning Model.

Adjective placement in Romance exhibits a kind of variation for which a complex interplay of different factors, semantic, syntactic, morphological, phonological and lexical, have to be taken into account in order to predict in which position the adjective occurs. Even factors which lie outside grammar, like frequency, seem to play a role. If all these factors are taken into consideration, a stochastic rule can be formulated which allows to formulate a probability of occurrence. The variation across languages is categorical, though: German disallows postnominal adjectives, independently of the above factors. The question is whether bilingual children can acquire these two types of variation.

### 3. Adjective placement in German, French and Spanish

#### 3.1 Current assumptions in literature

Let us have a brief look at current assumptions in the literature on the variation of Romance attributive adjectives. According to linguists like Demonte (1999), Ticio (2010) and others, semantic factors affect the position of attributive adjectives in Romance: Whereas postnominal adjectives can change the extension of the noun (in a predictable or non-predictable way), prenominal adjectives do not have this effect. A radical view in this line of argumentation is expressed by Bouchard (1998) who assumes that every (French) adjective can appear pre- and postnominally, depending on the semantics expressed by the noun phrase.

In contrast Abeillé & Godard (1999) show for French that there are adjectives which can occur pre- and postnominally without a difference in meaning. For example, the adjective *charmant* in the NP *un charmant garçon* and *un garçon charmant* (Thuilier 2014: 289) means in both positions *a charming boy*. In this line of reasoning, Thuilier (2014), basing her results on corpus data, assumes for French that, among others, syntactic aspects like the length of the DP<sup>1</sup> and the nature of the

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1. Thuilier (2014: 300) shows that the presence of a relative clause, a PP, or another adjective after the noun strongly favours the prenominal placement of the adjective.



determiner<sup>2</sup> and lexical aspects related to the type of the noun<sup>3</sup> and to the adjective determine the position. Fox (2012) undertakes a cross-sectional study of three monolingual French children and their input. She investigates the preferences of adjectives for a particular position in the French spoken by the caretakers. Broadly speaking, she assumes that there are three types of adjectives: (i) Some adjectives always occur in prenominal position, (ii) others are always placed after the noun and (iii) some adjectives occur in both positions. 8% of all adjective types alternate, based on her database of spoken French. These 8% comprise 45.5% (922) of all occurrences of adjectives (2027). Investigating these alternating DPs in detail Fox (2012) shows that the favoured position of the adjective is the prenominal one. In addition, in some cases they can be placed in both positions with the same frequency, but a preferred placement after the noun is completely absent in her corpus.

Turning to Spanish, Hoff (2014) argues that there are alternating adjectives in Spanish and that their position is determined by phonological factors. Notice, however, that there are no comparable empirical studies for Spanish as for French and therefore, the issue of whether there are alternating adjectives and how frequent they are, has to remain open.

In sum, current studies and discussions have shown so far that the target system of attributive adjective placement in Romance languages contains variation. Some linguists argue that this variation pertains to all adjectives (like Thuilier 2014, Bouchard 1998), others assume that alternating adjectives form one (sub)group of adjectives (Fox 2012, Ticio 2010, Hoff 2014). They all agree on the fact that if alternation is possible, there are factors which determine the position of the adjective. In the literature, these factors are semantic in nature (Ticio 2010, Cinque 2010, Bouchard 1998, Waugh 1977), lexical, syntactic (Thuilier 2014, Fox 2012, Abeillé & Godard 1999) or phonological (Abeillé & Godard 1999, Hoff 2014, Prado 1980). Spanish corpora have received less attention and therefore the determining factors must await further empirical investigation.

Taking the assumptions of Thuilier (2014) and Bouchard (1998) seriously, we cannot apply the labels “target-like” and “target-deviant” to the domain of adjective positioning in French and in Spanish child language since adjectives can in

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2. Thuilier (2014:299f.) finds that demonstrative, possessive determiners and definite articles favour preposed adjectives.

3. Thuilier (2014:297) writes in this respect: “These observations go against the idea that the default position of an adjective is after the noun and argue for considering that there is not a canonical position for the adjective category as a whole but rather a canonical position for each lemma.” The noun can even force the adjective to appear in the non-preferred position. One example is the adjective *fort* which has a slight preference for prenominal position, but which is placed postnominally if it is combined with the noun *point* in *point fort*.

principle be placed in both positions and stochastic rules express preferences for one over the other position. Before we turn to the acquisition of adjective placement, we want to present new data from adults speaking French or Spanish and compare the French data with the study by Fox (2012).

### 3.2 Adjective placement in adult speech

In this section, we will present exemplary data of two Spanish adults and one French adult and compare the French data to the French adults analysed by Fox (2012). Following Fox, we investigate the distribution of pre- and postnominal adjectives and illustrate the positional preferences in spoken language.

#### 3.2.1 *French adult speech*

Our French adult data are taken from Rizzi et al. (2013) (cf. Figure 1). In addition, we have analysed one parental input of a French child (called French Input Syca-Inès' father in Figure 1).<sup>4</sup> Details about the corpora are given in Section 4.1. We will compare these data to Fox (2012, 2014).

Fox (2012) investigated 2027 adjective noun sequences in adult speech. The prenominal position prevails. The general distribution of prenominal and postnominal adjectives is the same as in the data from Rizzi et al. (2013) and the speech of Syca-Inès' father. If separated into types and tokens, Fox (2014: 106) observes that there are a lot more different adjectives which are placed after the noun but the fewer prenominal adjectives occur more often. In her study, Fox divided the instances of adjectives into those which occur either prenominally or postnominally only and those which occur in both positions, so called alternating adjectives. Interestingly, Figure 1 shows that the alternating adjective tokens occur frequently (45.4%), but the number of types is very small. The fact that the number of types of alternating adjectives is rather small allows us to predict that corpora of spoken French should deviate a lot as to the frequency of alternating adjective tokens, since alternation depends on the use of a small number of alternating adjective types. This is what we find. Syca-Inès' father only produces one alternating adjective type with a token frequency of 19 (5.7%). All other adjectives appear in a fixed position. Alternating adjectives remain unstudied in Rizzi et al. (2013).

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4. Jasmin Geveler has provided the quantitative analysis of this corpus.

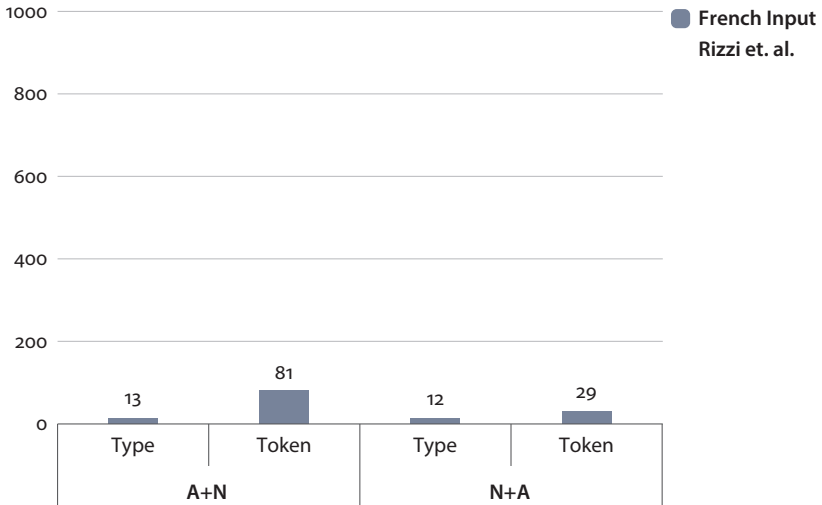
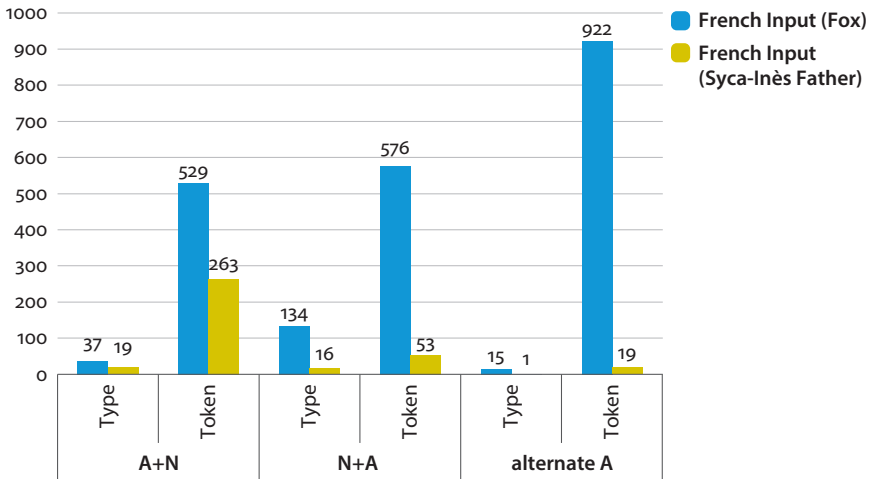


Figure 1. Adjective noun sequences in the speech directed to French children

### 3.2.2 Spanish adult speech

We analysed child directed speech of two Spanish adults (called Syca-Inès Input and Lucas Input).<sup>5</sup> Details about the corpora are given in Section 4.1. The postnominal position prevails. The type-token analysis shows that there are very few adjective types (Lucas Input 5.3% and Syca-Inès Input 3.1%) and tokens (Lucas Input 11.5% and Syca-Inès Input 7.6%) in Spanish which alternate. This result sharply contrasts with French.

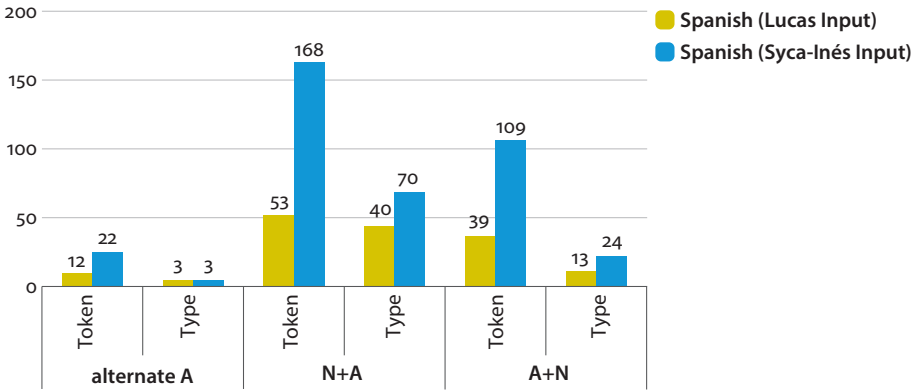


Figure 2. Adjective noun sequences in the speech directed to Spanish children

## 4. Empirical study

The challenge is to investigate a grammatical domain which involves variation from two perspectives: cross-linguistic and intra-linguistic variation. Due to the existence of intra-linguistic variation, the differentiation of target-like and target-deviant adjective noun sequences used across the board is not possible. Instead, we need to compare the bilingual acquisition data with the variational adult system.

5. Katharina Sonia Alcivar has provided the quantitative analysis of the two corpora.

## 4.1 Methodology

For the present study, we analysed the corpora of 12 children who are bilingual from birth and show different degrees of linguistic (un)balance (Table 1).<sup>6,7</sup> The language dominance and the dimension of the balance of the children's two languages is based on the MLU.<sup>8</sup>

**Table 1.** Overview of the analysed bilingual children

| Name      | Language | Raised in | Recordings (Fr/Ger/It/Sp) | Age     | Monolingual utterances |                | Language dominance                  |
|-----------|----------|-----------|---------------------------|---------|------------------------|----------------|-------------------------------------|
|           |          |           |                           |         | Romance                | Ger./(It./Sp.) |                                     |
| Alexander | Fr/Ger   | Germany   | 50/50                     | 2;2–5;2 | 9,802                  | 8,715          | Balanced with tendency towards Fr.  |
| Amélie    | Fr/Ger   | Germany   | 68/68                     | 1;6–5;0 | 13,343                 | 12,798         | Balanced                            |
| Céline    | Fr/Ger   | Germany   | 57/57                     | 2;0–5;4 | 6,060                  | 12,660         | Strongly unbalanced (Ger. Dominant) |
| Marie     | Fr/Ger   | France    | 32/32                     | 1;9–5;1 | 5,496                  | 1,541          | Extremely unbalanced (Fr. Dominant) |
| Syca-Inès | Fr/Sp    | France    | 35/35                     | 2;2–3;8 | 5,819                  | 6,627          | Extremely unbalanced (Fr. Dominant) |
| Teresa    | Sp/Ger   | Germany   | 47/47                     | 2;3–4;2 | 4,694                  | 5,181          | Balanced                            |

6. The data were collected in three research projects under the direction of Natascha Müller which have been financed by the DFG (*Deutsche Forschungsgemeinschaft*) since 1999: (1) Frühkindliche Zweisprachigkeit: Italienisch-Deutsch und Französisch-Deutsch im Vergleich (Hamburg, 1999–2005) Project B1/E1 within SFB 538, Grant number 5483483; (2) Die Architektur der frühkindlichen bilingualen Sprachfähigkeit: Italienisch-Deutsch und Französisch-Deutsch in Italien, Deutschland und Frankreich im Vergleich (Wuppertal, 2005–2008) Grant number: DFG MU 875/8; (3) Code-Switching bei bilingual aufwachsenden Kindern in Deutschland, Italien, Frankreich und Spanien: Italienisch-Deutsch, Französisch-Deutsch, Spanisch-Deutsch, Italienisch-Französisch, Italienisch-Spanisch, Französisch-Spanisch (Wuppertal, 2009–2013) Grant number: DFG, MU 875/10. For details about the projects cf. Cantone, Kupisch, Müller & Schmitz (2008), Hauser-Grüdl, Arencibia Guerra, Witzmann, Leray & Müller (2010), Müller, Arnaus Gil, Eichler, Geveler, Hager, Jansen, Patuto, Repetto & Schmeißer (2015), Müller, Cantone, Kupisch & Schmitz (2002) and Müller, Kupisch, Schmitz & Cantone (2011).

7. The quantitative analysis of the child corpora has been provided by Laia Arnaus Gil.

8. Detailed information about language dominance based on MLU is given in Schmeißer, Hager, Arnaus Gil, Jansen, Geveler, Eichler, Patuto & Müller (2016).

Table 1. (continued)

| Name            | Language | Raised in | Recordings (Fr/Ger/It/Sp) | Age      | Monolingual utterances |               | Language dominance                 |
|-----------------|----------|-----------|---------------------------|----------|------------------------|---------------|------------------------------------|
|                 |          |           |                           |          | Romance                | Ger./It./Sp.) |                                    |
| Arturo          | Sp/Ger   | Germany   | 49/49                     | 2;3–5;3  | 5,718                  | 6,680         | Unbalanced (Ger. Dominant)         |
| Erik            | Sp/Ger   | Spain     | 26/43                     | 1;6–3;4  | 6,184                  | 667           | Strongly unbalanced (Sp. dominant) |
| Lucas           | Sp/Ger   | Spain     | 35/35                     | 1;7–3;6  | 5,922                  | 4,360         | Strongly balanced                  |
| Nora            | Sp/Ger   | Spain     | 32/27                     | 1;4–3;3  | 1,295                  | 1,874         | Strongly balanced                  |
| Juliette        | Fr/It    | France    | 42/42                     | 1;8–4;11 | 6,923                  | 6,219         | Balanced                           |
| Siria           | Fr/It    | Italy     | 16/58                     | 1;6–4;4  | <i>n.a.</i> *          | 5,667         | Balanced                           |
| Syca-Inés input | Sp       | Colombia  | 35                        | 2;2–3;8  | –                      | –             | –                                  |
| Syca-Inès input | Fr       | France    | 33                        | 2;2–3;5  | –                      | –             | –                                  |
| Lucas input     | Sp       | Spain     | 16                        | 1;7–2;5  | –                      | –             | –                                  |

\* *n.a.* = not available.

## 4.2 Bilingual German

The results of the bilingual children who acquire German have been reported in Rizzi et al. (2013). The bilingual corpora contained 2,486 monolingual noun phrases with a German pre- or postnominal adjective. Only 2.3% (56) of all German noun phrases contained a target-deviant postnominal adjective. In other words, the database reveals no signs of “learning” in any sense.

## 4.3 Bilingual French

Figure 3 shows the distribution of French adjectives in the bilingual children and in Syca-Inès’ father over the whole period of investigation. It becomes clear that all children and the adult prefer prenominal adjectives (tokens), a result which is predicted by the adult system.

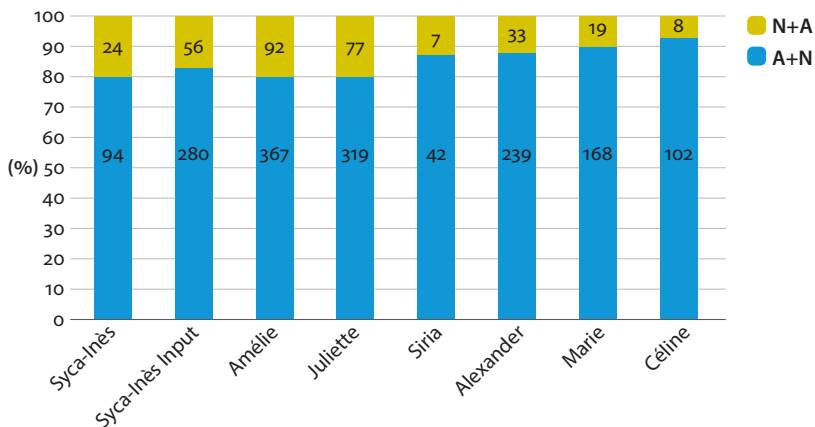


Figure 3. The distribution of pre- and postnominal adjectives in French

Having a closer look at one adjective which is used by all children at least once, in Figure 4, we can safely conclude that the bilingual children match the adult input and behave like their monolingual peers. In other words, no signs of “learning” can be revealed. According to Fox (2014: 106), *grand(e)* vastly prefers prenominal order in adult French (99%).

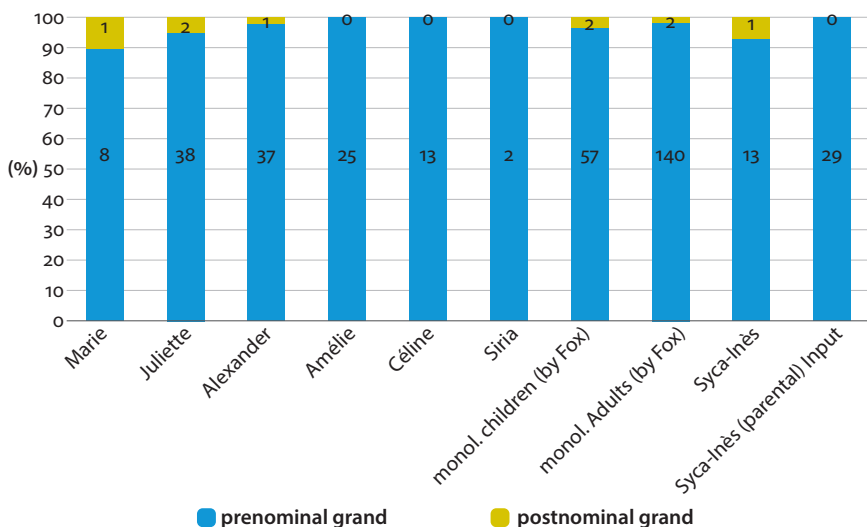


Figure 4. Placement of the adjective *grand(e)*

We can thus conclude that the children “reproduce” the input frequencies.

#### 4.4 Bilingual Spanish

While in French, monolingual and bilingual children reflect the distribution of adjective placement in adult speech, Spanish shows a more complex picture. Figure 5 shows that Syca-Inès and her mother use both positions with nearly the same frequency. The data of Nora and Erik are similar to the adult speech Syca-Inès Input and Lucas Input. In contrast, Lucas produces prenominal adjectives more often than his mother and in the records of Teresa and Arturo<sup>9</sup> the postnominal adjective position prevails.

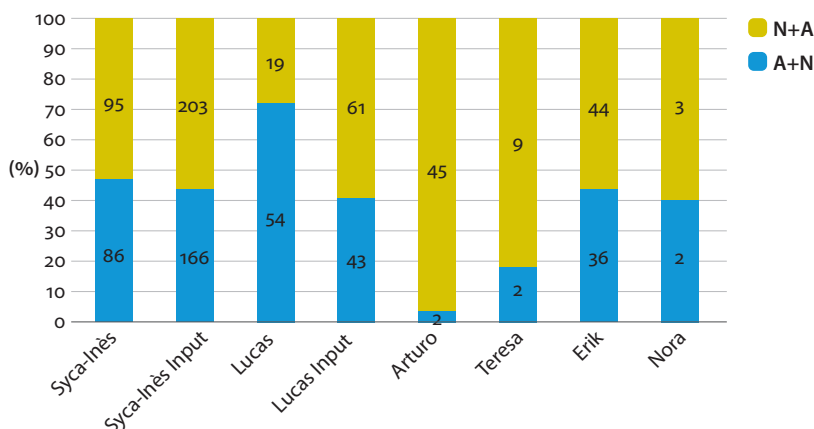


Figure 5. The distribution of pre- and postnominal adjectives in Spanish

Having again a closer look at one adjective type which occurs in nearly all corpora, we see that Erik uses the Spanish adjective *grande* exclusively in postnominal position, like both adults do. Unfortunately, the absolute numbers of occurrences are quite small. On the contrary, Lucas, Teresa and Syca-Inès differ from the adult input. They often place the adjective before the noun.

9. Teresa and Arturo are recorded by a non-parental native speaker of Spanish.



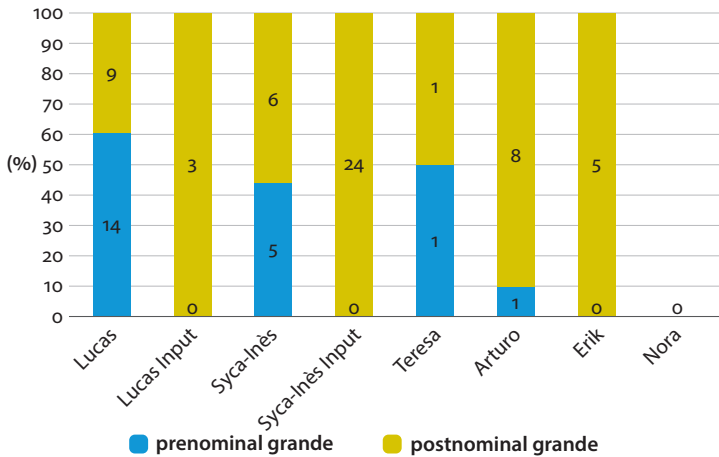


Figure 6. Placement of the adjective *grande* in Spanish bilingual children and two adults

As a result, some children “reproduce” the input frequencies in Spanish, while others do not. An individual analysis of the children, mainly in terms of language dominance, is not possible here. Notice, however, that an MLU comparison of the different children yields the result that they differ with respect to the mean MLU difference between their two languages. The bilingual profile in terms of different dominance criteria (cf. Table 1) like MLU, noun lexicon, number of words uttered per minute, to name only a few, should be related to the results in the domain of adjective placement.

## 5. Conclusion

The first result of our study on the acquisition of adjective placement is that variation across languages is unproblematic for bilingual children. Consequently, the children separate their languages. Other studies have investigated the corpora in Table 1. These came to support the main result for the acquisition of other grammatical domains. J. Müller (2009) attests very early separation without any signs of cross-linguistic influence for the VO-OV domain, Jansen (2015) for dislocations, to name just a few. It is important to highlight this result, since separation with cross-linguistic influence is attested in the same corpora during the same period of life. Among the grammatical domains which show signs of an influence across languages range the selection of copula verbs (Arnaus Gil 2013), the realization of determiners (Kupisch 2006) and the attribution of gender (Hager 2014). As a second result, we observed that bilingual children who acquire French “reproduce” the

frequencies found in their input. In other words, we can assume that the children are able to acquire the intricate interaction of multiple factors which determine adjective placement in French. Thirdly, early bilingual Spanish differs from adult Spanish. Here, only some children “reproduce” the input frequencies while others do not.

Intuitively speaking, one would assume that the French system is harder to acquire than the Spanish system since there are so many adjective tokens which alternate in French and only a very small number of alternating adjective tokens in Spanish. The reverse is true. We would like to argue that alternating adjectives are best modelled in the syntactic component of the language or post-syntactically. The ultimate position of the adjective is determined by different factors, syntactic among them. In some studies, half of the adjective tokens in French are alternating. In other words, children have ample evidence for the syntactic analysis of adjective ordering. Non-alternating adjectives are best modelled as lexically marked adjectives in French and Spanish. They enter the syntactic component with a particular lexical feature which determines their position. In Spanish, the frequency of these adjective tokens is very high, in some corpora above 90%. Since the analysed bilingual children do not match the input frequencies in Spanish, while they do in French, we may very tentatively assume that children find syntactic analyses to adjective ordering easier to acquire than lexically marked distinctions. The most important result from the French corpora surely is that intra-linguistic variation is not *per se* a problem for bilingual children. Future research relating the Spanish data to individual bilingual profiles with respect to language dominance is necessary.

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# Exploring sociolinguistic discontinuity in a minority variety of French

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In a language spoken in a minority setting, sociolinguistic variation is often reduced. This paper examines rhythm in Ontario French and explores the presence and extent of such variation. Text readings and spontaneous samples from men and women of two age groups are compared, and the following rhythmic aspects are examined: articulation rate, syllabic structure and typology, length of a stress group, syllable and vowel duration ratios within a stress group, and phonetic rhythm (using nPVI-V, VarcoV, and %V metrics). The results suggest that style and social factors affect rate and rhythmicity but do not interact: all participants articulated more slowly when reading; also, women and older participants demonstrated a more French-like rhythm, while younger participants appeared converging to English.

## 1. Introduction

Speakers of a language in a minority setting do not have opportunities to practice their language across different contexts. This leads to an incomplete mastery of social and stylistic variants, or a “sociolinguistic discontinuity” (Mougeon & Nadasdi 1998). As a consequence, speakers may adhere to vernacular forms learned in the household from childhood, or to standard forms used at school.<sup>1</sup>

Both scenarios have been observed in French speaking communities in Ontario (Canada), depending on how much speakers use their language in everyday life (Mougeon & Béniak 1991). For the Ontario French spoken in a minority setting that is studied here, a third possibility is also imaginable: in a more controlled type of production, such as text reading, speakers may use French forms (prosody in

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1. In Ontario, francophone speakers have an opportunity to frequent French language schools. Due to geographic and social mobility of the population, and to the linguistic exogamy, among other factors, school often becomes the main context for French language usage.

particular), while in a less controlled spontaneous interactions they may converge to dominant language forms (cf. with L2 learners). In other words, different patterns may emerge in different speaking styles, divergent from the patterns observed in the same language spoken in a majority setting. Here, I examine the presence and extent of rhythmic variation in a minority French dialect spoken in the Windsor area in Ontario. Will we observe reduced variation and find the same patterns in spontaneous speech and in text readings, or will we find differences that suggest transfer from English? Also, will the age and gender of the participants have an effect on their rhythm depending on the speaking style? To answer these questions, I undertake a comparison of articulation rate, syllabic structure and typology, length of a stress group, and syllable and vowel duration ratios within a stress group, and phonetic rhythm, using rhythm metrics that performed best in earlier studies – nPVI-V, VarcoV and %V (Russo & Barry 2008, Prieto et al. 2012, among others). Based on my previous examination of rhythmicity in reading style in this dataset (Kaminskaïa 2014), and on the comparison of spontaneous samples with Quebec speakers (Kaminskaïa 2015a), I expect to observe style, age and gender factors affect variation and interact: younger speakers are expected to converge to English in spontaneous speech to a greater degree than other participants, whereas women are expected to adhere to a very French-like pattern in the reading task. These hypotheses are motivated by the reasons specified above for the younger group, and by a trend towards a supralocal norm in women (Milroy & Gordon 2003).

Besides this, under the influence of English, younger speakers are expected to produce shorter stress groups (in terms of the number of syllables) with proportionally shorter final syllables<sup>2</sup> (in terms of duration). This group may also exhibit a richer typology of closed syllables (because of the potential absence of consonant cluster simplification), and utter more open syllables (due to the possible unawareness of schwa omission, Poiré 2009). Overall, younger participants are not expected to show a clear difference between styles. Women, on the other hand, are expected to show a clear difference: they are expected to demonstrate shorter stress groups in spontaneous speech, proportionally longer final syllables in text readings, and richer and more complex syllable structures in a more formal style. It is hard to speculate about men's and older participants' production.

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2. In French, the vowel of the syllable bearing primary (group) final stress is lengthened, while in English stress has a different nature (F0, intensity). While it is expected that in the younger population the final stress is still durational, this final lengthening may not reach the same extent as it does in the older population.

## 2. French language in Ontario

Francophone communities in Ontario are found across the province, and almost all of them are in intense contact with English.<sup>3</sup> In the Windsor region, one of the first settlements of immigrants from Quebec, 2.6% of population speaks French as their mother tongue, according to Statistics Canada 2011. French here is spoken in a minority setting and in a very intense contact with the dominating English language. While Ontarian French spoken in majority settings (see Footnote 3) does not differ from the parent Quebec French (Tennant 2012), minority varieties demonstrate simplifications of verbal paradigms, borrowings, calques, and differences in sound production (Poplack 1989, Mougeon & Béniak 1991, Poiré 2009, among others). On the prosodic level, Ontario French has usually been described as similar (if not identical) to the Quebec variety. But a series of divergences has been identified in intonation (e.g., F0 declination, abundance of falling continuities, a later peak alignment, upstep (Cichocki & Lepetit 1986, Kaminskaïa 2013, 2015b, Tremblay 2007, respectively)), and in rhythm. For instance, earlier rhythm studies report an irregular rhythm and a more salient penultimate syllable (Robinson 1968), which motivated the researcher to talk about stress shift from the final syllable. More recent studies, however, suggest that Ontario French rhythm is very much French-like, with some social variation motivated by speakers' age and gender (Kaminskaïa 2014).

## 3. Studies of rhythmic variation

The traditional classification of the languages distinguishes between stress- and syllable-timed languages (Pike 1945, Abercrombie 1967), English being a representative of the former, and French, of the latter. Mora- and mixed-timed languages were later added to the classification (Hoequist 1983, Nespor 1990). This classification has been reconsidered in terms of a continuum, since languages of the world and their varieties do not easily fall into one or another category (Dauer 1987). This view originates from the observations about phonological properties of languages described as more or less syllable- or stress-timed. These properties pertain to syllabic typology, vowel reduction, and the presence of tones, among others (Dauer 1983, Bertinetto 1989), and they can be variably present in different languages. Such phonological properties are believed to be reflected by various measurements (or rhythm metrics) based on segmental durations, which are affected by these

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3. In a very few communities in Ontario Francophones outnumber Anglophones (e.g., in Hearst and Hawkesbury 85% of the population is native Francophone).



properties. These metrics are: proportion of vocalic intervals (%V), standard deviations of vocalic ( $\Delta V$ ) vs. consonantal intervals ( $\Delta C$ ) (Ramus et al. 1999), pairwise variability index (PVI, Low et al. 2000); rate-normalized metrics appear later: VarcoC and VarcoV (or normalized  $\Delta C$  and  $\Delta V$ , Dellwo 2006, White and Mattys 2007), and nPVI-V and nPVI-C (Grabe & Low 2002). While research shows that the most stable and reliable metrics are rate-normalized, a number of recent studies demonstrated that rate still can be an important factor (Arvaniti 2012a, Avanzi et al. 2012, Obin et al. 2012, Schwab & Avanzi 2015, Schwab & Racine 2013).

Studies applying rhythm metrics to French compared “standard” and regional varieties, varieties in contact, social groups, and L2 samples, with different degree of successful discrimination between the datasets. For example, Fagyal (2011) applied  $\Delta C$ ,  $\Delta V$ , and %V to study speech samples from monolingual Francophones and French-Arabic bilinguals, but the differences between the two groups of speakers suggested by the metrics alone were not significant. Tennant (2011) compared the speech of Ontario Francophones in both minority and majority settings with L2 speakers using nPVI-V without establishing significant differences between the datasets. Also, an innovative approach combining durational and melodic characteristics of syllabic (rather than segmental) intervals did not allow Cumming (2011) to discriminate between standard and Swiss French samples.

On the other hand, regional variation was captured using  $\Delta C$  and rate by Avanzi et al. (2012) who examined varieties of European French. Similarly, Obin et al. (2012) used rate in combination with PVIs calculated from stress-group durations in order to discriminate between varieties of European and African French, including varieties in contact. In my studies of Canadian varieties of French, I observed an intermediate-to-syllable-timed rhythmic pattern in text readings by Ontario Francophones in a minority setting (Kaminskaïa 2014). Using rate and a series of metrics to compare spontaneous samples from Ontario minority French speakers and from Quebec French speakers, I found that only rate successfully discriminated between the dialects (Kaminskaïa 2015a). Finally, Kaminskaïa et al. (2015b) observed differences between age and gender groups in minority and majority settings in Ontario, but no effect of a contact with English in a minority setting, based on spontaneous speech samples.

Prosodic differences characterize not only various languages and dialects, but also styles. For example, in German, Swedish, English, or French, read samples compared to spontaneous ones demonstrate slower articulation rate, a higher F0 average with a greater span and more frequent modulations, steeper slopes and steeper F0 declination line overall, less frequent but predictable pauses that are also shorter, different phrasing and non-realized stresses (Howell & Kadi-Hanifi 1991, Laan 1997, among others). Rhythm studies that apply rhythm metrics have traditionally relied on controlled datasets (carefully designed sentences or text readings),

so that when spontaneous data began being explored, results often appeared inconsistent for a given language (Arvaniti 2009, 2012b), which seems to confirm the presence of stylistic variation. However, studies aiming to compare different speaking styles based on rhythm metrics are rather rare. For example, in their study of three speaking registers across fifteen varieties of Italian, Giordano and D'Anna (2010) found that intervocalic intervals ( $\Delta C$  and PVI-C) show more variation in spontaneous than in read samples, suggesting a more syllable-timed pattern in the reading task. Vocalic intervals ( $\Delta V$  and nPVI-V) showed, however, the opposite trend – more variation in sentence readings, suggesting a less syllable-timed pattern in the reading task. However, a greater %V found in spontaneous speech contradicted this.

Varieties of Southern and Northern ('standard') French also showed some contradiction in the preliminary study by Meisenburg (2013): %V, VarcoV and nPVI-V were greater in spontaneous samples than in text readings in the Southern dataset, while the Northern one demonstrated the opposite for the nPVI-V metric only. The author concluded that more research is needed to understand how such phenomena as schwa omissions and realizations, liaison, consonant cluster simplifications, and vowel fusion contribute to the observed results.

These phenomena of French phonology affect syllable structure, the conditioning property for prosodic rhythm. So, here, together with rhythm metrics, I consider syllabic structure and typology. To further explore prosodic variation, I also examine the length of a stress group, syllable and vowel duration ratios within a stress group, and articulation rate in order to compare two production styles from minority Ontarian French speakers representing both genders and divided into two age groups. The main purpose of this comparison is to see whether the speakers of the dialect in intense contact with English converge to the dominant language rhythm in a less controlled type of production (i.e. spontaneous speech).

Based on studies that considered articulation rate in different social groups and styles (Schwab & Racine 2013, Schwab & Avanzi 2015), I expect to find a faster rate in spontaneous speech and in the younger group. Gender groups showed different results in these analyses depending on the origin, so I have no definite hypothesis in this respect.

Among studies looking at the durations of the syllables within stress groups, there are a few that examined Canadian French varieties (Table 1). Here, we notice that in all dialects the final syllable is the longest (lengthening of the vowel of the stressed syllable). However, in Prince Edward Island and especially Nova Scotia varieties, the penultimate syllable is considerably lengthened as well. Ontario French shows a pattern different from these varieties (with less lengthening of unstressed syllables) and from Standard French as well (with more lengthening of

these syllables). We are not aware of a stylistic or social comparison of other aspects considered here.

**Table 1.** Syllable duration in a 4-syllable group compared to the final syllable

|                                            | 4th from<br>the end | 3rd from<br>the end | Penultimate | Final<br>syllable |
|--------------------------------------------|---------------------|---------------------|-------------|-------------------|
| Standard French (Léon 1992: 111)           | 51.4%               | 56.4%               | 63.4%       | 100%              |
| Ontario (Robinson 1968: 166)               | 62.6%               | 73.4%               | 73.9%       | 100%              |
| Nova Scotia (Cichocki 1997: 66)            | 70.9%               | 76.7%               | 91.2%       | 100%              |
| Prince Edward Island (Tennant & King 2007) | 61.4%               | 65.1%               | 79.5%       | 100%              |
| Newfoundland (Tennant & King 2007)         | 61.6%               | 69%                 | 73.1%       | 100%              |

#### 4. Data and methods

The recordings used in this analysis come from the database of the international project *Phonologie du français contemporain* (Durand et al. 2002, 2009), Windsor corpus (Poiré & Kelly 2003). Spontaneous speech samples and text readings from 12 speakers (six males and six females, six under age 45 and six above this age) were used for the analysis of prosodic rhythm. The subset of four speakers (in italics in Table 2) was used for the analysis of syllable structure, typology and duration ratios. Table 2 presents the participants, identified by a pseudonym, and grouped according to their age and gender. All speakers are native Francophones.

**Table 2.** Participants identified by their alias

| Under age 45      |                     | Above age 45       |                    |
|-------------------|---------------------|--------------------|--------------------|
| Females           | Males               | Females            | Males              |
| <i>Rémie</i> (17) | Mathis (21)         | <i>Eliane</i> (65) | Chris (46)         |
| Claire (42)       | <i>Patrick</i> (33) | Lucie (74)         | <i>Roland</i> (66) |
| Debbie (43)       | William (41)        | Vanessa (84)       | Raymond (74)       |

The recordings were treated in *Praat* (Boersma & Wennink 2015). All pauses, hesitations, code switches, false starts, truncations, etc. were excluded from the analysis. Segmentation of the material used in the analysis was first performed semi-automatically using *EasyAlign* (Goldman 2011), and then manually verified (see Kaminskaïa 2014, 2015a, for details concerning the interval segmentation and coding of the data). Comparisons between styles, age and gender groups for 12 speakers were done using 2x2x2 ANOVAs. For the analyses run for 4 speakers, t-tests were applied, because each age and gender group became represented by

one speaker only, and ANOVAs could not be applied. The following measurements were calculated from the interval durations:

- **Articulation rate** (syll/sec): total syllables in the analyzed sample divided by its duration
- **%V**: the proportion of vocalic intervals to the total of the intervals
- **VarcoV**: standard deviation of the duration of vocalic intervals divided by their mean duration, and multiplied by 100
- **nPVI-V**: The absolute value of the durational difference between two consecutive vocalic intervals was divided by the average duration of these intervals, then the sum of these values was divided by their number and multiplied by 100. Given the difficulty of establishing utterance boundaries in spontaneous speech, the total of the sample was used rather than individual utterances (Thomas & Carter 2006). For consistency, a similar approach was adopted for text readings. Also, given the extremely variable nature of spontaneous speech, median values were compared based on a minimum of 200 nPVI-V quotients for every speaker (*ibid*).

Phrasing of the data into stress groups (or Accentual Phrases, APs, Jun & Fougeron 2002) followed the constraints specified by the authors. The AP length was established by counting the number of uttered syllables; the AP duration was measured in seconds. Duration ratios were calculated for both syllables and vowels in four-syllable APs for comparability reasons (see Table 1). Initial syllabification of the material was performed using *EasyAlign* (Goldman 2011), with necessary corrections accounting for resyllabification in cases of liaison or enchaînement. Sonority Hierarchy and French language preferences were taken into consideration,<sup>4</sup> and consonantal clusters starting with [s] were divided to have this sound in the coda of the previous syllable (e.g. *rɛs-to-rã*). Syllable structure was established on the basis of syllable boundaries, and syllabic typology was established based on the distribution.

## 5. Results

### 5.1 Rate and prosodic rhythm

Spontaneous speech samples varied in duration from 2 to 10 minutes. Such variation is explained by a speaker's involvement in the dialogue, their rate, and our

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4. For example, *absolument* was syllabified as [ap-sɔ-ly-mã], even though the Sonority Hierarchy accepts/requires [a-psɔ-ly-mã].

methodological choice of obtaining a minimum of 200 nPVI-Vs. On average, per speaker, there were 310 nPVI-Vs calculated for this style. For the analysis of text readings, the first part of the text “Le Premier Ministre ira-t-il à Beaulieu” was used. On average, this gave 114.6 sec of recorded material and 329 nPVI-Vs per speaker. Table 3 presents individual results for rate and rhythm metrics, in both spontaneous speech (s) and text readings (r).

**Table 3.** Articulation rate and rhythm metrics. Shading signals greater values

| Alias   | Gender | Age | Rate |      | nPVI-V |       | VarcoV |       | %V    |       |
|---------|--------|-----|------|------|--------|-------|--------|-------|-------|-------|
|         |        |     | s    | r    | s      | r     | s      | r     | s     | r     |
| Raymond | M      | 74  | 5.28 | 3.88 | 42.03  | 44.24 | 41.73  | 48.33 | 55.98 | 54.77 |
| Roland  | M      | 66  | 4.88 | 4.11 | 42.73  | 40.90 | 44.16  | 45.78 | 55.10 | 55.27 |
| Chris   | M      | 46  | 4.25 | 3.46 | 47.59  | 43.70 | 50.27  | 49.25 | 56.03 | 55.96 |
| William | M      | 41  | 4.76 | 3.94 | 46.64  | 44.44 | 58.29  | 50.28 | 53.15 | 50.43 |
| Patrice | M      | 33  | 5.14 | 4.25 | 45.26  | 40.55 | 48.39  | 47.24 | 52.21 | 49.63 |
| Mathis  | M      | 21  | 5.65 | 5.96 | 47.88  | 37.59 | 61.21  | 48.05 | 55.23 | 51.74 |
| Vanessa | F      | 84  | 5.13 | 4.12 | 35.8   | 39.56 | 38.34  | 47.61 | 53.55 | 50.10 |
| Lucie   | F      | 74  | 5.56 | 4.06 | 37.34  | 34.45 | 43.26  | 37.45 | 56.56 | 51.55 |
| Eliane  | F      | 65  | 5.16 | 4.31 | 37.03  | 36.01 | 48.13  | 44.94 | 52.17 | 53.86 |
| Claire  | F      | 42  | 4.83 | 4.75 | 36.72  | 32.82 | 49.78  | 48.33 | 51.58 | 45.63 |
| Debbie  | F      | 43  | 5.16 | 4.92 | 43.87  | 38.17 | 55.41  | 51.83 | 53.20 | 50.19 |
| Rémie   | F      | 17  | 5.35 | 4.58 | 44.65  | 39.20 | 53.68  | 49.30 | 57.48 | 52.08 |
| AVERAGE |        |     | 5.10 | 4.36 | 42.30  | 39.30 | 49.39  | 47.37 | 54.35 | 51.77 |

Each participant articulated faster when speaking spontaneously. With few exceptions, the faster rate in spontaneous speech translated into greater differences between vocalic intervals – nPVI-V and VarcoV. This contradicts the expectations, because shorter durations of the intervals due to a faster rate should normally translate into smaller interval variability. The proportion of vocalic material appeared greater in spontaneous speech for almost all speakers as well.

These individual differences contributed to the averages for style, age and gender factors presented in Table 4. No interaction between the three factors was established, therefore, the results are presented separately for each variable. Here, highlighted are greater values, metrics for which differences were significant are marked with \*, and the ANOVA results appear at the bottom of each chart.

Table 4. Style, age and gender effects. Shading signals greater values

| Style                     | Spontaneous |     | Text readings |     | Age                        | Over 45 |     | Under 45 |     |
|---------------------------|-------------|-----|---------------|-----|----------------------------|---------|-----|----------|-----|
|                           | Ave         | Std | Ave           | Std |                            | Metric  | Ave | Std      | Ave |
| Rate*                     | 5.0         | .4  | 4.4           | .6  | Rate                       | 4.4     | .5  | 4.9      | .5  |
| nPVI-V*                   | 42.3        | 4.5 | 39.3          | 3.8 | nPVI-V                     | 40.1    | 4.1 | 41.5     | 4.6 |
| VarcoV                    | 49.4        | 6.9 | 47.4          | 3.6 | VarcoV*                    | 44.9    | 4.2 | 51.8     | 4.5 |
| %V*                       | 54.4        | 2.0 | 51.8          | 2.9 | %V*                        | 54.2    | 2.0 | 51.9     | 2.9 |
| F(1, 16) ≥ 6.689, p ≤ .02 |             |     |               |     | F(1, 16) ≥ 6.094, p ≤ .026 |         |     |          |     |

| Gender                      | Males |     | Females |     |
|-----------------------------|-------|-----|---------|-----|
|                             | Ave   | Std | Ave     | Std |
| Rate                        | 4.6   | .7  | 4.8     | .4  |
| nPVI-V**                    | 43.6  | 3.1 | 38.0    | 3.5 |
| VarcoV                      | 49.3  | 5.5 | 47.4    | 5.5 |
| %V                          | 53.9  | 2.4 | 52.2    | 2.9 |
| F(1, 16) = 23.936, p ≤ .001 |       |     |         |     |

Looking at the differences between the styles, we notice that greater individual values observed in Table 3 for rate, nPVI-V, VarcoV and %V gave greater averages in spontaneous speech, with rate, nPVI-V and %V proved significantly lower in text readings. Tendencies suggested by nPVI and %V for the effect of style trend in the opposite direction: greater nPVI-V in spontaneous samples indicates a less syllable-timed rhythmicity, whereas greater %V suggests a more syllable-timed pattern. This contradiction is similar to the one observed in studies on Italian and French mentioned above, and we will return to it in Section 6. Looking at age groups, we see that younger speakers, while articulating faster, showed higher nPVI-V and VarcoV values, but also lower %V. This suggests a less syllable-timed pattern for the younger participants, which was confirmed statistically for VarcoV and %V. Women articulated faster and showed smaller values of the metrics measured. This is indicative of a more syllable-timed pattern in females, which was confirmed statistically for nPVI-V.

## 5.2 Syllable structure and typology

Remember that a subset of four participants was considered for the following stages of the analysis. These participants each represent one age and one gender group. Three of them (Éliane, Patrice and Roland) participated in the interview together and were chosen because of the convenience of treating one recording; Rémie was chosen as the youngest female. The results presented below are descriptive and do

not allow drawing firm conclusions. The same spontaneous speech samples served this part of the analysis, while the text readings were used in full (average 191.6 sec). In the spontaneous dataset, an average of 404.3 syllables per speaker were analyzed. In the readings samples, the average was 598.8 syllables. The average number of APs in spontaneous data was 124.5; in text readings, this average was 181.8.

In both styles, open syllables dominated (Table 5). In the reading style, three out of four participants (exception: the youngest female, Rémie) produced more open syllables (76.9%–78.4%) than in the spontaneous interactions (73.4%–75.7%). Due to these individual differences, the overall difference was not significant between styles (t-test, paired:  $p = .994$ ). In both styles, the two preferred syllabic structures were CV (average 55.9% for spontaneous and 55.3% for text) and CVC (18.1% in spontaneous and 17.7% in text), with CC(C)V and V syllables following them, the latter appearing more frequently in spontaneous speech in three out of four speakers (Table 5). The distribution of the syllable structures being very similar across the four speakers, no gender or age effect was found (t-test, two-tailed:  $p \geq .846$ ).

Table 5. Observed syllable structures

| Syllable structure | Rémie |      | Éliane |      | Patrice |      | Roland |      | Average |      |
|--------------------|-------|------|--------|------|---------|------|--------|------|---------|------|
|                    | Spont | Read | Spont  | Read | Spont   | Read | Spont  | Read | Spont   | Read |
|                    | %     | %    | %      | %    | %       | %    | %      | %    | %       | %    |
| VC                 | 0.8   | 1.2  | 1      | 0.7  | 1.6     | 0.7  | 1.5    | 0.5  | 1.2     | 0.8  |
| VC(C)              |       | 0.2  |        |      |         |      |        |      |         |      |
| V                  | 9.3   | 7.7  | 10.5   | 7.2  | 8.9     | 7.4  | 11.5   | 8.4  | 10.1    | 7.7  |
| CVC                | 15.2  | 17.8 | 20.3   | 17.4 | 17.9    | 18.6 | 19     | 17.1 | 18.1    | 17.7 |
| CVCC(C)            | 2.2   | 1.2  | 1.9    | 1.8  | 0.8     | 1.8  | 0.9    | 2.5  | 1.5     | 1.8  |
| CV                 | 57.8  | 55.3 | 53.7   | 56.3 | 56.1    | 54.6 | 55.8   | 54.8 | 55.9    | 55.3 |
| CC(C)VC            | 2.8   | 2.5  | 3.5    | 1.8  | 5.7     | 2    | 2.7    | 2.3  | 3.7     | 2.2  |
| CC(C)VCC           | 0.2   | 0.2  |        |      |         |      | 0.2    |      | 0.1     | 0.1  |
| CC(C)V             | 11.7  | 13.9 | 9.2    | 14.9 | 8.9     | 14.9 | 8.4    | 14.4 | 9.6     | 14.5 |
| % open syll        | 78.8  | 76.9 | 73.4   | 78.4 | 73.9    | 76.9 | 75.7   | 77.6 | 75.5    | 77.5 |

### 5.3 Stress group length and duration, duration ratios

Turning from syllable structure to the number of syllables within an AP, I expected to find that in spontaneous speech participants produced longer APs than in text readings. Overall, this hypothesis has been supported: average 3.46 syll/AP in spontaneous interviews and 3.33 syll/AP in the reading task. However, one participant (Roland), uttered more syllables per AP in the text reading (Table 6).

Table 6. Length and duration of stress groups (APs)

| Alias                             | Gender | Syll/AP     |             | Sec/AP     |            |
|-----------------------------------|--------|-------------|-------------|------------|------------|
|                                   |        | Spont       | Read        | Spont      | Read       |
| Remie                             | f      | 3.19        | 3.05        | .61        | .636       |
| Eliane                            | f      | 3.59        | 3.14        | .715       | .728       |
| Patrice                           | m      | 3.52        | 3.47        | .794       | .807       |
| Roland                            | m      | 3.52        | 3.65        | .788       | .879       |
| <i>Average</i>                    |        | <b>3.46</b> | <b>3.33</b> | <b>.73</b> | <b>.76</b> |
| <i>T-test, paired, styles</i>     |        | .370        |             | .151       |            |
| <i>T-test, two-tailed, gender</i> |        | .055        |             | .007 **    |            |
| <i>T-test, two-tailed, age</i>    |        | .337        |             | .341       |            |

As far as the duration of the stress group is concerned, on average it was longer in text readings (.76 sec) than in spontaneous productions (.73 sec) (Table 6). All of these differences are due to a slower speaking rate in the reading style (see above). The only variable that significantly affected variation within our dataset was gender: female speakers produced shorter APs (Table 6). More data, with tests of factor interaction is needed in order to be able to draw firm conclusions.

When looking at the ratios of the stressed vowels and syllables with respect to the duration of an AP<sup>5</sup> (Table 7), we find greater values in text readings than in spontaneous speech for all speakers: 45.6% vs. 40.6% (for the proportion of the stressed syllable) and 23.3% vs. 21.1% (for the proportion of the stressed vowel).

Table 7. Duration (%) of the stressed syllable and vowel relative the duration of the AP

|       |                       | Stressed syllable |             |          | Stressed vowel |            |          |
|-------|-----------------------|-------------------|-------------|----------|----------------|------------|----------|
|       |                       | Ave               | Std         | <i>r</i> | Ave            | Std        | <i>r</i> |
| Spont | Rémie                 | 41.0              | 15.3        | -.741    | 23.7           | 10.8       | -.608    |
|       | Eliane                | 39.8              | 17.6        | -.783    | 20.4           | 9.5        | -.565    |
|       | Patrice               | 42.2              | 16.0        | -.758    | 18.8           | 7.7        | -.441    |
|       | Roland                | 39.6              | 15.4        | -.736    | 21.6           | 10.5       | -.615    |
|       | <i>Average</i>        | <i>40.6</i>       | <i>16.1</i> |          | <i>21.1</i>    | <i>9.6</i> |          |
| Text  | Rémie                 | 48.7              | 17.6        | -.765    | 25.0           | 10.0       | -.652    |
|       | Eliane                | 44.9              | 14.9        | -.721    | 23.2           | 9.4        | -.580    |
|       | Patrice               | 46.6              | 28.7        | -.487    | 22.1           | 8.8        | -.718    |
|       | Roland                | 42.2              | 14.8        | -.791    | 23.0           | 9.1        | -.695    |
|       | <i>Average</i>        | <i>45.6</i>       | <i>19.0</i> |          | <i>23.3</i>    | <i>9.3</i> |          |
|       | <i>T-test, paired</i> | <i>.018*</i>      |             |          | <i>.021*</i>   |            |          |

5. Monosyllables were excluded from this comparison.



These differences were confirmed statistically, and they are consistent with the articulation rate differences presented above. Besides the durational information, Table 7 also shows that the duration of the AP is negatively correlated with the proportion of the stressed syllable and vowels (cf. *r* values). For syllables, this relationship is stronger than for the vowels in both styles, except for Patrice who shows the opposite pattern in text readings.

#### 5.4 Durational patterns within a stress group

Finally, to further explore rhythmic patterns, I looked into the distribution of syllable durations in 4-syllable APs. This AP length was chosen for comparability purposes with studies from Table 1. 78 and 138 APs were analyzed in spontaneous and reading productions, respectively. Table 8 presents proportional durations of the syllables in comparison with the final syllable in the current data and previous analyses of Standard French and Ontario French. Both earlier studies relied on spontaneous radio interviews. Here, we see that our data, particularly the spontaneous subset, shows a pattern almost identical to the Standard French reported by Léon (1992). At the same time, the current results differ considerably from Robinson's (1968) study of Ontario French, in which unstressed syllables appear substantially longer (62.6%–73.9%) than in Standard French (51.4%–63.4%).

**Table 8.** Durations (%) of the syllables in a 4-syllabic stress group

|                                 | 4th from<br>the end | 3rd from<br>the end | Penultimate | Final |
|---------------------------------|---------------------|---------------------|-------------|-------|
| Standard French (Léon 1992:111) | 51.4                | 56.4                | 63.4        | 100   |
| Ontario (Robinson 1968:166)     | 62.6                | 73.4                | 73.9        | 100   |
| Current, read                   | 51.8                | 68.1                | 61.0        | 100   |
| Current, spontaneous            | 52.5                | 59.9                | 62.6        | 100   |

The pattern observed in text readings in this study is also similar to the one found in Standard French by Léon (1992), with the noticeable difference that the anti-penultimate syllable is lengthened in the current study: 68.1% vs. 56.4% in Standard French (cf. also with 59.9% in spontaneous speech). Our results suggest a change in pattern in the distribution of syllable durations in Ontario French, which should be explored further. A comparison with Quebec data will help to understand these results.

## 6. Conclusions and discussion

This analysis aimed to explore the presence and extent of sociolinguistic variation in Ontario French rhythm. The results suggest that sociolinguistic discontinuity does not characterize our data, because rate and prosodic rhythm showed effects of all three external factors (style, age and gender), though without any interaction between them. This partially supports our hypothesis and does not confirm that women or younger speakers have a particular behaviour in a given style. Thus, a faster articulation rate was observed in spontaneous speech, which was also found to have a less syllable-timed pattern than text readings (because of greater variability between vocalic intervals). The %V value suggested the opposite. However, this contradiction is compatible with the specifics of the Franco-Ontarian pronunciation, and are particularly salient in spontaneous productions: diphthongs, vowel fusions, simplification of consonantal clusters, and less liaisons realized. Another detail that can be contributing to such a result is the abundance of V syllable structures in our spontaneous dataset.

Figure 1 compares current results (Ontario minority setting) with other varieties of Canadian French (majority settings in Ontario and Quebec). Arrows indicate the direction of the increase of the metric values between the groups compared, with metrics in bold showing significant differences. We see that age (upper half) and gender groups (lower half) behave similarly in all three studies, and when not (dotted arrows), the differences are almost always not significant.

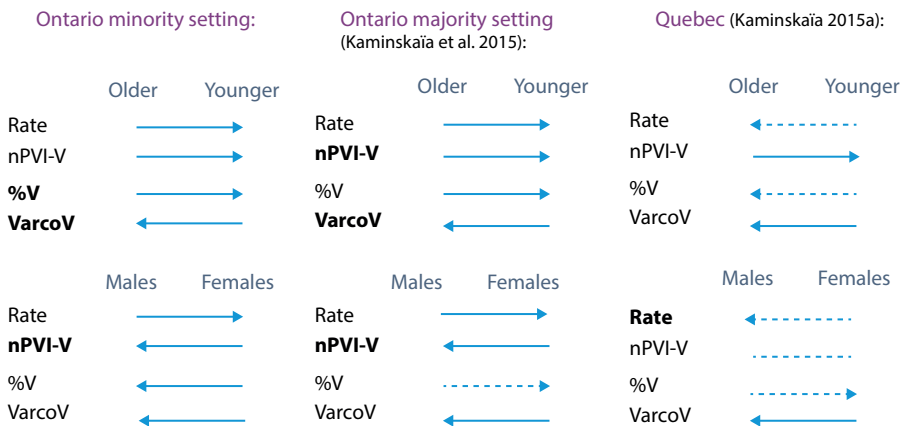


Figure 1. Current results (left column) compared to other varieties of Canadian French

As far as the styles are concerned, the only comparison with previous results that is possible is the one with Meisenburg (2013), where trends for %V, VarcoV and nPVI-V observed in regional varieties (increase of values for all three metrics

between read and spontaneous speech) are similar to our findings. In standard French, Meisenburg found a lower nPVI-V in spontaneous data. Thus, the stylistic variation observed in our minority data follows other regional varieties of French.

When comparing prosodic rhythm and rate in our dataset with previous results for other varieties of French and for English (Figure 2), we notice that metric values put Ontario minority French in a syllable-timed rhythmic category, with lower nPVI-V and VarcoV, and a higher %V. Rate here is very slow and comparable with other varieties of French in contact.

| French                                                                                     |          | English                                                                                            |         | Current<br>spont | Current<br>read |
|--------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------|---------|------------------|-----------------|
| nPVI-V (Grabe & Low 2002; Mairano 2011; White & Mattys 2007)                               | 43.5–50  | nPVI-V (Grabe & Low 2002; Mairano 2011; Prieto et al. 2012; White & Mattys 2007)                   | 55–73   | 42.3             | 39.3            |
| %V (Avanzi et al. 2012; Fagyal 2011; Mairano 2011; Ramus et al. 1999; White & Mattys 2007) | 43.6–51  | %V (Mairano 2011; Ramus et al. 1999, Prieto et al. 2012; Tortel & Hirst 2010; White & Mattys 2007) | 38–42.2 | 54.35            | 51.77           |
| VarcoV (Mairano 2011; White & Mattys 2007)                                                 | 45.5–50  | VarcoV (Mairano 2011; Tortel & Hirst 2010; White & Mattys 2007)                                    | 53–64   | 49.39            | 47.37           |
| Rate (Avanzi et al. 2012; Obin et al. 2012; Schwab & Racine 2013):                         |          |                                                                                                    |         |                  |                 |
| <b>Standard</b>                                                                            | 5.24–6.2 | Gender effect on rate in standard and regional European French – Quebec                            |         | 5.1              | 4.36            |
| <b>Regional</b>                                                                            | 4.85–5.6 | Age effect on regional European French =                                                           |         |                  |                 |
| <b>In contact</b>                                                                          | 4.5–5.2  | Ontario (age not sig. in standard French)                                                          |         |                  |                 |

Figure 2. Current results compared to other studies of French and English

Other rhythmic aspects considered here have only a suggestive nature, due to the limited sample. The preliminary findings suggest a typically French pattern, without style, gender or age affecting variation. Thus, the syllabic typology is similar in both styles, with CV, CVC, CC(C)V or V syllables on top of the list. Durational ratios appear similar to the standard French pattern from Léon (1992) study. Patterns in both spontaneous speech and text readings show final syllable lengthening, with similar durations of the unstressed syllables (including the penultimate syllable). All this seems to suggest a change from the pattern observed by Robinson (1968). More data is necessary in order to verify these observations. A comparison with other varieties of Canadian French (especially, Quebec), and a study of prosodic organization and intonation will allow better understanding the current results.

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# (And yet) another proposal for *ser/estar*

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This paper puts forward an l-syntactic account of non-trivially alternating copulas *ser/estar* building on incorporation of a prepositional head ( $p^*$ ). I propose that  $p^*$  is to be seen as a locus of encoding and variation of the relevant properties whereby *ser/estar* diverge, but also as the element constraining selection and interpretation of the predicate.

First, I use the distinction between telicity and boundedness as a starting point for developing a reformulation of the Hale-and-Keyserian analysis of *ser/estar* that supports a new typology of  $p$  heads within the Central Coincidence domain. This is important to capture wider sets of corpus and analytic data, but also in order to reflect an adequate division of work between verbal (Aktionsart) and constructional aspect. Then, I propose a novel implementation based on  $p$ -conflation and Hyponym Argument Relations. If correct, the analysis handles different facts and at the same time positions *ser/estar* into a much ampler frame.

## 1. Introduction

One of the most interesting facts about Spanish copulas *ser/estar* is that they diverge from the basic definition of copula – basically, a semantically trivial verb – by bearing specific semantic content. Such distinctive properties motivate a non-trivial alternation in shared contexts, on the one hand, including minimal pairs, as shown in (1), as well as a well-known complementary distribution, exemplified by (2), on the other hand, when selectional patterns diverge. Even if this empirical circumstance has been extensively addressed in the literature, the question remains as to what the correct account ultimately is.

For instance, different approaches have alternatively placed the burden of the explanation in the predicate (e.g. Bosque 1999), in discourse anchor (e.g. Maienborn 2005) or else in reinterpretation phenomena (e.g., coercion, cf. Escandell & Leonetti 2002), among other options. These proposals offer interesting insights; they are not, however, a compelling analytical frame if the goal is to provide a systematic correlation between the meaning of a verb (the copula) and the selectional restrictions



placed by it insofar as we agree that a nontrivial verbal alternation is a problem of a (lexico)grammatical nature; especially since major contrasts arise in minimal pairs defined by copula choice. In addition, such approaches may not seem convenient if we want to explain how the relevant semantic properties are encoded in the copula. For instance, an account based on two semantically null verbs (cf. Maienborn 2005) may not offer a convincing explanation for a nontrivial verbal alternation. Another potential empirical problem, especially for those accounts that concentrate on the relevance of the copular predicate, is that neither the distribution nor the semantic consequences of the alternation are straightforwardly predicted from the semantic and/or morphosyntactic properties of the predicate. In fact, the distribution is very difficult to pin down. Predicates bearing similar features appear with both copulas, while others, predicted to pattern with one copula, are either eligible only for the unexpected alternate or equally compatible with both. For instance, various APs with perfective morphology, which is generally predicted to pattern with *estar*, take only *ser* (*admirado* ‘admired’ and *leído* ‘[well-]read’ in (2b)) while others freely alternate (*calmado* ‘calmed’ in (1)). Similarly, present perfect morphology (*-nte*), which in principle patterns with *ser*, is also found in APs that only combine with *estar* (cf. *pendiente* ‘pending’, *vigente* ‘valid’ etc., in (2a)). More importantly, a significant set of predicates lacking the relevant morphology are crosscut by the exclusive distribution (e.g. *simple* ‘simple’ in (2b)), while others freely alternate, though not trivially (e.g. *feliz* ‘happy’ in (1)).

- (1) {*Ser/Estar* *feliz, cariñoso, oscuro, apacible, fresco, gris, calmado*,  
*Be<sub>SER</sub>/be<sub>ESTAR</sub> happy, loving, dark, quiet, fresh, grey, calmed,*  
*potable, insistente*  
 drinkable, insistent
- (2) a. {*#Ser/estar* *contento, descalzo, lleno, vivo, muerto, disponible,*  
*be<sub>SER</sub>/be<sub>ESTAR</sub> happy, barefoot, full, alive, dead, available,*  
*pendiente, vigente, expectante, presente*  
 pending, valid, expectant present
- b. {*Ser/#Estar* *simple, capaz, idóneo, válido, probable, posible,*  
*Be<sub>SER</sub>/be<sub>ESTAR</sub> simple, (cap)able, apt, valid, probable, possible,*  
*importante, leído, admirado.*  
 important, well-read, admired

Moreover, it is not the case that all occurrences of each copula produce the predicted aspectual specification (e.g. *estar* not always conveys a perfective or telic predicate); and, on the other hand, the meaning of the whole predicate does not depend solely on the complement. Namely, aspectually underspecified or neuter adjectives like *feliz* ‘happy’ yield semantically distinct predicates depending on the

copula they appear with. Quite apart from this question, even if we assume standardly that the distribution bears on an aspectual contrast between *ser/estar* (e.g. temporally unlimited vs. limited properties; stable vs. changing qualities, properties vs. states, etc.), the general situation proves much more complex. For example, accounts building on the well-known Individual vs. Stage-Level dichotomy (cf. Gallego & Uriagereka 2009, Husband 2010, Marín 2009) must deal with the fact that the opposition does not reflect the *ser/estar* cut. In reality, both copulas succeed in delivering the two types of predicates (3), at the same time that they preserve the capacity to determine a distinct, consistent semantic flavor and relevant restrictions. Again, the specific properties of *ser/estar* are strong enough to prevail over the aspectual burden contributed by the lexical head of the SC predicate – which should be the one prevailing over a copula, at least under standard assumptions (that is, under the definition of *copula* as a semantically trivial verb) – as (4) shows. In addition, the distribution also involves interesting patterns in contexts in principle unexpected for stative verbs, exemplified by (5). Finally, the problem exceeds mere semantics, especially to the extent that the distribution is category-sensitive (6).

- (3) Individual-Level Predicates [ILP]
- a. *Esta cartera* {<sub>ILP</sub>*es*/<sub>ILP/SLP</sub>*está*} *muy bonita*.  
 This wallet be<sub>SER</sub> be<sub>ESTAR</sub> very nice  
 ‘This wallet is very nice’  
 (cf. *La cartera* {*es*/\**está*} *triangular*)  
 The wallet be<sub>SER</sub> be<sub>ESTAR</sub> triangular
- b. *Brasil* {*\*es/está*} *en Sudamérica*.  
 Brazil be<sub>SER</sub> /be<sub>ESTAR</sub> in South America  
 ‘Brazil is in South America’
- c. Stage-Level Predicates [SLP]  
*Rafael* {<sub>ILP/SLP</sub>*fue*/<sub>SLP</sub>*estuvo*} *grosero con sus alumnos*.  
 Rafael be<sub>SER</sub>;PRF be<sub>ESTAR</sub>.PRF rude with his students  
 ‘Rafael was rude to his students’
- (4) a. *Ser* [<sub>-perf/ILP</sub>] {*enfermo* / *despierto*/ *borracho*} [<sub>+ perf/SLP</sub>] > ILP  
 Be<sub>SER</sub> sick awake drunk  
 ‘To be a sick person, a wide-awake person, a drunk’
- b. *Estar* [<sub>+ perf/SLP</sub>] {*sensible*/ *deseante*/ *inteligente*} [<sub>-perf/ILP</sub>] > SLP  
 Be<sub>ESTAR</sub> sensitive willing intelligent  
 ‘To be touchy, eager, brainy (at a given moment)’
- (5) a. *La habitación terminará de* {*estar*/\**ser*} *limpia en 20 minutos*.  
 The room finish<sub>FUT</sub> of be<sub>SER</sub> be<sub>ESTAR</sub> clean in 20 minutes  
 ‘The room will be finally clean in 20 minutes’  
 [The room will finish being clean in 20 minutes]

- b. *El editor estaba {\*estando/siendo} grosero cuando llegamos.*  
 The editor was being<sub>SER</sub>/being<sub>ESTAR</sub> rude when arrived.  
 ‘The editor was being rude when we arrived’ > ILP
- c. *Amy vio al editor {siendo/\*estando} amable con su empleada.*  
 Amy saw the editor being<sub>SER</sub>/being<sub>ESTAR</sub> kind with his employee > SLP  
 ‘Amy saw the editor being kind to her employee.’
- d. *Los pasajes {#son/están} baratos {lunes y jueves/ a cada rato/nuevamente}.*  
 the tickets be<sub>SER</sub>/be<sub>ESTAR</sub> cheap Mondays and Thursdays/  
 at every while/again  
 ‘The tickets are cheap {(on) Mondays and (on) Thursdays/every once in a while/again}’

(6) *Ser* {PP/AP/NP/\*AdvP} *Estar* {PP/AP/AdvP/\*NP}

In this paper, I would like to argue that these facts can be accommodated by an l-syntactic account building on incorporation of a prepositional head ( $p^*$ ), which is to be seen as a crucial locus of encoding for the relevant properties whereby *ser/estar* diverge but also as the main determiner of the interpretation and selection of the copular predicate. The initial idea is not new. The notion that *ser/estar* can receive a natural explanation from p-incorporation has been around for some time in the literature (e.g. Uriagereka 2001, Zagona 2011, 2014). Yet, even if considerable progress has been made, at least two issues remain to be settled. One bears on the semantic ontology of the incorporated p. This concerns, namely, the definition of Central [CC] and Terminal Coincidence [TC] relations, together with its implications for the aspectual domain, in particular for copulas. This is a basic opposition in Hale & Keyser’s model, and one that has figured importantly in previous accounts of *ser/estar* (e.g. Gallego & Uriagereka 2009, Brucart 2012). The other question concerns the syntactic ontology of p and some specific problems raised by its implementation.

The goal of the paper is, therefore, twofold. First, I put forward a reformulation of the basic l-syntactic analysis of *ser/estar*. The proposal builds on the distinction between telicity and boundedness to support a specific typology of p heads as a locus of encoding of the relevant properties. The general idea behind this attempt is that the semantic contrast at work needs to be properly constrained to the correct domain; most crucially, *estar* needs to be redefined independent of telicity and TC in order to correctly capture corpus and analytic data, but especially to reflect an adequate division of work between the aspectual properties of the copula per se, motivating the non-trivial alternation, and those ensuing from a composition,

which nonetheless involves visible contrasts with *ser*. Then, I propose a finer grained implementation of a novel theoretical approach that builds on p-incorporation (conflation) à la Hale & Keyser [HK] (1993, 2002, 2005) combined with hyponym selection (Hyponym Argument Relations [HAR], HK 2002: 70; 2005: 18) as a way to solve some specific problems. If correct, the analysis will correctly handle the facts in (1)–(6) at once and at the same time place *ser/estar* within a much ampler frame provided by verbs arguably produced by similar processes.

## 2. The semantic (aspectual) problem

This section presents an overview of the TC/CC ontology and its implications for the analysis of Aktionsart, as a common theoretical device used in l-syntactic accounts. The focus is on the relation between TC, as originally defined, and telicity. The specific problem at hand is that a characterization of *ser/estar* building on TC leads to generalizations that seem too strong when confronted with larger sets of data, besides posing a problem for the essential stativity of these copulas. In order to reflect the aspectual properties of *ser/estar* as closely as possible, I will consider the idea that these semantically contentful copulas result from conflation of a verbal head and an abstract locative birelational element: a non-eventive dyadic head ( $p^*$ ) yielding a stative (CC) relation and encoding the specific semantic nuance whereby *ser/estar* diverge. Under the assumption that a contrast between two CC ps ( $P_{AT/P_{HAVE}}$ ) would be a better choice to handle divisions internal to the stative type, I build on Hale's (1986) and HK's (1993, 2002, 2005) aspectual definition of CC/TC. As discussed above, this opposition has been used to account for different properties of the semantic structure of relational lexical items (HK 2002) and has been used before to account for Spanish copulas. Note that I keep placing this opposition as the source of telicity and atelicity, respectively, in line with the original formulation and only to preserve the distinction between lexical (verbal) and constructional aspect.

### 2.1 TC and telicity

On Hale's (1986) original account, spatiotemporal relations are defined by two Figure/Ground relations: central (CC) and non-central (TC) coincidence. Essentially, CC designates those cases where the location of the Figure and the Ground coincide centrally. By contrast, in the TC the location of the Figure corresponds to a *trajectory* (if moving) or to a *linear arrangement* (if stationary) *ending or beginning at the designated Ground*. In HK (2002, 2005) – i.e., the framework

adopted by previous attempts on *ser/estar* – this fundamental opposition is seen as reflecting the contrast between stasis and change (HK 2002: 2018). Specifically, while CC is argued to “consistently correspond to stativity”, TC is related to change and therefore, to “the various active, dynamic, and otherwise non-stative event types”. However, TC is not constrained to mere change, so to speak. Leaving aside the fact that a proper distinction between eventive type (i.e., stasis/change) and an aspectual parameter (*telicity*) is, in our view, in order, TC is further defined as “a property which corresponds to the *endpoint* of a change undergone by the entity denoted by the subject” and accordingly assigned to *telic* verbs (HK 2002: 221). Even if an attested correlation holds between TC and Telicity in some cases (cf. Mateu 2008a), the former is crucially defined as the “source” of the latter (HK 2005: 36). If we apply this to Spanish copulas, an account of *ser/estar* based on a CC/TC opposition would involve, at least in principle, the analysis of *estar* in terms of telicity. This idea figures prominently in early accounts of *ser/estar*.

## 2.2 *Estar* as a telic copula

An analysis of *estar* based on telicity (explored in Schmitt 1993, Zagona 2011, Camacho 2012, Luján 1981) has the advantage of building on parameters that are central to the analysis of lexical aspect. Besides, it allows a direct relation with a notion (TC) which is central to the theoretical framework followed here. However, these advantages are rapidly outweighed by empirical and technical problems logically affecting a TC account of *estar* as well.

In principle, telicity should not be expected in *estar* – not less than in *ser* –, at least under the assumption that these copulas (if not copulas in general) are stative. In theory, this proviso holds not only given HK’s definition, outlined above, but essentially as states, as eventive type, are basically defined by not featuring an endpoint (much less, progression towards one). Nonetheless, *estar* – unlike *ser* – seems to pass standard tests for telicity, as (7)–(12) (further discussed later) suggest.

- (7) Endpoint adverbials (Dowty 1991)
- a. *Los resultados estuvieron {disponibles/ abiertos/ en la recepción} en 10 minutos.*  
‘The results were {available/ open/ at the reception desk} in 10 minutes’
  - b. *La sopa estará {caliente/lista} en un minuto.*  
‘The soup was {hot/ready} in a minute’
  - c. *Les tomó diez minutos estar {conscientes/listos/disponibles/libres}.*  
‘It took them ten minutes to be {conscious/ready/available/free}’

- (8) Conjoined intervals (Verkuyl 1993)  
*Los resultados estuvieron {disponibles/ abiertos /en la } recepción*  
 ‘The results were {available/ open/ at the reception desk}  
 (el) *lunes* y (el) *martes*.  
 (on) Monday and (on) Tuesday’
- (9) Pause (Landman & Rothstein 2010)  
*Los resultados estuvieron {disponibles/ abiertos /en la recepción}*  
 ‘The results were {available/ open/ at the reception desk}  
 (el) *lunes* y (el) *jueves*.  
 (on) Monday and (on) Thursday’
- (10) Embedding under culminative verbs such as stop, finish (Verkuyl 1993).
- Los resultados dejaron de estar {disponibles/ abiertos/ en la recepción} #(hace poco).*  
 ‘The results stopped being {available/ open/ at the reception desk} #(a while ago)’
  - La sopa terminará de estar {caliente/lista} \*?(en un minuto)*  
 ‘The soup will finish being {hot/ready} \*?(in a minute)  
 [‘The soup will be finally {hot/ready} un a minute’]
  - Las entradas {terminaron/ acabaron} de estar disponibles \*?(el viernes).*  
 ‘The tickets {finished/ ended being available \*?(on Friday)  
 [‘The tickets were finally available on Friday’]
- (11) Ambiguity of negation and almost (Bennet & Partee 1972)
- La sopa (casi) estuvo (casi) {lista/caliente}.*  
 ‘The soup (almost) was (almost) {ready/hot}’.  
 → Event scope: the process of preparation was almost initiated.  
 → Result State scope: the process of preparation was initiated, but the result state was almost reached (the soup was almost {ready/hot}).
  - La sopa no estuvo {lista/caliente} [finalmente]*  
 ‘The soup was not {ready/hot} [finally]’  
 → Counterfactual reading: the process of preparation did not even begin (was about to, but didn’t).  
 → Incomplete reading: The process begun but was not completed (the soup was heated halfway).
- (12) Ambiguity between restitutive and repetitive reading (Dowty 1979)  
*La sopa estuvo nuevamente {caliente/lista}*  
 ‘The soup was {ready/hot} (once) again’
- Repetitive reading: the same person prepared/heated the same soup twice
  - Restitutive reading: the soup had already been ready/hot before.

However, although this may be true, a less often noted fact is that *estar* happens to pass common atelicity tests just as easily, as shown by (15). The important point here is that the absence of endpoint adverbials, as in (15b), or else the combination with durative ones, as in (15a), produces homogeneous (hence, atelic) predicates, in contrast to the potentially telic predicate (or telic entailment) yielded with an endpoint adverbial. Clearly, *estar* is not amenable to other semicopulas such as *resultar* ‘turn out’ or *quedar* ‘become’ (16), which can ultimately be seen as bearing lexical semantics properties related to telicity. This, added to the fact that the durative adjunct is irrelevant to the delivery of an atelic/homogeneous predicate, can be seen as an indication that *estar* is not, in and of itself, telic. Instead, these patterns encourage the idea that *estar* produces homogeneous (atelic) predicates by default and that the telic entailment is, instead, epiphenomenal (i.e., a side-effect of the construction). In fact, also *ser* can yield telic entailments and even trivially alternate with a semicopula more closely akin to telicity if combined with relevant adjuncts, as in (17).

- (13) Framing [for X time] (Dowty 1991)  
*Las entradas estuvieron disponibles por días.*  
 ‘The tickets were available for days’
- (14) Durative adjuncts (Dowty 1991)  
*Las entradas estuvieron disponibles durante toda la semana.*  
 ‘The tickets were available the whole week’
- (15) Homogeneity (Bennett & Partee 1972)
- a. *La mitad de ‘estuvieron disponibles (por diez minutos)’ es ‘estar disponible’*  
 Half of ‘to be<sub>ESTAR</sub> available (for ten minutes)’ is ‘to be<sub>ESTAR</sub> available’
- b. *La mitad de ‘estuvieron disponibles #(en diez minutos)’ no es ‘estar disponible’*  
 Half of ‘to be<sub>ESTAR</sub> available in ten minutes’ not is ‘to be<sub>ESTAR</sub> available’
- (16) {Terminó/ Quedó} cansado cf.  
 Finished/ remained tired ‘He ended up tired’ be<sub>ESTAR.PERF</sub> tired  
 Estuvo cansado  
 ‘He has been tired’
- (17) *Las condiciones {fueron/resultaron} {diferentes/insufribles/imposibles} en poco tiempo.*  
 ‘The conditions {were<sub>SER</sub>/became} {different/unbearable/impossible} in a short time’





- (19) {\**siendo/ estando*} *el bebé en la cama, podemos relajarnos.*  
 being<sub>SER</sub> being<sub>ESTAR</sub> the baby in the bed, can.1PL relax  
 ‘Being the baby in bed, we can relax’

Quite apart from this question, trying to avoid using a TC/CC opposition to define the point of divergence between *ser/estar* does not imply assuming that these copulas are aspectually neuter or unspecified, but rather that there are finer and equally crucial differences at work; namely, those motivating the well-known distributional patterns and non-trivial alternation in shared contexts summarized at the beginning. Along these lines, I will propose instead that the formal differences behind the *ser/estar* alternation are to be dealt within the realm of CCs.

This solution is compelling at different levels. For instance, if the CC (i.e., the stative Figure/Ground-relation) can be eventually interpreted as overlapping with the end of a trajectory – i.e., in those predicates involving a telic/resultative flavor – this is precisely because TCs are more complex structures fundamentally comprising (simpler) CCs relations like (18a) in their base (cf. HK 2002: 221). Interestingly, this structural complexity fits well with our claim about telicity being epiphenomenal (i.e., the result of a construction). Further, there are specific properties in *estar* that can be argued to account, quite naturally, for the embedding of this CC predicate in the more complex (TC) structure, and which are to be crucially differentiated from telicity. If on track, such an account would be more in line with analytic patterns indicating that telic entailments are not a constant feature of *estar*, as well as with the theoretical notion that telicity is not part of verbal semantics, but rather a property of constructions (going back at least to Dowty 1979). In consequence, the observation about the relative structural complexity of TCs in contrast to the simplicity of CCs would crucially coincide with the contrast between constructional aspect and lexical aspect defended here. In turn, the alternative distinction between CC prepositions would account for the relevant contrast between *ser/estar*, while the evidence for this sort of lexical difference is, in general, straightforward. Moreover, the basic claim remains highly compatible with the definition of these copulas as statives, especially if we are open to the idea that states can be seen as basic building blocks from which more complex predicates are formed (cf. Rothmayr 2009).

At this point, a relevant question arises. It concerns the observation, advanced above, that although copulas are in general allowed in more complex (e.g., TC) constructions, *ser/estar* are visibly constrained in this respect. Arguably, such restrictions follow from the same semantic/aspectual burden that motivates the alternation. The question now is which feature or property best accounts for the behavioral patterns noted and makes *estar* more suitable for telic entailments.

### 3. A way out: boundedness vs. telicity

Various analyses based on perfectivity, telicity, and inchoativity (Bosque 1990, Zagana 2011, Camacho 2012, respectively) share intuitions about the presence of a boundary in *estar*. Such an agreement is not accidental. Crucially, it has been pointed out that one of the reasons why telicity and perfectivity are commonly mistaken is that they both involve boundedness (cf. Borik & Reinhart 2004, Guéron 2007). I want to propose that this is the key to the problem of *estar*, as primary explanation for (7)–(17), and in particular because boundedness is not incompatible with atelicity.

Simplifying somewhat, telicity is basically defined by involving an endpoint – in theory, the event counts as complete if it reaches this point beyond which it cannot continue (Depraetere 1995: 2). However, this is a necessary but not a sufficient condition; in turn, non-homogeneity is. Put simply, the idea (going back to Bennett & Partee 1972, Dowty 1979) is that atelic predicates describe each sub-interval comprised in the event denoted, while telic predicates do not describe all the subparts of the time interval but only the one that overlaps the endpoint. Boundedness (Depraetere 1995: 3), on the other hand, also refers to the existence of a relevant boundary for the eventivity described, although in this case the event can still be described by the subparts comprised in the time interval for which it holds, and it is not necessarily linked to culmination. Hence, boundedness may be functional to telicity, but it may also concur with homogeneity and apply to atelic predicates, to the extent that they can handle, namely, a temporal frame (i.e., time stops to which (8) and (9) above are crucial). Importantly, unlike telic predicates, for bounded predicates progress or extension are possible beyond the temporal boundary in question.<sup>1</sup>

At first sight, *estar* fits well with the general circumstance just described. Note that the different examples provided in the Introduction, as well as those in (20), all have in common that the eventivity (i.e., the state) can be resumed even after a temporal boundary, in this case set by adjuncts defining non-conjoined intervals. Further, the introduction of a determiner, which normally draws an important

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1. The concept of boundedness is implemented here in a non-standard manner on which, for reasons of space I cannot elaborate in detail. For present purposes, I will assume that this semantic property is part of *estar*'s lexical semantics, arguably determined by the abstract boundary preposition that combines with the empty *v* head (pAT). Importantly, while *estar* fits well with the semantic and empirical description of boundedness offered above, *ser* is commonly characterized by representing a situation with no inherent temporal boundaries, which is the precise definition of unboundedness (Depraetere 1995: 4). Ultimately, this is not incompatible with the interpretation of TC/CC in terms of contact/inclusion, among other analytical alternatives. For a specific analysis of *as* boundary P and in particular in combination with *estar*, see Mangialavori & Marín (2015).

difference for telic verbs (cf. Verkuyl 1993), is irrelevant here. Moreover, in the case of *estar*, and unlike telic verbs, the addition of a temporal boundary, as in (21), amounts to the instantiation of the atelic eventivity (state). The important point being that, while telicity bears on right boundaries, boundedness can involve either left or right boundaries (or both). In addition, boundedness is consistent with the fact that the basic predicate with *estar* (take, for instance, (20) below) allows (at least) three readings, represented in (22): (a) the reading where the (atelic) state yields an extensive eventivity (state) with temporal stops; (b) the reading where the state is resumed after the relevant endpoint (a possibility which is in principle not available for telic verbs, as discussed above); and (c) the ‘telic’ reading, where the state comes through as the result of a process that is not entailed by the verb (inasmuch as it is not featured by basic occurrences of *estar*, and is not included in the basic denotation of the copula), but is somehow implied or entailed as a preparatory phase (cf. Brucart 2012) leading to the onset of the state instantiated by *estar*.<sup>2</sup> Crucially, with non-spatial uses of *estar* the nature of the situation is such that it is generally interpreted as taking up a limited amount of time, irrespective of whether it ultimately combines temporal stop adverbials or not. Finally, note that this is independent of the telic, resultative or perfective burden of the predicate: (22) shows that APs with no relevant morphological features, such as *libre* ‘free’, are not less successful than perfective/participial forms (namely, *estará liberada* ‘it will be<sub>ESTAR</sub> freed’) in producing predicates that bear the much-discussed resultative flavor.

(20) *La sala estará libre (el) lunes y (el) martes.*  
 ‘The room will be free[available] (on) Monday and (on) Tuesday’.

(21) Left boundary  
*Las habitaciones {estuvieron/están} libres desde las ocho.*  
 ‘The rooms {were/are} free [available] since eight o’clock’

(22) a. Extensive  
*La sala estará libre*  
 ‘The room will be free  
*de forma continua en el término comprendido por lunes y martes.*  
 [available] uninterruptedly from Monday to Tuesday’

b. Repetitive/Restitutive  
*La sala estará libre el lunes y*  
 ‘The room will be free [available] on Monday and  
*volverá a estarlo el martes.*  
 will be free again on Tuesday’

2. For more details on the general aspectual description pursued here, see Mangialavori Rasia (2013a).

## c. Resultative

*La sala llegará a librarse de ocupantes en un punto comprendido  
 ‘The room will be free of visitors at any given point comprised  
 entre lunes y martes.  
 between Monday and Tuesday’*

Therefore, boundedness provides a welcome explanation for the occurrence of *estar* (over *ser*) in contexts that involve temporal stops but which nonetheless remain atelic/homogeneous (cf.(23)). Bounded atelicity also fits well with the fact that measure phrases such as *un poco* ‘a little’ allow for a relevant ambiguity between temporal and scalar scope (see (24a), in contrast to unbounded atelic verbs (*ser* in (24b) and telic verbs (24c)). Finally, frequentative readings with an adjunct indicating a point in time, as in (25), are also expected for bounded atelic verbs (Depreaetere 1995: 4).

(23) Los niños {\*fueron/estuvieron} libres {desde las ocho/entre las ocho y las nueve}.

(24) a. *Amy estuvo un poco feliz* → time frame (eventless) reading

(= Amy was happy for a few days)

Amy be<sub>ESTAR.PERF</sub> a little happy → scalar reading

(= Amy was not completely happy)

b. *Amy fue un poco feliz* →\*time frame (eventless) reading

(= Amy was happy for a few days)

Amy be<sub>SER.PERF</sub> a little happy → scalar reading

(= Amy was happy but not completely)

c. *Amy terminó un poco feliz* →\*time frame reading

(= Amy was happy for a few days)

Amy ended [up] a little happy → scalar reading

(= Amy was happy but not completely)

(25) a. *Las entradas estarán disponibles {todos los / cada} martes*

‘The tickets will be available {every /each} Tuesday

y viernes.

and Friday’

b. *Las habitaciones están libres a las 8:00.* [≈frequentative]

The rooms are available at 8:00’

Summarizing, boundedness fares better with the range of predicates under consideration, avoiding potential overgeneralizations (e.g. sweeping telicity), while at the same time it allows us to remain within the frame of atelic and stative predicates if needed. Again, this holds insofar as boundedness is seen as a distinct property, logically separable from telicity and perfectivity. In turn, boundedness in conjunction with resultativity can be proposed to account for the eventual denotation of a state

‘resulting from a change’. This resultative flavor, reported in the literature on *estar* in specific constructions (cf. Bosque 1999) and consistent with HK’s basic definition of TC, follows naturally inasmuch as *estar* would be eventually able to produce richer descriptive content under the adequate conditions by virtue of boundedness. Accordingly, the state can sometimes be interpreted as a specification of the final situation/location of the Figure (Terminal Ground) overlapping with the end of a trajectory or linear arrange, as a natural consequence of *estar*’s bounded nature. In this way, boundedness captures the intuition that *estar* is (sometimes) compatible with a telic entailment while remaining basically stative. The difference can be seen by considering the role of adverbials. Namely, while adverbs in (26a) can be argued to describe the manner in which a result state is brought about or achieved, note that there is a clear contrast with (26b) on the one hand, where the adjuncts refer to the attribution of the property/state to the subject, involving no process whatsoever (i.e., so-called evaluative predicates);<sup>3</sup> and (26c) on the other hand, where the adverb underscores the restitutive reading allowed by bounded atelic, homogeneous predicates – that is, a state that has been resumed after a relevant boundary is crossed, but which does not necessarily involve a process or transition. Thus, boundedness would account for the compatibility with (rather than circumscription to) telicity and perfective morphology, correctly accommodating the aspectual profile outlined by (20)–(26), but also the various situations presented by (1)–(6).

- (26) a. *La puerta está {herméticamente/ firmemente/ perfectamente/  
‘The door is {hermetically/ firmly/ perfectly/  
sublimemente} cerrada.  
brilliantly} closed’*
- b. *La puerta está {claramente/ decididamente/ técnicamente/  
‘The door is {clearly/ decidedly/ technically/  
impresionantemente} cerrada.  
impressively} closed’*
- c. *La puerta está {nuevamente/ frecuentemente/ raramente/  
‘The door is {again/ frequently/ rarely/  
excepcionalmente} cerrada.  
exceptionally} closed’*

3. For an argumentation on the bounded flavor of *estar* and its compatibility with evaluative uses, see Mangialavori Rasia (2013b).

## 4. Implementation

### 4.1 Staying within CCs

The facts introduced above are a good indication that a careful aspectual analysis is needed in bringing Spanish copulas into the frame of HK's account, in particular if the TC/CC opposition is used to reflect their Aktionsart properties. Now, in view of the patterns and the considerations presented in the previous section, there are specific problems that we may want to avoid. For instance, we do not want to argue that *estar* is related by definition to a TC or to a Terminal preposition [ $P_T$ ].<sup>4</sup> First, because in that case a path<sup>5</sup> and, importantly, change would be involved by definition, at least according to the original formulation of TC cited above and the manner in which the relevant endpoint is established. Second, this situation would probably also involve a consequent non-homogeneity, which does not fit well with *estar*, especially if held as a sweeping generalization (recall (20)–(26)). On the other hand, it would be specifically difficult to argue that a stative verb (a copula) comprises the relative structural complexity required by TCs, namely to the extent that this would determine a structural asymmetry in relation to *ser* that is not easy to justify. Further, if *ser* contrasted by instantiating a  $P_C$ , in opposition to the  $P_T$  allegedly producing *estar*, it follows that *ser*, rather than *estar*, would be the one allowed to alternate between atelic and telic environments, at least provided the structural complexity of TCs and the necessary embedding of the CC in its base (recall HK's 2002: 221 definition). However, this is not the case: as noted above, the member of the pair that seems more likely to occur in telic and atelic contexts is *estar*. In principle, this situation requires *estar* to embody a CC, arguably a bounded one, as discussed above. Finally, we do not want to assume that *ser* contrasts with

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4. Some examples of these analytical alternatives are briefly outlined in fn. 11 below.

5. Some works on CCs realized as lexical prepositions argue that a line/path/trajectory (e.g. *The horse ran along the river*) and linear arrangement (*Reeds grow along the river*) is found in CCs yielding atelic predicates, assuming that “the relation between Figure and Place remains constant: hence, central coincidence” (Rapoport 2012: 2). However, I do not agree that Path, as defined above (where trajectory is directly linked to motion) can be found in stative verbs, namely as this involves a debatable identification of *path* and *scale*, but mainly because the problem under consideration involves a relevant difference with *path* as seen in eventive verbs. I rather assume, in line with works on Vector Space Semantics, that the notion of *atemporal path*, as an order-preserving function, is central to this effect, and that temporal and spatial stretches (paths), as well as directionality and dynamicity, should be carefully differentiated for a successful account of *estar* on these terms. See Mangialavori & Marín (2015) for a more detailed argumentation and also for discussion on the potential incompatibility of paths and states applied to boundary Ps and *estar*.

*estar* simply by being unmarked with respect to the coincidence relation, not only because this is technically problematic (more next), but also because this assumption seems empirically inaccurate, to the extent that *ser* also shows significant combinatorial restrictions and imposes a specific aspectual flavor. In any event, if *ser* were aspectually unspecified, the delivery of Individual-Level predicates even if combined with Stage-Level and perfective APs (recall (4) above) – as well as their interpretation as properties which are somehow temporally unbounded, inherent, owned by the individual<sup>6</sup> – would remain unaccounted for.

Therefore, I want to propose that *ser/estar* are better analyzed not as expressing a contrast between CC and TC, but rather in relation to a minimal pair, so to speak, of CC prepositions producing two distinct stative relations contrasting minimally in aspectual type. The idea builds on two observations. On the one hand, CCs are not conceived as a homogenous class in the theory; and, empirically, languages with aspectually-driven alternating copular systems, like Iberian Romance languages, stress the need to consider that copulas may encode (at least two) aspectually distinct types of predication. Nonetheless, this does not place one of the alternatives outside the stative frame – that is, the only alternative cannot be telicity. On the other hand, remaining within the stative domain would be more in line with the manner in which copulas are categorized in HK’s framework. Crucially, this is done by contrasting “minimally with the non-stative, terminal coincidence [copula] *become*” (HK 2005: 37). In this connection, I take up the observation that Spanish verbs such as *resultar* ‘become’, *terminar* ‘end up’ or *quedar* ‘remain’ provide a more adequate TC counterpart to *ser* than *estar*. Further, an alternative within CCs has not been considered so far and seems a worthwhile undertaking, given the facts just discussed.

In of track, a new – or at least a different – typology of P heads is needed to account for *ser/estar*. Within an I-syntactic framework like the one pursued here, and given the facts presented above, a more natural solution would be to look for a differential ontology internal to the CC realm compatible with boundedness. I will propose that the reason why *estar*, and not *ser*, is the one allowed to take part in the composition of a TC also justifies this decision: in essence, for a state to be conceived of as overlapping with the end of a trajectory, boundedness is essential. From a more general, theoretical, perspective, the proposal is consistent with previous insights on boundary prepositions being expected to allow directional or telic readings in certain contexts (cf. Levin & Rappaport 2015: 24 but see Mangialavori & Marín 2018

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6. This is in reference to certain intuitions, commonly found in the literature, about a difference between “state-descriptive” properties and “property properties”; or “accidental” vs. “essential” properties in relation to Carlson’s (1977) labels of stage- and individual-level (see Husband 2010: 8 for discussion).

for a specific analysis on *estar*+ boundary P) and is broadly compatible with the potential involvement of a trajectory in, namely, resultative constructions (see Brucart 2012) – or, rather, with *estar* being open to resultative or telic entailments in relevant contexts. More importantly, this potential solution fits well with the assumption that stativity is determined lexically (1-syntactically), whereas telicity is only achieved as a result of a construction. In HK's words, to the extent that stativity is identified with CCs, "then it is very probable that this identification is the only way in which stativity is attributable to a head, as opposed to a construction" (2002: 218).

#### 4.2 On the semantics of $p^*$ : $p_{AT}$ and $p_{HAVE}$

I will preserve the basic insight that two stative verbs (copulas) are produced by incorporating or conflating<sup>7</sup> a distinct abstract prepositional element ( $p^*$ ) determining consequent contrasts in Aktionsart properties and restrictions. However, in order to account for *ser/estar*'s divergent semantic characteristics without having to force the distinction to a CC/TC opposition, a different set of Ps is needed. Here, I argue that the  $p_{CS}$  at work can be related to  $p_{AT}$  and  $p_{HAVE}$ :

Importantly, these abstract Ps have been proposed as the source of relevant semantic properties encoded in the verb, especially in (1)-syntactic accounts (cf. Harley 2002 for summary). They have also been argued to crucially alternate in the formation of other verbs pairs – e.g. locatum/location verbs (Kiparsky 1997, Harley 2004), ditransitive verbs and dative alternation (Harley 2004), possessive SCs (Stowell 1995: 281). And, interestingly enough,  $p_{HAVE}$ , which I relate to *ser*, is particularly defined as the counterpart of a **spatial** (abstract) preposition (Harley & Jung 2015: 714).<sup>8</sup> This is central to the problem under consideration here given the much-discussed locative nature of *estar* in contrast to *ser* and the consequent distribution, but also in order to integrate into the analysis the fact that *estar* is equally productive in spatial predications. Therefore, in the case of  $p_{AT}$  an abstract preposition encoding boundary location (cf. Tortora 2008) would offer a compelling alternative in view of both *estar*'s aspectual profile (i.e., bounded stative)

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7. This does not involve an analytic choice, and both terms are kept here only in reflecting the fact that HK remain undecided as to what is the ultimately correct formulation (see HK 2002: 90). For present purposes, I use the term conflation following HK's original analysis, but also because this is crucial for HARs (see Section 5), which are in principle not possible in verbs produced by Incorporation (see HK 2002: 101). For reasons of space, I set aside this problem and the detailed discussion for another paper.

8. Other authors argue that  $p_{AT}$  and  $p_{HAVE}$  both correspond to abstract locations (Cf. Stiebels 1998: 288). This would apply more generally, namely in relation to the long-held liaison between copular predicates (states/properties) and (abstract) space.



and its basic locative flavor, which is relevant in many respects, even for the distinctive quirk and restrictions in its Individual-Level Predicate capacity (3) (see Mangialavori Rasia 2013b). In addition, a locative preposition – and particularly a boundary  $P$  – is expected to favor interpretations overlapping with motion/change, thus allowing the state to be potentially interpreted as a ‘following’ eventuality (Rizzi 1988: 522, Tortora 2005: 312).  $p_{AT}$  can be also argued to encode the abstract Ground component commonly analyzed in attributive relations corresponding to *estar* in Spanish (cf. (27) gloss), thus subsuming the progress made by localist accounts as well as by analyses building on a locative feature ascribed to this copula as formalization of its aspectual burden (e.g. Zagona 2015) and, moreover, in agreement with HK’s definition of CCs ((18)–(19) above). This provides a welcome simplification, since  $p_{AT}$  shall readily handle the two basic guises in which *estar* predicates come: predicative and locative, traditionally analyzed as the result of two different lexical verbs (see Bosque 2001).

- (27) [StateBE [ThingAMY], [PlaceAT [PropertyHAPPY]]]  
 Gruber (1965), Jackendoff (1990)  
 Amy is happy (English)  
 Amy {está/\*es} feliz (Spanish)

By contrast,  $p_{HAVE}$  (Harley 2004, Richards 2001 and references therein) is to be related to a contiguity CC relation whereby an entity is in unbounded (stative) coincidence with another entity or property (Rapoport 2014, Rigau 2005). This has the advantage of presenting an alternative to the non-eventive dyadic component determining *estar*’s distinctive properties (e.g.,  $p_{AT}$ ) without leaving the CC territory and, more importantly, presenting a close semantic match to the possessive, (in)alienable flavor pointed out for *ser* across specific studies, grammars, and general reference works.<sup>9</sup> In addition, a possessive-like  $p^*$  flavor heading the SC (cf. Harley 2012: 17, Stowell 1995: 281 on possessive SCs produced by  $p_{HAVE}$ ) would fare better with NP predicates (DP- $p_{HAVE}$ -NP), characteristically selected by *ser* (Pustet 2003: 27). This is important in order to accommodate the categorial distribution ((6) above).

Finally, insofar as  $p_{AT}$  and  $p_{HAVE}$  are both defined as CCs, and so are copulas, the alternative correctly reflects a distinction between two aspectually different stative – i.e., non-dynamic, non-eventive, homogeneous – denotations.<sup>10</sup>

9. For example, *ser* is commonly defined by conveying properties that *belong to* or are *possessed by* the individual (Bosque 1990), holding for an unlimited amount of time, or *inherent* qualities (Pustet 2003: 28, Bosque & Gutiérrez-Rexach 2009: 314), etc.

10. As a part of a proposal in progress, and for reasons of space, I leave open the question of how widely these Ps are present in other languages with comparable multicopular systems and whether single-copula languages leave this distinction to the conceptual domain.

### 4.3 On the syntax of $p^*$

Starting from Hale (1986), it became clear that the TC/CC opposition does not involve a unanimous lexical-syntactic realization across languages. The case of *ser/estar* is not an exception: an issue that remains unsettled concerns the syntactic nature of the P encoding the relevant coincidence relation. Here I present some reasons to consider a structural definition of P over a featural one. Nonetheless, the analysis of  $p^*$  as a head carries both important advantages and a potential problem. As for the advantages, it logically stays clear of specific limitations affecting the analysis of P as a feature.<sup>11</sup> As for the problem, it is precisely this what motivates the reformulation proposed next. Namely, the conception of  $p^*$  as a head with specific flavor allows us to preserve a uniform derivation and structural symmetry for *ser/estar* within SC configurations, in contrast to other proposals in which the syntactic ontology is either unclear or leads to categorially different outcomes, or even to major configurational asymmetries in order to account for the relevant semantic content. Further, it allows a compelling analysis of the way in which variable Aktionsart is produced, with  $p^*$  as a key locus of variation.

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11. For reasons of space, I cannot offer a detailed overview and discussion of each alternative and its potential limitations. In essence, featural accounts of P tend to assume that *estar* incorporates a *Terminal P feature* [uPT] (Gallego & Uriagereka 2009, Zagana 2014). Regardless of being conceived semantically or morphologically, this analysis faces problems apart from those lying on the aspectual implications of  $P_T$  (proposals diverge as to perfective/telic/inchoative features), which ultimately add up to those pointed out by Gallego & Uriagereka (2009). Namely, as seen in the Introduction, the distribution is not always predicted by the presence of perfective features in the predicate (recall (1)–(2)), and, in those cases where it does, a duplication problem arises (see Fábregas 2012). Semantically, the [uPT] analysis is problematic given the standard definition of TC and the stativity of the copula, discussed above.

Other proposals instead analyze *estar* as a marked element valuing a TC feature [ $R_T$ ] in opposition to a *neutral copula* (*ser*) (e.g. Brucart 2012: 120). Yet, this alternative may also require a non-standard definition of TC, at least in the sense that *estar* does not necessarily express “the goal of the path, as happens in movement verbs” (Brucart 2012: 22) nor “a path that is interpreted as a preparatory phase” but rather a bounded situation, the main difference being that the latter applies also to stative predicates, as argued above. Further, it seems that on this type of account locative (non-directional) occurrences shall involve a TC, which may be problematic for reasons discussed above. Another potential problem that may need to be solved is that combinations allegedly involving successful valuation of [uRT] in the attributive relation do not seem to always yield a TC, while *estar* occurs in contexts not requiring valuation of a [ $R_T$ ] (cf. (1)). On the face of it, the considerably large set of predicates shared with *ser* presents a problem for a distribution determined by valuing requisites. In any case, and much more importantly, the analysis of P as a value is not extendable to CCs—and, hence, to *ser*, according to the typology assumed—, insofar as [ $\pm$  CC] “makes no sense” (HK 2002: 221).

Admittedly, a  $p_C$ , understood as a meaningful non-eventive dyadic element, in its capacity as SC head, produces the expected argument structure configuration. Inasmuch as the relevant point of divergence is non-configurational ( $p^*$  flavor), the structural symmetry between *ser/estar*, together with the local relation between the subject and the predicate, are preserved. At the same time,  $p^*$ , as locus of encoding of the specific stative birelation – with contrasting  $p^*$  flavors corresponding to distinct CC types –, accommodates the non-trivial semantic contribution made by each copula.

On the other hand, and importantly enough, a  $p_C$  in the complement position of  $V^0$  would naturally explain the relative insensitivity of the copula with respect to the aspectual burden of the SC predicate, to the extent that it would be  $p^*$  and not the AP/PP predicate the one determining the aspectual profile of the verb and the resulting construction, alternation being sometimes possible though never trivial. This consideration is compatible with previous works on measure-out positions internal to VP, especially for V heads complemented by an SC structure (Harley 2005). Put simply, given that  $p^*$  would be in the relevant measure-out (sister-to-V) position, it is consequently expected to determine the aspectual contour (i.e. the Aktionsart) of the verb. If  $p^*$  is furnished with a boundary ( $p_{AT}$ ), then it is logical to expect an aspectual type featuring a default boundary, as part of the verb's lexical semantics. In this sense, the analysis seems to make the correct prediction, to the extent that incorporation (conflation) of a locative boundary  $p^*$  would produce a verb with consequent properties and, crucially, *estar* is commonly characterized by yielding situations that make crucial use of a bound (see Mangialavori 2013a for detailed analysis also accounting for cases in which  $p_{AT}$  is not instantiated as a temporal bound, nonetheless remaining equally crucial to the denotation). In fact, an important property of this copula is that it is highly compatible with time stops, inchoative, repetitive, restitutive and even culminative and resultative entailments, as seen above (e.g., (5), (9), (12)). Conversely, the presence of a  $p_C^*$  with possessive-like properties ( $p_{HAVE}$ ) is expected to produce a verb reflecting these characteristics, but also lacking the bounded flavor yielded by a boundary locative  $p^*$  of the sort of  $p_{AT}$ . The semantic burden of the  $P^*$  in *ser* is not trivial, at least since it contrasts with pure copulas like *be* by introducing distinct flavor and restrictions. Accordingly, *estar* yields states with consistent aspectual properties, regardless of being combined with aspectually neuter, imperfective, Individual-Level or perfective predicates as in (28), or even with predicates with specific (e.g., present participle) morphology like *-ble*, while *ser* yields a predicate with consistently different Aktionsart properties in similar contexts (29) – a fact that is not easily explained by

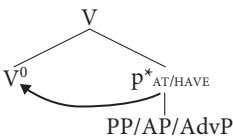
accounts that analyze *ser* as “inert with respect to aspect” (e.g. Fernández Leborans 1999), aspectually neutral, unmarked, or even as a mere carrier of  $\varphi$ -features.

- (28) a. [underspecified predicate]  
*estar* {*feliz/ cariñoso/ nervioso/ disponible/ claro*}  
*be*<sub>ESTAR</sub> happy/ loving/ nervous/ available/ clear  
 → bounded/punctual state
- b. [imperfective/ILP predicate]  
*estar* {*inteligente/ alto/ redondo/ cortés /impresionable*}  
*be*<sub>ESTAR</sub> intelligent/ tall/ round/ polite/ impressionable  
 → bounded/punctual state
- c. [perfective/SLP predicate]  
*estar* {*lleno/ suelto/ limpio/ descalzo/ abierto /aquietado*}  
*be*<sub>ESTAR</sub> full/ loose/ clean/ barefoot/ open/ quiet(ened)  
 → bounded/punctual state
- (29) a. [underspecified]  
*ser* {*feliz/ cariñoso/ nervioso/ #disponible/ claro*}  
*be*<sub>SER</sub> happy/ loving/ nervous/ available/ clear  
 → possessed property
- b. [imperfective/ILP predicate]  
*ser* {*inteligente/ alto/ redondo/ cortés/ impresionable*}  
*be*<sub>SER</sub> intelligent/ tall/ round/ polite/ impressionable  
 → possessed property
- c. [perfective/SLP predicate]  
*ser* {*#lleno/ suelto/ limpio/ #descalzo/ abierto/ quietado*}  
*be*<sub>SER</sub> full/ loose/ clean/ barefoot/ open/ quiet(ened)  
 → possessed property

The restrictions noted also fall out of the proposed analysis, as I will show next, to the extent that *estar* is expected to combine with predicates allowing a boundary reading amenable to  $p_{AT}$  (applicable to SL, perfective and even IL predicates yielded by *estar*). *Ser*, on the other hand, shall take predicates that can be interpreted as centrally coinciding with the subject in a temporally unbounded relation, with a possessive or inherent entailment matching the descriptions generally offered in the literature. However, before we proceed, there is a problem that must eventually be addressed.

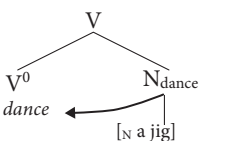
## 5. A Hale-and-Keyserian solution

As matters stand, if we maintain that *ser/estar* are produced by conflation of a semantically relevant  $p^*$ , but at the same time a lexical predicate (namely, a PP) is necessarily selected by the copula, then a potential duplication problem arises, inasmuch as the prepositional element would be present both in the verb and in its complement. If we adopt the original derivation proposed by HK (2002: 15(27)), as in (30a) – and under the standard assumption that lexical insertion cannot take place into a position already occupied by a syntactic object –, a comparable problem obtains: conflation needs to be preempted, or the copy of  $p^*$ 's signature be deleted or overwritten, before vocabulary insertion. As HK (2002: 83) note, insertion cannot preempt conflation here. Therefore, some other solution must be implemented to accommodate the additional constituent in question. The problem is already considered by HK in their classical example of verb formation (30b), where the verb produced by conflation<sup>12</sup> of a nominal source (e.g., *dance*) selects another noun (*jig*) in its complement position (*dance a jig*, HK 2002: 89). Importantly, the proposed analysis also holds for verbs produced by merge of a PP. In particular, HK observe that location/locatum verbs like *shelve* (30c), which are argued to result from P conflation, select a PP in its complement as well (*shelve on a windowsill*).

- (30) a. 

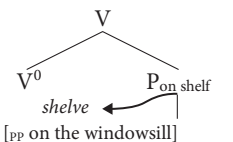
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graph TD
 V --- V0[V0]
 V --- pstar[p*AT/HAVE]
 pstar --- PP[PP/AP/AdvP]
 V0 --> V

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- b. 

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graph TD
 V --- V0[V0]
 V --- Ndance[Ndance]
 Ndance --- N[N a jig]
 V0 --> V

```
- c. 

```

graph TD
 V --- V0[V0]
 V --- Ponshelf[Pon shelf]
 Ponshelf --- PP[PP on the windowsill]
 V0 --> V

```

A related question that remains concerning *ser/estar* is what prevents verbs allegedly already comprising a  $p^*$  from occurring without an overt (lexical) complement, which is precisely the requirement motivating the light-verb approach proposed by

12. Again, I am not unaware of the difference between Incorporation and Conflation. Cf. fn. 7.

Bosque (2001).<sup>13</sup> Nonetheless, note that the PP, AP or AdvP complement is not only required by *estar*, but crucially subject to specific restrictions. This is not a problem for the analysis pursued, however. Rather, the parallel with typical instances of verbs produced by P-conflation arguably extends to our data: on the one hand, null complements are not licensed HK's prototypic cases either (31a). On the other hand, verbs yielded by the derivation in (30c), unlike their phrasal counterparts in (31b), also impose visible restrictions on the PP (cf. (31c)).<sup>14</sup>

- (31) a. \*They put the books [PØ]. (HK 2005: 18(21); 2002: 91)  
 b. Put books on the {shelf/windowsill/tray/floor}  
 c. Shelve books on the {windowsill/\*tray/\*floor} (HK 2002: 93(83))

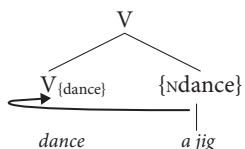
To explain this, HK (2005) focus on the restrictive relation between the conflated element and the full-fledged lexical category surfacing in complement position. They propose the notion of “hyponymous argument relations” [HAR], which has been fruitfully applied in subsequent works on Romance and English verbs (e.g. Mateu 2008a/b, Mateu & Rigau 2010, Harley 2005, Haugen 2009). According to HK, the verbs at issue here productively enter into this restrictive relation, notated with braces in (32a). This is a classical semantic Selection – a “classificatory selectional relation” – that licenses the overt complement “above and beyond the purely structural relation expressed by the verb-complement configuration alone” (HK 2002: 92). In this way, the “verb itself” – i.e., the result of conflation – determines the interpretation of the overt complement as a hyponym of the conflated constituent by Identification. This means that, for instance, the conflated N *dance* would determine that *jig* in (32a) is interpreted as a kind of dance, in contrast to, namely, *whistle a jig*, where a different conflated N would guide the interpretation of *jig* as kind of tune instead, according to a restrictive part-whole relation (see Uriagereka 2008) which is now semantically shaped by *whistle*. It follows that p\* conflation in (32b), admittedly producing *estar* in our case, is not expected to preclude the selection of a (lexical) PP as complement; rather, it is crucially predicted to guarantee and systematically constrain the interpretation of the overt PP (e.g. *en calma*) – or

13. In certain respects, it could be argued that copulas are more like P than (light) verbs, to the extent that they instantiate a birelational structure between the predicate and its subject in a non-eventive relation. In any event, selection of a predicate instead of an internal argument remains as a major difference between copulas and light verbs – and one which the proposed (p\*) merge captures. Further, HK (2005: 34) emphasize that the impossibility of passivization follows exactly from this point, while statives like *cost* or *weight* are analyzed as copulas.

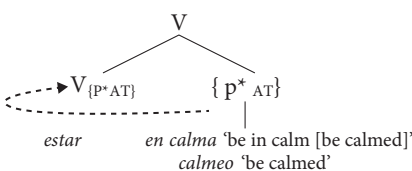
14. Uriagereka (2010: 413) also notes this semantic restriction by comparing *put water on a shelf* with the infelicitous *\*shelve water*.

else the AP (*calmo*)<sup>15</sup> – accordingly. In consequence, *calmo* in (32b) is interpreted as a bounded situation in which the subject is found (i.e., a finer instantiation of  $p_{AT}$ ), in contrast to *ser calmo*, where the copula produced by conflation of an unbounded  $p_C$  (say,  $p_{HAVE}$ ) would guide the interpretation of the predicate as a *possessed* property (‘be a calm person’) instead.

(32) a.



b.



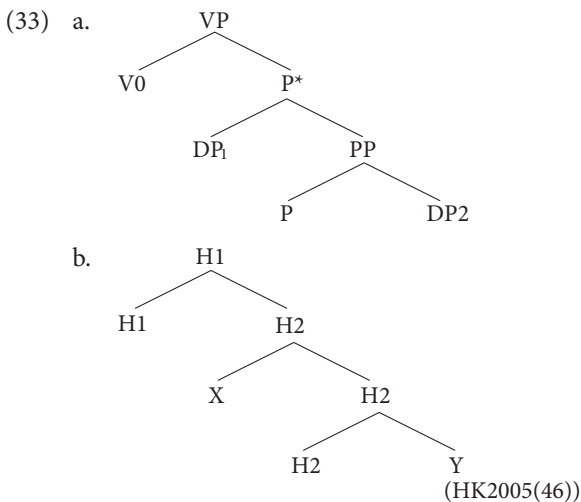
In short, there are good semantic and syntactic reasons to consider the proposed analysis. In principle, both cases in (32) involve two constituents crucially related: a non-overt relational element giving semantic constituency to a defective V, and a lexically-realized complement which is interpreted accordingly. They both involve also relevant selectional restrictions, allowing only predicates which are compatible with the classificatory semantic relation drawn by the element merged in each case, which in turn supplies the specific semantic properties motivating non-trivial alternations with other verbs. Therefore, there are various reasons to adopt HK’s general proposal. First, in all cases the relevant ingredients at issue are the symmetric relations expressed in the argument structure configuration of VP. Second, conflation is specifically intended to leave the configuration intact. Third, the crucial restrictive semantic relation between the conflated  $p^*$ , and those of the designated (overt) complement, crucially conform to HK’s account outlined above.<sup>16</sup> Moreover, in *ser/estar*, as well as in standard verbs of the type central to the question of conflation, the verb itself gives information relevant to the interpretation of the verb in conjunction with its overt complement.

15. Arguably, under the present theoretical framework, the adjectival variant would obtain from the same structure (PP predicate) by virtue of conflation (suggested by Hale & Keyser 2002, but specifically analysed in Jayaseelan 2007, Mateu 2008a).

16. I also assume late insertion for the PP, after the verb has been formed (‘out of the loop’, HK 2002: 23, see also Mateu 2008b); that is, not necessarily as proposed by Haugen (2009), but rather in relation to the idea that conflation is ordered before insertion.

From here, further advantages follow. Being  $p^*$  the key locus of variation between *ser/estar*, the restrictive relation in question would explain the unambiguous interpretation of aspectually neuter predicates according to the type of  $p_C$  involved: as bounded states or locations with the locative boundary  $p$  producing *estar* (say,  $p_{AT}$ ); or as inherent or *possessed* properties with the unbounded central coincidence  $p^*$  yielding *ser* (recall (1) and (28)–(29) above).  $p^*$  would also account for the non-trivial alternation, particularly in those cases in which the copula remains the sole variable ((4) above). The need for multiple lexical entries for predicates combined with either copula (see Camacho 2012) also goes away, to the extent that the restrictive (selectional) relation holding between  $p^*$  and the PP/AP/AdvP predicate guarantees the proper interpretation of the latter as a specific instantiation of the former, as discussed above. Finally, comparable cases found crosslinguistically can be argued to provide additional support, as shown below.

There are, however, specific structural conditions that must be met first. Namely, the operation involved in such a verbal derivation must be *strictly local*, relating a head (H1) in (33b) and the head of its complement (H2). Further, the conflated element yielding the HAR (H2) is required to head a predicate and be c-subjacent to a head setting the  $\tau$ -value (admittedly, T itself; HK 2005: 16). Assuming that (33a) is correct, it meets the desired characteristics: the inner head ( $p^*$ ) projects a specifier (DP), is locally c-commanded by the upper head (V), and heads its own predicate. Accordingly,  $p^*$ , as (non-eventive) birelational head, would define the basic argument structure (SC) and the relevant selectional restrictions on the predicate by Identification, in what may be described as a copula-based version of HARs.





If correct, the general situation offers a further advantage, as it allows the distinction of two important local relations in HK's frame: Conflation and Selection. Strict locality holds in both cases; the difference is, basically, that in the former the governing head (V) *conflates* with its complement (i.e., the birelational non-eventive head contributing the specific stative relation and introducing the external argument). This is important not only to guarantee locality and to preclude conflation with the specifier of  $p^*$ , which bears no structural relation with the governing head, but also because this rules out a potential semantic restrictive relation between the subject and a null  $V^0$ . Selection, on the other hand, is expected to hold between the conflated head and its target. Thus, it would be Selection that relates  $p^*$  to its predicate, producing the observed restrictions. Hence,  $p^*$  is governed by  $V^0$ ; but neither the SC subject nor the predicate are selected by  $V^0$ , but rather by  $p^*$ , which is the element providing the specific semantic burden and the relevant locus of variation. In turn, Selection is not expected between V and  $p^*$ . Crucially, V is not rich enough in semantic features: recall that the verb *per se* does not succeed in licensing null complements, neither in HK's verbs produced by p-conflation, recall (31a), nor in the case of Spanish *ser/estar*.<sup>17</sup> Finally, if it is true that the conflated  $p^*$  introduces the external argument, the general analysis also captures the fact that the specifier of the inner projection (SC) bears no direct argumental relation to the defective  $V_0$ , at the same time that it remains in a local relation with the lexical predicate, thus being open to account for the specific relation established between the DP and the predicate.

To recap, according to these considerations, non-trivial copulas like *ser/estar* would result from conflation of an abstract but meaningful  $p^*$ . Arguably,  $p^*$ , first, provides a locus of encoding for the non-eventive relation whereby *ser* and *estar* diverge; second, it handles selectional restrictions noted; third, it occupies a relevant measuring-out position, determining the Aktionsart properties of the predicate; fourth, it introduces the external argument in a local relation with its predicate, heading the SC-like configuration where the specific stative relation between them is established.

Finally, from this perspective, a natural explanation for the significant semantic and syntactic restrictions noted is not only provided within the same framework but further supported by an important corpus of verbs with comparable characteristics. For instance, a relevant extension is encouraged by the idea that semantically contentful copulas like *ser/estar* may be part of more general phenomena,

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17. As it stands, another reason to assume, at least in principle, Conflation is that, in contrast to Incorporation, it is allegedly restricted by Selection. Still, the case of *ser/estar* differs from the narrow conception of Conflation as a morphophonological problem, as the general process is not about a phonological matrix being transferred to  $V^0$ . We leave this problem for future research.

corresponding to better-known cases where a spatial preposition is both conflated into the verb and realized as a lexical PP/AdvP. The general circumstance is not germane to Spanish – nor to (Iberian) Romance languages also featuring a comparable copular alternation, such as Catalan or Portuguese. Rather, it has been shown to be productive in Romance languages generally, including Spanish (*entrar en* ‘enter in’) and Italian (*entrare dentro* ‘enter into’; see Mateu & Rigau 2009: 135) but also in non-Romance languages (e.g. Dutch *op*, cf. den Dikken 2006). If the parallelism holds, the different verbs resulting from such processes<sup>18</sup> would be all directly provided with hyperonymic semantic features corresponding to a specific type of coincidence relation involved – in principle, the one encoded by the conflated p head. Crucially, such superordinate features (see Mateu 2008b: 6) consequently assigned to V, could impose important semantic restrictions on the overt complement, which would be in turn endowed with more specific (i.e., hyponymic) content. This means that, in the case of *ser/estar*, it would presumably be the incorporated p\* that introduces the SC subject in accordance with Strict Complementation (HK 2002: 59) at the same time that it selects a grammatically-realized complement, its predicate. The selected complement, which is alternatively instantiated by a PP, an AP, a DP (only with p<sub>HAVE</sub>) or else by an Adv (with p<sub>AT</sub>), receives an interpretation that is reliably restricted by Identification along the parameters drawn by the type of p\* merged, according to the type of non-eventive (CC) relation involved in each case. In this way, we can retain the p-conflation account of the syntactic and semantic properties of *ser/estar* by assuming that some sort of HAR accounts for the crucial restrictions on the predicate, as argued for (30), while we avoid the potential duplication<sup>19</sup> problem. Eventually, if correct, these considerations would indicate that the p component widely discussed in *estar* is not only real but central to the selection and interpretation of the predicate.

## 6. In sum

The basic idea advanced here would be that Iberian Romance copulas – specifically, Spanish *ser/estar* – are semantically rich enough to license a specific set of predicates, but also to prevail over the aspectual determination of the lexical AP or

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18. Cf. Haugen (2009) for a DM-like implementation of hyponym objects; Mateu & Rigau (2010) for a cognate/hyponym analysis of Romance verb-particle constructions, and, in particular, Mateu (2010) on the differences between Conflation and Incorporation.

19. Although P-doubling (Gallego 2012: 107) seems more convenient on technical grounds as it avoids overwriting, it may not contribute the adequate semantic and/or syntactic (i.e., restrictive, classificatory) relation between p\* and the (overt) predicate.

PP predicate, by virtue of a meaningful non-eventive relational head ( $p^*$ ) which, combined with a defective V, produces the relevant semantic burden and restrictions. If the analysis is correct, this  $p^*$  would define a crucial locus of encoding of the distinctive semantic and syntactic properties – and, thus, the relevant locus of variation – that motivate the non-trivial alternation between *ser/estar*. In this way, the aspectual implications of a specific  $p^*$  flavor – recall that I take  $p_{AT/HAVE}$  only by way of formalization of an essential opposition between bounded and unbounded stasis (i.e.,  $p_C$ ) – emerge as the key variable from which the contrasting semantic entailments and distribution follow naturally. Moreover, on this account  $p^*$  reliably constrains both the interpretation of the predicate, thus explaining the semantic contrast in minimal pairs, as well as the aspectual entailments sanctioned by the resulting verb. This is important to explain the fact that the aspectual makeup of the entire predicate is not freely determined by the AP/PP, as with pure copulas (e.g. English *be*), but also in order to capture the consistent restrictions noted. Another advantage is that semantics would not be acting freely nor would be directly determined externally;<sup>20</sup> rather, it would be reliably determined and contained at an (l-)syntactic level. Finally, the analysis proposed would allow the distinction of two important local relations in HK's frame, Conflation and Selection, which are important to guarantee the semantic restrictive relation at work and to preserve relevant configurational aspects of the account. In this way, the proposal offers an alternative to handle the principal points of data and theory at hand.

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20. Note, however, that Mateu (2008b) correctly points out that the (hyponymic) semantic compatibility at issue is in part established outside the computational system, at least in the sense that encyclopedic meaning is anyhow involved.

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# Spanish *estarse* is not only agentive, but also inchoative

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This article explores the properties of constructions involving the stage level copula *estar* with the pronominal form *se*, which has been argued to encode an agentive component lacking from the non *se*-marked form. While several previous studies have argued that *estarse* constructions involve a dynamic and telic component similar to an achievement, the goal of this contribution is to show that *estarse* is essentially stative, lacking all kinds of dynamicity and telicity, and should be analysed as an inchoative state, that is, a state that encodes its onset, but not the culmination of the transition preceding it. We show that this analysis overcomes the problems of previous proposals with respect to the temporal and aspectual behaviour of *estarse* constructions.

## 1. Introduction

The Spanish copula *estar* has a pronominal counterpart, *estarse*, (1), which can be combined with a number of adjectives, (2a), participles, (2b), and PPs, (20c).

- (1) a. *A ver si puedes estarte quieto.*  
To see if you.can be.SE still  
'Let's see if you can remain still'
- b. *No se estuvo callado ni un momento.*  
Not SE was silent not a moment  
'He wasn't silent for a single moment'
- c. *Se estuvo de pie durante toda la charla.*  
SE was on feet during all the talk  
'He remained standing for the whole talk.'
- (2) a. *atento* 'alert', *despierto* 'awake', *inmóvil* 'still', *listo* 'ready', *pendiente* 'attentive', *quieto* 'still', *seguro* 'certain', *tranquilo* 'quiet'
- b. *acostado* 'lying down', *agachado* 'ducking', *callado* 'silent', *escondido* 'hidden', *parado* 'motionless', *preparado* 'ready', *sentado* 'sitting', *tumbado* 'lying'



- c. *de pie* ‘standing’, *de rodillas* ‘on one’s knees’, *en silencio* ‘silent’, *en tu trabajo* ‘concentrated on your job’, *en tu casa* ‘at home’

Although *estarse* is different from *estar* in a number of properties (see Sánchez López 2002; Morimoto 2008, 2011; Gómez & García 2013; García & Gómez 2015, and references therein), in most cases, both the pronominal and the non pronominal forms are equally acceptable (with slight differences in meaning). However, in certain cases only the pronominal form is allowed; the main one of these contexts is when agentivity is involved.

The following contrasts show that *estarse*, unlike *estar*, passes standard tests on agentivity: it allows the imperative form, (3), and agent oriented adverbials (4); it can be selected by control verbs, (5), and in pseudo-cleft sentences it allows the verbal pro-form *hacer* ‘do’ (6).

- (3) a. ¡*Estate callado/quieto!*  
be.IMP-SE silent/still!  
b. \*¡*Está callado/quieto!*  
Be silent/still!
- (4) a. *Juan se estuvo callado/quieto deliberadamente.*  
Juan SE was silent/still on-purpose  
b. ??*Juan estuvo callado/quieto deliberadamente.*
- (5) a. *Pedro obligó a Juan a estarse callado/quieto.*  
Pedro made A Juan to be-SE silent/still  
b. ??*Pedro obligó a Juan a estar callado/quieto.*
- (6) a. *Lo que hizo Juan fue estarse callado/quieto.*  
what did Juan was to be-SE silent/still  
b. ??*Lo que hizo Juan fue estar callado/quieto.*

Agentivity has also been used to explain the constraints affecting the kind of predicates that can be combined with *estarse*: only those predicates denoting a situation under the control of the subject are compatible with *estarse*. This is why *atónito* ‘astonished’, *enfermo* ‘ill’, or *perdido* ‘lost’, among many others, cannot combine with *estarse* (Morimoto 2008), as they denote properties outside the control of the subject, cf. (7).

- (7) \**El niño se estuvo {atónito/enfermo/perdido.}*  
The boy SE was {astonished/ill/lost.}

An explanation also based on control or volitionality is needed in order to account for contrasts such as the following one, adapted from Morimoto (2008); a fugitive can control whether he hides, but a corpse cannot, as shown in (8).

- (8) a. *El fugitivo se estuvo escondido en una cueva durante semanas.*  
 the fugitive SE was hiding in a cave for weeks
- b. \**El cadáver se estuvo escondido en una cueva durante semanas.*  
 the corpse SE was hiding in a cave for weeks

Simultaneously, the presence of the clitic *se* is also associated to a number of aspectual changes, that have not been properly described yet. While most studies assume that *estar* denotes a (result or stage-level) state (Marín 2016 and references therein), there is no agreement with respect to even the aspectual definition of *estarse*. Thus, Morimoto (2008, 2011) argues that *estarse* denotes a (result) state presupposing a previous (agentive) achievement, while García & Gómez (2015) consider, in the line of De Miguel & Fernández Lagunilla (2000), that *estarse* denotes a complex situation, composed of an achievement followed by a result state. Other works (García & Gómez 2013) consider that the denotation of *estarse* is halfway between states and activities. Here we will argue for an alternative analysis, mainly based on the idea that *estarse* predicates denote inchoative states; we will show that this characterisation overcomes some of the problems found in the preceding accounts.

The paper is organised as follows: in the following section we will revise the aspectual properties of *estarse* constructions, arguing that, contra previous studies, they do not encode dynamicity; then we will show that they cannot be analysed as states following achievements because they are atelic, and we will provide further evidence that will lead us to the conclusion that they are inchoative states. § 3 will formalise the inchoative state analysis, while § 4 provides some conclusions.

## 2. Bringing aspect under control

In this section, we will provide a detailed characterisation of the aspectual properties of constructions with *estarse*.

### 2.1 The stative denotation of *estarse*

As we have already pointed out, some authors (e.g. Gómez & García 2013) consider that *estarse* shows a behavior halfway between states and activities. However, as we are going to show here, *estarse* predicates do not behave as activities in any respect.

Several of the diagnostics used by Gómez & García (2013) to argue that *estarse* has an activity behaviour are, properly, tests that diagnose agentivity, not eventivity: these include, among others, the compatibility with the (i) imperative and (ii) agent-oriented adverbs (*deliberately*), or the possibility of being selected by (iii) control verbs like *convince* or *persuade* (De Miguel 1999).

Secondly, García & Gómez (2015:33) state that “another piece of evidence for the non-stative status of *estarse* is their acceptability as complements of direct perception verbs in contrast with the ungrammaticality of the copula alone as complement of these verbs”. We think, however, that the grammaticality judgements of García & Gómez (2013) are not suitable at this respect. According to the opinion of several colleagues, *estarse* predicates are not acceptable as complements of perception verbs, cf. (9).

- (9) ??*Vi a Juan estarse {listo/quieto/de pie}.*  
 I.saw to Juan be-SE {ready/still/standing}

Thirdly, Gómez & García (2013) point out that *estarse* predicates pattern with activities with respect to the epistemic interpretation in the future: only stative predicates or stative aspectual forms allow this reading. However, this test does not show that there is a dynamic meaning in *estarse*: it only shows that they are not pure stative forms, and, as we will argue (cf. § 2.4) the inchoative component of *estarse* is what pulls it apart from the purely stative forms that allow the epistemic future interpretation:

- (10) a. *Estará corriendo.*  
 is.FUT running  
 ‘He is probably running’  
 b. *Tendrá fiebre.*  
 have.FUT fever  
 ‘He probably has a fever’  
 c. *\*Se estará callado.*  
 SE is.FUT silent  
 Intended: ‘He is probably silent’

In any case, let us show that *estarse* passes the tests of stativity that are available in the literature; we will begin with the tests already examined in Gómez & García (2013), and then add another set of cases.

### 2.1.1 Tests examined in Gómez & García (2013)

According to Gómez & García (2013), *estarse* predicates, unlike dynamic verbs, are not compatible with incremental and velocity adverbs such as *poco a poco* ‘little by little’ or *lentamente* ‘slowly’, cf. (11).

- (11) a. *\*Está cansada {poco a poco/lentamente}*  
 Is tired {little by little/slowly}  
 b. *\*Se está quieto {poco a poco/lentamente}.*  
 SE is still {little by little/slowly}

- c. *Corre {poco a poco/lentamente}.*  
Runs {little by little/slowly}.

Both *estar* and *estarse* are incompatible with the progressive: \**Juan está estándo(se) callado/quieto* ‘Juan is being silent/still’. This could be blamed on the undesirable effect produced by the combination of two identical copulas in the same construction, given that *estar* is also the copula used in the Spanish progressive.

Gómez & García (2013) present an alternative test: the compatibility with *ir* ‘go’ + gerund. As illustrated in (12), only dynamic predicates are compatible with this periphrasis.

- (12) a. \**Iba estando callado.*  
was being quiet  
b. \**Iba estándose callado.*  
Was being quiet  
c. *Iba ahorrando.*  
was saving (money)  
d. *Iba escribiendo la tesis.*  
was writing the thesis

Like most stative verbs, (13a), *estarse* predicates can receive a causal interpretation in temporal sentences introduced by *al* lit. ‘to.the’, (13b). Non-stative predicates only receive a temporal reading, (13c).

- (13) a. *Al estar enfermo, se fue a casa*  
being ill, SE went to home  
b. *Al estarse callado, nadie le prestó atención.*  
being quiet, nobody him paid attention  
c. *Al nadar, sintió un dolor en el brazo.*  
Swimming, felt a pain in the arm

(examples from Gómez & García 2013)

In the protasis of irrealis sentences, stative verbs are interpreted as situations taking place in the present, (14a), while dynamic verbs are interpreted as taking place in the future, (14b); *estarse* predicates pattern with stative verbs, as they are also interpreted in the present, (14c).

- (14) a. *Si tu padre estuviera aquí, no me dirías eso.*  
If your father were here, not me would-tell.2SG that  
‘If you father were here, you would not tell me that.’

- b. *Si Juan hiciera deporte, no tendría problemas*  
 If Juan did sport, not would-have.3SG problems  
*de sobrepeso.*  
 of overload  
 ‘If Juan did sport, he would not have overload problems.’
- c. *Si se estuviera callado, podríamos oír lo que están diciendo.*  
 If SE were silent, could.3PL hear what are.3PL saying  
 ‘If he was silent, we could hear what they are saying.’

### 2.1.2 Additional tests on the stativity of *estarse*

In addition to the tests discussed by Gómez & García (2013), there are other diagnostics that also point out towards a stative nature of *estarse* predicates.

Like other stative verbs, *estarse* predicates fulfil the subinterval property (Rothstein 2004; Maienborn 2005): If for a certain time interval I it is true that, for example, *Juan se estuvo callado* ‘Juan kept quiet’, this is also true for every subinterval of I, down to instants.

Unlike dynamic verbs, *estarse* predicates are not accepted as complements of *parar* ‘stop’, (15), and do not accept manner modification, (16).

- (15) a. \**Juan paró de estarse callado/quieto/tranquilo.*  
 Juan stopped of being-SE quiet/still/calm  
 b. *Candela paró de correr.*  
 Candela stopped of running
- (16) a. ??*Juan se estuvo quieto/tranquilo elegantemente.*  
 Juan SE was still/calm elegantly  
 b. *Candela corrió elegantemente.*  
 Candela ran elegantly

In Table 1, which summarises the results of the tests, it can be seen that *estarse* predicates are the perfect opposite from activities.

In the next section, we will show that the situations denoted by *estarse* predicates are not telic either, which throws doubt on the claim, made by previous authors, that they involve an achievement component.

**Table 1.** Comparison of the behavior of activities and *estarse* predicates with respect to a battery of tests on dynamicity-stativity

|                                                 | activities | <i>estarse</i> |
|-------------------------------------------------|------------|----------------|
| Causal interpretation of <i>al</i> + infinitive | –          | +              |
| <i>Ir</i> + gerund                              | +          | –              |
| Velocity adverbs                                | +          | –              |
| Complement of perception verbs                  | +          | –              |
| Irrealis protasis: present interpretation       | –          | +              |
| Subinterval property                            | –          | +              |
| Complement of <i>parar</i>                      | +          | –              |
| Manner adverbs                                  | +          | –              |

## 2.2 *Estarse* does not entail telicity

According to García & Gómez (2015), *estarse* predicates denote a particular type of transition (Pustejovsky, 1991), i.e., they denote situations involving telicity. However, this cannot be the case, given that *estarse* predicates do not pass any test on telicity. Note first that *estarse* predicates are not fully compatible with *in x time* or *to take x time*:<sup>1</sup>

- (17) a. \**Mortadelo se estuvo quieto/callado en cinco minutos.*  
 Mortadelo SE was still/quiet in five minutes  
 b. ??*Tardó cinco minutos en estarse quieto/callado.*  
 it.took five minutes in to-be-SE still/quiet

This behavior sharply contrasts with that of verbs such as *desaparecer* ‘disappear’ or *ocultarse* ‘to hide oneself’, (18), bona fide achievements followed by a subsequent or target state (Kratzer, 2000), as shown in (19).<sup>2</sup>

- (18) a. *Filemón desapareció/se ocultó en cinco minutos.*  
 Filemón disappeared/hid in five minutos

1. There is a reading where *in x time* could be interpreted as the time passed before *being -ed*, which is not related with telicity. Observe, that under this interpretation, even *estar* predicates are mostly acceptable: *Mortadelo (se) estará quieto/ callado en cinco minutos* ‘Mortadelo will be still/quiet in five minutes’.

2. Note that *for x time* is compatible with these predicates modifying the stative subevent: *Juan se ocultó durante tres meses* ‘Juan hid for three months’, means that Juan was hidden during three months. Other examples of target states given by Kratzer (2000) are *obstruir* ‘obstruct’ or *desalojar* ‘evacuate’.

- b. *Tardó cinco minutos en desaparecer/ocultarse.*  
it took five minutes in to disappear/to hide.

- (19) *Juan desapareció (repentinamente) durante varias horas.*  
Juan disappeared (suddenly) for several hours

In (19), the modifier *repentinamente* ‘suddenly’ points to the achievement (sub) event, while *durante varias horas* ‘for several hours’ point to the stative one. Most achievements lack this stative denotation, in clear contrast with *estarse* predicates:

- (20) a. <sup>??</sup>*El avión explotó/llegó durante varias horas.*  
the plane exploded/arrived for several hours  
b. *Los niños se estuvieron callados durante varias horas.*  
the children SE were silent for several hours

Note also that *estarse* predicates, unlike telic predicates, are incompatible with the phase verb *terminar de* ‘finish’, cf. (21).

- (21) a. *Juan terminó de leer el libro.*  
Juan finished of read the book  
‘Juan finished reading the book’  
b. \**Juan terminó de leer poesía.*  
Juan finished of read poetry  
Intended: ‘Juan was done with reading poetry’  
b. \**Juan terminó de estarse callado.*  
Juan finished of being-SE silent  
Intended: ‘Juan was done with being silent’

### 2.3 *Estar* is not so punctual

Although we propose that *estarse* predicates include a sort of punctual part in their denotation (the one corresponding to the state onset), it is not easy to refer to this punctual part as straightforwardly as in the case of *ocultarse* predicates. Observe the following contrasts in (22) and (23).

- (22) a. <sup>??</sup>*Juan se estuvo callado a las tres en punto.*  
Juan SE was silent at the three o'clock  
b. <sup>#</sup>*En ese preciso instante, se estuvo callado.*  
in this precise instante, SE was quiet
- (23) a. *Juan desapareció/se ocultó a las tres en punto.*  
Juan disappeared/hid at the three o'clock  
b. *En ese preciso instante, desapareció/se ocultó.*  
in this precise instant, disappeared/hid

The question is why: here we would like to propose that the property that differentiates the inchoative part of *estarse* from achievement verbs is that an achievement is a complete transition which marks a complex transformation, with a beginning and a culmination that are immediately adjacent to each other in time. The punctual modifier is able to identify this whole transition, placing it at a particular point in time. However, *estarse* only contains the initial boundary of this transition, which explains why it does not behave as a telic predicate: the culmination of the transformation is not denoted by the predicate. Consequently, it is impossible to place the defective transition in time, explaining why the punctual modifier is ungrammatical. In *estarse* predicates, the stative component is necessary in order for the initial boundary of the transformation to be a complete object in semantics, but this has the effect that it is not combinable with a punctual modifier because the stative component is not punctual. For this reason, a durative modifier (24) will denote both the moment in which the state begins to happen and the duration of the whole state, without it being possible to single out the initial boundary through a modifier.

- (24) *Juan se ha estado callado durante una hora.*  
 Juan SE has been silent for one hour  
 ‘Juan started being silent one hour ago, and has been silent for one hour’

#### 2.4 The inchoative denotation of *estarse*

García & Gómez (2015) use the contrast in (25) as evidence that *estarse* predicates include an achievement in their denotation.

- (25) a. \**Cuando Juan entró, los niños se estaban callados.*  
 when Juan came-in, the children SE were.IMPF silent  
 b. *Cuando Juan entró, los niños estaban callados.*  
 when Juan came-in, the children were.IMPF silent

According to García & Gómez (2015), the example (25a) is ungrammatical because the conjunction *cuando* ‘when’ cannot establish a relation of simultaneity between the reference time for the main clause and the event time for the *when*-clause, as in (25b).

If an imperfective aspect is used inside the subordinate clause, instead of a perfective, *estarse* predicates are also possible, yet inducing a different, habitual reading where the starting point of the controlled state is simultaneous to the entrance of Juan in (26a), while Juan’s entrance coincides with one of the point in time (not necessarily the first one) during which the children were silent (26b) This automatically shows that the form *estarse* forces reference to the starting point of the state, providing direct evidence for the inchoative reading.



- (26) a. Cuando Juan entraba, los niños se estaban callados.  
 when Juan came-in.IMPF, the children SE were silent  
 ‘Whenever Juan came in, the children would get silent’
- b. Cuando Juan entraba, los niños estaban callados.  
 when Juan came-in.IMPF, the children were silent  
 ‘Whenever Juan came in, the children were silent’

Note that if we follow Morimoto’s account we will be in serious trouble to account for the ungrammaticality of (25a) or the interpretation of (26a). In fact, we will have problems just trying to distinguish *estar* and *estarse* predicates.

Observe the following additional contrast in the perfective: here without habituality, it is also possible to interpret that Juan’s entrance coincides with the moment in which the children get still (27a), but ungrammaticality takes place in the absence of the *se* form (27b).

- (27) a. Cuando Juan entró, los niños se estuvieron quietos.  
 when Juan came.in.PERF the children SE were.PERF quiet  
 ‘When Juan came in, the children started being still.’
- b. \*Cuando Juan entró, los niños estuvieron quietos.  
 when Juan came.in.PERF the children were.PERF quiet

These contrasts are easily explained appealing to the inchoative nature of *estarse*; it is not necessary then to suppose that any telic achievement is included in its denotation, which, as we have seen, is empirically inadequate.

Thus, the main – and probably the only – aspectual difference between *estar* and *estarse* is that the latter includes in its denotation not only a state, but also the onset of that state. That is to say, the denotation of *estarse* remains essentially stative, adding to it only the starting point of the transition.

### 3. Analysis: *estarse* denotes an inchoative state

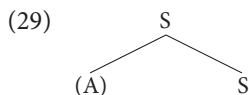
#### 3.1 Previous analyses

Both Morimoto’s (2008) and García & Gómez’s (2015) analysis are based on a proposal by De Miguel & Fernández Lagunilla (2000), who postulate – within the Generative Lexicon framework – eight types of events or aspectual classes. Among them, there is a type, *logro compuesto* ‘composed achievement’, with a complex denotation: achievement (culmination) + subsequent state, (28), which is the representation, they argue, of verbs such as *ocultarse* ‘hidde’ or *sentarse* ‘sit down’.



Gómez & García (2015) postulate that *estarse* predicates are complex achievements, including an achievement (a culmination) and the subsequent state, (28).

On the other hand, Morimoto (2008) postulates that *estarse* predicates are complex states, including a state + a presupposed previous achievement (culmination), as in (29):



Our main criticism against García & Gómez (2015) is related to telicity. They state that *estarse* predicates include a telic achievement in their denotation, and this is wrong, because *estarse* predicates do not behave as telic in any respect. In addition, as we have already pointed out, if we followed García & Gómez (2015), we would not be able to distinguish between *estarse* constructions and target state verbs like *desaparecer* ‘disappear’ or *ocultarse* ‘to hide oneself’, that indeed denote both an achievement and a subsequent state (cf. § 2.2).

On the other hand, if we followed Morimoto (2008, 2011), we would have problems to explain why *estarse* predicates are compatible with situations including the starting point of a state (cf. § 2.4). We would be in serious trouble as well in order to distinguish *estarse* from *estar*: the denotation of *estar* also tends to presuppose a previous change of state, without the help of *se* (Marín 2016).

- (30) a. *La fruta está madura.*  
           the fruit is ripe  
       b. *Luis está viejo.*  
           Luis is old  
       c. *La silla está sucia.*  
           the chair is dirty

Yet, this is also what we observe in most of the examples examined throughout this paper. It is difficult to admit that *estarse* predicates in (31b) presuppose a previous change of state, while *estar* predicates in Examples (31a) do not.

- (31) a. Juan estuvo quieto/callado/de rodillas.  
           Juan was still/silent/on his knees  
       b. Juan se estuvo quieto/callado/de rodillas.  
           Juan SE was still/silent/on his knees

We claim that an analysis based on the idea that *estarse* predicates denote inchoative states can overcome these problems.

### 3.2 Inchoative states

Inchoative states have not raised interest until very recently. However, in the last few years, several authors have focused on this issue considering a variety of different languages: Squamish Salish (Bar-el, 2005), Korean (Chung, 2005; Lee, 2006; Choi, 2015), Japanese (Kiyota, 2008), Spanish (Marín & McNally, 2005, 2011), Polish (Rozwadowska, 2012), among others.

#### 3.2.1 *Bar-el (2005)*

Most of these works follow Bar-el's (2005) analysis of inchoative states, which is based on Rothstein's (2004) event semantics. Bar-el (2005) proposes the predicate representation in (32) for inchoative states:

$$(32) \lambda e. \exists e_1 \exists e_2 [e = {}^s(e_1 \sqcup e_2) \wedge (\text{BECOME}(P))(e_1) \wedge P(e_2)]$$

Inchoative states are represented as complex event predicates constructed by adding an initial transition event BECOME ( $e_1$ ) and a subsequent state ( $e_2$ ).<sup>3</sup>

This is a suitable representation of inchoative states. The problem is that this is also the representation for the class of achievement + state predicates such as *disappear*. Therefore, the Rothstein-Bar-el system, in its literal implementation, does not allow to distinguish between these two classes of predicates. For this, we have to distinguish between (telic) achievements and (state) onsets, in the line of Marín & McNally (2011).

#### 3.2.2 *Right and left boundaries*

Marín & McNally (2011) analyze Spanish psychological pronominal verbs of the type of *preocuparse* 'to worry' or *enfadarse* 'to get angry' precisely as inchoative states. They adapt Piñón's (1997) theory and, particularly, the distinction between right and left boundaries.

Right boundaries correspond to the final points of situations (HAPPENINGS in Piñón's terminology), as the culmination part of accomplishments (*to build a house, to write a book*) or (telic) achievements (*to arrive, to win*).

In contrast, left boundaries correspond to the inception of a situation, in our case the onset of a state. In this respect, it is important to note that inchoative states

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3. The superscript <sup>s</sup> indicates that the summing operation involved forms a singular entity.

do not include a change of state in the typical terms (related to telicity) that are usually understood, and therefore, the state denoted is not a result state.

Following Piñón (1997), we adopt a decompositional approach to event semantics (see also Moens & Steedman, 1988), in which an event (*e*) can be decomposed into subevents, essentially happenings and boundaries (*b*); there are two main types of happenings: processes (*p*) and states (*s*).

Thus, inchoative states, as those denoted by *estarse*, can be represented as in (33), and distinguished from stage-level states presupposing a previous achievement, as those denoted by *estar*, (34).<sup>4</sup>

- (33) a.  $\lambda x \lambda \langle b, s \rangle. \text{Pred}(x, \langle b, s \rangle)$   
 b. [---

- (34) a.  $\lambda x \lambda s . \exists b (\text{Pred}(x, \langle b, s \rangle))$   
 b. ([]---

In this way we can offer a better explanation of *estarse*'s behavior, and in particular we can solve the main problem identified in Morimoto's (2008) analysis, given that *estarse* and *estar* denotation are clearly distinguished.

Moreover, inchoative states are also to be distinguished from proper achievements followed by target states (*desaparecer* 'disappear'), which can be represented as right boundaries of presupposed processes (*p*) (Piñón, 1997), followed by states, as in (35).

- (35) a.  $\lambda x \lambda \langle p, b \rangle \lambda s . \exists p (\text{Pred}(x, \langle p, b \rangle, s))$   
 b. (-----)]---

An additional advantage of our analysis is that, contrary to García & Gómez (2015), we are not obliged to treat *estarse* constructions as involving telicity, which is quite undesirable, given that *estarse* constructions do not pass any test on telicity.

#### 4. Conclusion

In this article we have argued that *estarse* constructions do not encode an achievement component; from the transition denoted by achievements, *estarse* only keeps the onset of the transition, and because of that it is not a telic predicate, but it allows a temporal clause to coincide with the onset of the state denoted by it. This onset is plausibly related to the agentivity that they codify, to the extent that the subject

4. In (32)–(35), *x* stands for subject; *p* for process; *b* for boundary, and *s* for state.

controls the starting point of the state and maintains it for the whole duration of the situation.

A consequence of our analysis is that the denotation of both *estar* and *estarse* is essentially stative. The only relevant aspectual difference between them is that *estarse* includes a left boundary.

Given that the only morphophonological difference between these two forms is the clitic *se*, it is plausible to identify it as the element triggering this inchoative meaning (cf. also Jiménez-Fernández & Tubino 2014), but in this article we have left the matter open; we hope that further exploration will allow us to be more explicit about the structural position of the clitic in these constructions, but for the time being we hope to have been able to provide convincing evidence that *estarse* constructions denote inchoative states.

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# From *completely free* to *complete freedom*

## Spanish adjectives of completeness as maximizers of property concept nouns

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Maximizers (*completely, fully*) are degree modifiers sensitive to the scale structure of the adjective they combine with. Spanish adjectives of completeness (*completo* ‘complete’, *total* ‘total’) show a distribution similar to that of their adverbial counterparts when modifying property concept [PC] nouns (*libertad* ‘freedom’, *sabiduría* ‘wisdom’). This paper argues that adjectives of completeness are degree modifiers in the nominal domain. It adopts a semantics of PC nouns according to which they denote substances, following Francez & Koontz-Garboden (2015). These substances can be bounded or unbounded, just like their related adjectives (*libre* ‘free’, etc.). By establishing a strict parallelism between adverbs and adjectives of completeness, this paper contributes to the understanding of completeness contributes to the understanding of scalarity across categories and the relation between degrees and measurements.

### 1. Introduction

Modifiers with adverbial and adjectival counterparts are an important source of information for cross-categorical manifestations of gradability. Adjectives of completeness [ACs] in Spanish (*completo* ‘complete’, *total* ‘total’) (1) display a strong parallelism with their corresponding adverbs (*completamente* ‘completely’, *totalmente* ‘totally’) in their distribution and interpretation (2). The latter have been analyzed in the literature as degree modifiers sensitive to scale maximums (Rotstein & Winter 2004; Kennedy & McNally 2005, among others).

- (1) a. *La completa libertad de la prensa.*  
the complete freedom of the press



- b. *??La total sabiduría de Lucía*  
 the total wisdom of Lucía
- (2) a. *La prensa es completamente libre.*  
 the press is completely free
- b. *??Lucía es totalmente sabia.*  
 Lucía is totally wise

This paper argues that, in cases such as the ones in (1), ACs are degree modifiers as well. Nouns such as *libertad* ‘freedom’ or *sabiduría* ‘wisdom’ encode property concepts [PC] (Dixon 1977; Francez & Koontz-Garboden 2015, among others) and have corresponding adjectives (*libre* ‘free’, *sabio* ‘wise’) that lexicalize the same concept. Two unexpected facts arise when a PC noun combines with an AC (1). First, mass nouns (either abstract nouns, like PC nouns, or concrete nouns, like *water*) are cumulative and do not have clear boundaries that may constitute a maximum for ACs. Second, the AC in (1) seems to be asserting something not about the amount of freedom of the press, but rather about its degree. These facts are in conflict with the common view that nouns, as opposed to adjectives, are not gradable (see, e.g., Constantinescu 2011; cf. Sassoon 2013 and references therein). Exploring these issues will help to unravel the correspondence between measurement of amounts in the nominal domain and measurement of degree in the adjectival realm (Bartsch & Vennemann 1973; Cresswell 1977; Doetjes 1997, among others).

In order to account for this behavior and motivate an analysis of ACs as maximizers, I adopt for Spanish Francez & Koontz-Garboden’s (2015) analysis of PC nouns as denoting portions of substances. Maintaining the distinction between adjectives and nouns, degrees are introduced externally to the noun, by a functional projection. ACs are argued to saturate this degree and set its value to the maximum in the scale of size, and consequently intensity, of the property denoted by the noun.

This paper is organized as follows. In order to set the basis for the analysis of ACs, Section 2 lays out the properties of maximality modifiers in the adjectival domain. Section 3 shows that the distribution and properties of ACs modifying PC nouns parallels those of maximizers. The semantics of PC nouns and the source of their gradability are discussed in Section 4. Section 5 provides an analysis of ACs as maximizers. Finally, Section 6 concludes.

## 2. Maximality modifiers in the adjectival domain

Gradable adjectives differ with respect to whether their scales include a maximal or a minimum value, both or neither (Rotstein & Winter 2004; Kennedy & McNally 2005, among others). If the set of degrees used by the adjective includes a lower

or an upper bound, the predicate's standard is set with respect to that value. If the adjective is associated with an open scale, the standard is calculated contextually. The typology of scale structures is provided in (3).

- (3) (Totally) open scale ○————○ (*tall, wide, beautiful, wise*)  
 Lower closed scale ●————○ (*dirty, impure, dangerous, wet*)  
 Upper closed scale ○————● (*dry, clear, free, dark*)  
 (Totally) closed scale ●————● (*open, closed, visible, full*)

Maximizers such as *completamente* 'completely' or *totalmente* 'totally' are a type of modifiers sensitive to the scale structure of the adjective. In particular, they only occur with upper- and totally-closed scale adjectives (4) (Rotstein & Winter 2004; Kennedy & McNally 2005).

- (4) a. *completamente* {*seco/ oscuro/ libre/ cerrado/ visible/ lleno*}  
 completely dry dark free closed visible full  
 b. ??*completamente* {*alto/ ancho/ bello/ impuro/ sucio*}  
 completely tall wide beautiful impure dirty

The role of these modifiers is to indicate that the referent has a maximal degree of the gradable property denoted by the adjective *G*. More formally, maximizers set the value of the degree argument of *G* to the maximum in its scale  $S_G$  (5) (Kennedy & McNally 2005). Since the function **max** only yields a value if the scale has a maximum defined, the restriction to upper and totally closed adjectives is accounted for.

- (5)  $\llbracket \text{completely} \rrbracket = \lambda G \lambda x. \exists d [d = \max(S_G) \ \& \ G(d)(x)]$  (Kennedy & McNally 2005)

Maximizers display a series of properties derived from their maximality semantics. First, they entail that the end of the scale has been reached. Consequently, it is contradictory to assert that the referent can have a higher degree of the property (6) (Kennedy & McNally 2005). Second, the construction *maximizer G* is a total construct, in the sense that it has the distribution of an upper-closed scale adjective (Rotstein & Winter 2004). This is shown by the fact that it is compatible with *casi* 'almost' (7). And third, because of the universal quantification in the semantics of the **max** function, *maximizer G* accepts exceptive phrases (8).

- (6) #*El avión está completamente lleno; hay un asiento libre en la*  
 the plane is completely full there.is a seat free in the  
*primera fila.*  
 first row

'The plane is completely full; there is an empty seat in the first row.'

- (7) *El avión está casi completamente lleno.*  
the plane is almost completely full
- (8) *El avión está completamente lleno, excepto un asiento en la primera fila.*  
the plane is completely full except a seat in the first row  
'The plane is completely full, except for a seat in the first row.'

In short, maximizers are degree modifiers restricted to adjectives that use a scale closed (at least) in its upper end and they set the degree of the property denoted by the adjective to that maximum. We turn now to the adjectival counterparts of these modifiers to check whether they are maximizers as well.

### 3. Adjectives of completeness modifying property concept nouns

In the nominal domain, adjectival counterparts of maximizers are able to modify nouns related to gradable adjectives. This section shows that ACs behave as maximizers when modifying nouns that denote properties or qualities<sup>1</sup> if they are related to upper- or totally closed scale adjectives.

ACs present the properties of maximizers when modifying PC nouns. First, the entailment that there is already a maximal amount of the property comes through. Adding that something can have more of the property is thus contradictory (9) (cf. (6)). Second, the construction is compatible with *casi* 'almost' (10) (cf. (7)) and, third, it accepts exceptive phrases (11) (cf. (8)).

- (9) a. *#La prensa tiene total libertad, pero podría tener más.*  
the press has total freedom but could have more  
'The press has total freedom, but it could have more of it.'
- b. *#La sala está en completa oscuridad; puedes apagar otra luz.*  
the room is in complete darkness can.2SG switch.off other light  
'The room is in complete darkness. You can switch off another light.'
- (10) a. *La prensa tiene casi total libertad para informar.*  
The press has almost total freedom for inform.INF  
'The press has almost total freedom to inform.'

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1. ACs also modify nominalizations of adjectives that denote states (*total soledad* 'total loneliness') and occurrences of events (*una completa crueldad* 'a complete cruelty'), which are out of the scope of this article. I understand PC nouns, or quality-denoting nouns, as non-eventive and not having argument structure (as opposed to states). As such, nouns denoting PCs do not accept temporal modification and the holder of the property does not have to be obligatorily present (see Roy 2010; Villalba 2013; Arche & Marín 2015, among others).

- b. *La casi completa oscuridad de la sala le impide*  
 the almost complete darkness of the room DAT prevents  
*ver al asesino.*  
 see.INF to.the murderer  
 ‘The almost complete darkness of the room prevents her from seeing the murderer.’
- (11) a. *La prensa tiene total libertad, salvo en asuntos religiosos.*  
 the press has total freedom except in issues religious  
 ‘The press has total freedom except for religious issues.’
- b. *La sala está en completa oscuridad, excepto por la tenue*  
 the room is in complete darkness except for the faint  
*luz de la luna.*  
 light of the moon  
 ‘The room is in complete darkness, except for the faint light of the moon.’

Yet not every PC noun is acceptable with ACs. The nouns in (12) are compatible with *completo*, but those in (13) are not. It is important to note that the former are related to upper and totally closed scale adjectives (that is, adjectives with a maximum), whereas the latter are correlates of open and lower-closed scale adjectives (i.e., adjectives without a maximum). Therefore, the compatibility of PC nouns with ACs depends on the scale used by the adjective related to the noun (see Constantinescu 2011:217 for English), and both the adjective and the noun seem to share scalar properties.

- (12) a. Upper closed scale adjectives:  
*completa aridez, total claridad, absoluta libertad, total oscuridad,*  
 complete aridity total clarity absolute freedom total darkness  
*completa lealtad*  
 complete loyalty
- b. Totally closed scale adjectives:  
*completa opacidad, total soledad, absoluta visibilidad*  
 complete opacity, total loneliness absolute visibility
- (13) a. Open scale adjectives:  
 ?*completa anchura, ?total belleza, ?absoluta altura,*  
 complete wideness total beauty absolute tallness  
 ?*absoluta sabiduría*  
 absolute wisdom
- b. Lower closed scale adjectives:  
 ??*completa impureza, ??total inseguridad, ?absoluta suciedad*  
 complete impurity total insecurity absolute dirtiness

However, this does not necessarily mean that the nouns in (12), just like their cognate adjectives, have a maximum standard. In other words, it is not the case that, in order for something to qualify as, for instance, *freedom*, it must have a maximal amount of the property. Compare (14a), where there is a contradiction in asserting that the press could be freer, to (14b), where no such conflict arises. More evidence comes from entailments of the comparative constructions. A maximum standard adjective in the comparative entails that the individual in the *than*-clause does not have the property (15a) (see Kennedy & McNally 2005). That entailment does not seem to be present for the nouns (15b) (cf. Fábregas 2016: III.2).

- (14) a. #*La prensa es libre. Solo tiene que pasar un control*  
 the press is free only has.to pass a inspection of.the  
*del gobierno.*  
 government  
 ‘The press is free. It just has to pass an inspection from the government.’
- b. *La prensa tiene libertad. Solo tiene que pasar un control*  
 the press has freedom only has.to pass an inspection  
*del gobierno.*  
 of.the government  
 ‘The press has freedom. It just has to pass an inspection from the government.’
- (15) a. *La prensa local es más libre que la prensa nacional. ⇒ La*  
 the press local is more free than the press national the  
*prensa nacional no es libre.*  
 press national NEG is free  
 ‘The local press is freer than the national press.’ ⇒ ‘The national press is not free.’
- b. *La prensa local tiene más libertad que la prensa nacional.*  
 the press local has more freedom than the press national  
 ≠ *La prensa nacional no tiene libertad.*  
 the press national NEG has freedom  
 ‘The local press has more freedom than the national press.’ ≠ ‘The national press does not have freedom.’

To sum up, the scale structure of the adjective plays a role in the semantics of its cognate noun. In particular, ACs only modify PC nouns when they are related to an upper- or totally-closed scale adjective. In that case, they behave as maximizers. A degree analysis of ACs can thus be imported to the nominal domain. The next question is what (bounded) scale is being accessed by these modifiers. In order to answer this question, the semantics of PC nouns is discussed next.

## 4. The semantics of property concept nouns

Nouns that denote property concepts have a series of characteristics that set them apart as a group of nouns. In this section, I first review the properties of Spanish PC nouns regarding their reference, their relational status and their gradability. I then argue for an approach that analyzes them as predicates of portions of a substance, adopting Francez & Koontz-Garboden's (2015) proposal for PC nouns in Ulwa. The source of gradability of PC nouns is discussed right after and established to be an ordering in their domain that tracks mereological structure.

### 4.1 Properties of property concept nouns

PC nouns behave morphosyntactically as mass nouns (Nicolas 2004, 2010). For instance, they are invariable in number (16) (but see, e.g., Beuseroy & Knittel 2007 for the range of readings they display when inflected for number), and they are compatible with quantifiers such as *poco* 'little' or *demasiado* 'too much' (17).

- (16) a. #*arrocés*; #*cervezas*  
           rices      beers  
       b. #*libertades*; #*felicidades*  
           freedoms   hapinesses
- (17) a. *poco arroz*; *demasiada cerveza*  
           little rice   too.much beer  
       b. *poca libertad*; *demasiada felicidad*  
           little freedom  too.much happiness

PC nouns and mass nouns both have cumulative reference. A predicate has cumulative reference if whenever it holds of two things, it also holds of their collection (Krifka 1989). For instance, the result of combining the beer in two glasses is referred to as *beer* as well. Similarly, John's happiness and Mary's happiness put together can be referred to as *happiness*.

Regarding the status of the holder of the property, PC nouns denote abstract properties and can appear on their own, but often refer to instantiations of those properties. The examples in (18) show absolute uses of PC nouns, while (19) illustrates uses where the individual property is manifested in its present.

- (18) a. *La libertad es lo más importante.*  
           the freedom is the more important  
           'Freedom is the most important thing.'

- b. *Disertaron sobre la belleza toda la noche.*  
discussed.3PL about the beauty all the night  
'They discussed beauty all night.'
- (19) a. *la libertad de la prensa – su libertad*  
the freedom of the press its freedom
- b. *la belleza de las cataratas Victoria – su belleza*  
the beauty of the falls Victoria its beauty

Most analyses of PC nouns assume that the holder is part of the meaning of the noun; that is, they take the noun as relational (Nicolas 2004, 2010; Moltmann 2004, 2009). Relational nouns such as kin nouns are relations between two individuals (see, e.g., Barker 1995). However, if PC nouns were relational, two facts would follow. First, the holder of the property would be an argument and would be always obligatorily realized. This is complicated by the fact that the distinction between arguments and modifiers in the nominal domain is not as clear as in the verbal domain, even for event nominals such as *victoria* 'victory' (Partee & Borschev 2003, among others), but the examples in (18) point against the argumental character of the PP phrase expressing the holder of the property (cf. Moltmann 2004 for a view in terms of tropes and kinds of tropes). Second, PC nouns would not be able to receive an existential interpretation without the presence of the holder, but only a universal one (20a). This is not borne out, as shown by the examples in (20b–c), from Carlson (1977), which lack an explicit holder and are interpreted existentially.

- |         |                                  |             |
|---------|----------------------------------|-------------|
| (20) a. | Democracy is nearing extinction. | UNIVERSAL   |
| b.      | The Greeks practiced democracy.  | EXISTENTIAL |
| c.      | There is now democracy in India. | EXISTENTIAL |

Finally, the third property of PC nouns is the clear correlation between measurement of intensity in the adjectival domain and measurement of quantity in the domain of PC nouns. The sentences in (21a–b) with an adjective and a degree modifier seem to be equivalent to those in (21c–d) with the corresponding PC noun and a quantifier or an AC.

- (21) a. *Lucía es muy paciente.*  
'Lucía is very patient.'
- b. *La prensa es completamente libre.*  
'The press is completely free.'
- c. *Lucía tiene mucha paciencia.*  
'Lucía has a lot of patience.'
- d. *La prensa tiene completa libertad.*  
'The press has complete freedom.'

This shows that PC nouns are gradable in some way. Most approaches do not include degrees in the semantics of the noun; rather, the measure function for the nouns is introduced later in the structure (Nicolas 2004, 2010; Moltmann 2009; cf. Bochnak 2013). This allows keeping the distinction between adjectives and nouns (see Section 5.1).

To sum up, three main empirical facts need to be captured by an analysis of PC nouns, namely their mass denotation, their relation to the holder of the property, and the relation between the gradability of the noun and that of the corresponding adjective.

#### 4.2 Property concept nouns as predicates of portions of a substance

In order to account for the mass denotation of Spanish PC nouns, I assume that they denote portions of substances, following Francez & Koontz-Garboden's (2015) proposal for PC terms in Ulwa (see also Levinson 1978). This model draws in the mereological approach to mass terms (Link 1983). The basic idea is that substances are predicates over a domain that is partially ordered. The set  $A$  of portions of a substance forms a joint semi-lattice with the joint operation  $\sqcup$  (commutative, idempotent, and associative), which induces an ordering relation  $\preceq$  on the set  $A$ . This ordering relation can be thought of as a 'part-of' relation. A PC noun thus denotes the set of all portions of a substance, as in (22), where  $p$  is a variable over portions and **freedom** is the characteristic function of the set.

$$(22) \llbracket \textit{libertad} \rrbracket = \lambda p. \text{freedom}(p)$$

The way to predicate the property denoted by a PC noun of an individual is by a possession relation (Francez & Koontz-Garboden 2015). Roughly, an individual has the property denoted by the PC noun if it possesses a portion of the substance. As a consequence, possessive morphology is required to relate PC nouns to an individual (cf. Francez & Koontz-Garboden 2015 for crosslinguistic evidence). In Spanish, this can be done by a PP headed by *de* or a possessive pronoun (19). Since the holder of the property is not a semantic argument of the PC noun (see Section 4.1), the possessive relation ( $\pi$ ) is introduced by the head of a possessive PP, which selects the possessor DP as its complement (23a), as in Storto (2003). This PP then adjoins to the PC noun (the possessum) and modifies the property it denotes via predicate modification (23b). This captures the fact that the possessor behaves like a restrictive modifier of the possessum and that definiteness is introduced in Romance by the determiner, instead of being a property of the genitive construction, as in English Saxon genitive DPs (Storto 2003; cf. Barker 1995).



- (23) a.  $\llbracket de\ la\ prensa \rrbracket = \lambda p.\pi(\text{the-press}, p)$   
 b.  $\llbracket libertad\ de\ la\ prensa \rrbracket = \lambda p.\text{freedom}(p) \ \& \ \pi(\text{the-press}, p)$

In short, the analysis of PC nouns defended here is one in which they denote portions of substances, thus accounting for their mass denotation, and are related to an individual via a possessive relation introduced externally, by a possessive head. I discuss the source of gradability of PC nouns next.

### 4.3 Source of gradability and collapse between amount and intensity

The last crucial property of PC nouns to be modeled is their gradability. I follow Francez & Koontz-Garboden (2015) in taking the domain of a substance-denoting term to be partially ordered. Gradability is modeled as an ordering of portions of a substance. Two postulates regulate this. The first postulate states that any substance  $P$  is ordered by a total preorder  $\leq$ , equivalent to the relation ‘smaller or equal to’. This means that any two portions of a substance are comparable in size, and that they can be either of the same size or else one is bigger than the other. According to the second postulate, the preorder  $\leq$  preserves the mereological part-of relation. Consequently, a portion  $p$  that is part of another portion  $q$  is smaller than  $q$ , the portion it is part of (Francez & Koontz-Garboden 2015).

Recall from the end of Section 4.1 that there is a correlation between the amount of a substance-denoting property and the degree of that property. For instance, having *complete freedom* is comparable to being *completely free* (21). Evidence for the correspondence between amount and intensity, or quantity and quality, in PC nouns comes from exclamatives and size adjectives. As for exclamatives, the Catalan examples in (24), from Brucart & Rigau (2002), show that a quantity exclamative with *quant* (‘how much’) and a quality one with *quin* (‘what’) have the same interpretation with PC nouns such as *paciència* ‘patience’ (24a–b), but not with concrete mass nouns like *gent* ‘people’ (24c–d) (Tovena 2001; Brucart & Rigau 2002).

- (24) a. *¡Quanta paciència!* Catalan  
 how.much patience  
 ‘What a patience!’  
 b. *¡Quina paciència!*  
 what patience  
 ‘What a patience!’  
 c. *¡Quanta gent!*  
 how.much people  
 ‘How many people!’

- d. ¡Quina gent!  
 what people  
 ‘What (strange) people!’

The collapse of the notions of amount and intensity can also be observed in the distribution and readings of size adjectives like *grande* ‘big’ or *enorme* ‘huge’. Size adjectives have an intensifying reading with PC nouns (25a), but do not occur with concrete mass nouns (25b).

- (25) a. *una gran {belleza/libertad}; una sabiduría enorme*  
 a big beauty freedom a wisdom huge  
 ‘a great {beauty/freedom}’; ‘a huge wisdom’  
 b. *\*gran agua; #arroz enorme*  
 big water rice huge

Amount equals intensity in PC nouns. One option to account for this would be to assume that the domain of PC nouns form a total order instead of a partial one, and thus that PC nouns lexicalize scales, just like their corresponding adjectives (see Francez & Koontz-Garboden 2015; cf. Bochnak 2013). This is, however, problematic. First, the part-whole relation  $\leq$  that orders substances allows for overlapping between portions of a substance, but there is no overlapping of degrees in a scale (unless degrees are substituted by intervals, see Schwarzchild & Wilkinson, 2002). Excluding the possibility of overlapping would draw apart the semantics of PC nouns and mass nouns. Second, scales, as total orders, are antisymmetric. This means that, whenever two degrees stand in the same position in the ordering, they are necessarily the same degree. This does not seem to be the case for two portions of a substance of the same size. For instance, in (26), the particular portion of beauty that is the Taj Mahal’s beauty is different for that of the Stata center, even if they are of the same size. However, the degree of beauty of both buildings is identical.

- (26) The Taj Mahal has as much beauty as the Stata Center, though their beauties are very different. (Francez & Koontz-Garboden, 2015)

In order to account for the relation between the PC noun and its related adjective, I assume that property concepts can be gradable or non-gradable, and, if gradable, bounded or unbounded. This information is conceptual and, as such, part of the root. It passes on to the different lexicalizations of it. For instance, the property concept that is the base for *free* and *freedom* is gradable and bounded. Since it is gradable, the individuals that possess the property or the portions of the substance form an ordered set; since it is bounded, there is a maximal degree or amount of the property an individual can have. By contrast, the concept for *wisdom* is unbounded

and the derived noun and adjective do not have maximums. Finally, the concept for *father* and *fatherhood* is not gradable.<sup>2</sup>

By encoding the boundedness of the concept in the root, the difference between nouns and adjectives is preserved. Nouns denote properties and their domain forms a joint semi-lattice, whereas adjectives are relations between degrees and individuals whose domain forms a scale (see Krifka, 1989; cf. Wellwood, 2014), and there is a mapping between the two. That is, a certain amount of a property corresponds to a certain degree of the same property, but only adjectives include degree arguments.

In sum, the semantics of PC nouns have been discussed in this section. In particular, they have been argued to denote substances. Gradability of PC nouns comes from an ordering in the domain of portions of the substance. Degrees are not part of the semantics of the noun. The next section shows how they are introduced by a functional head and puts forward the analysis for ACs as maximizers.

## 5. Adjectives of completeness as maximizers of property concept nouns

Section 3 showed that ACs are sensitive to the presence of a maximum and display the properties of maximality modifiers in the adjectival domain. This section puts forth an analysis of ACs as degree modifiers of PC nouns. In particular, ACs are maximizers: they set the value of the degree argument associated to the noun to the maximum in the intensity scale. In order to do so, it is first necessary to introduce degrees in the semantics of PC nouns.

### 5.1 Introducing degrees in the semantics of PC nouns

So far, it has been argued that Spanish PC nouns denote substances and are related to an individual through a possessive relation. Although there is an ordering in the domain of the noun, no degree argument is available. This is expected, given that nouns do not combine directly with degree morphology. Compare, for instance, the obligatory presence of *much* in nominal comparative (27a) but not in adjectival ones (27b) in English (see, e.g., Bresnan 1973; Wellwood 2014).

- (27) a. The local press has as \*(much) freedom as the national press.  
 b. The local press is as (\*much) free as the national press.

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2. I am assuming that Spanish adjectives and their corresponding nouns are derived from a common root, but not from one another. A first piece of evidence for this is the fact that some adjectives are derived from the PC noun, and not the other way around (*silencioso* ‘silent’ – *silencio* ‘silence’; *hambriento* ‘hungry’ – *hambre* ‘hunger’).

For a noun to be measured or counted, it requires that a degree argument be introduced externally, via a null head (Abney 1987; Zamparelli 1996; Schwarzschild 2006; Solt 2015; among others). I adopt here Solt's (2015) MEAS projection (28). When applied to an individual, MEAS introduces a measure function that links individuals to degrees on the scale of some dimension, and thereby enables the semantic composition of quantity expressions with nouns.<sup>3</sup> For PC nouns, the degree argument represents the measure of the size of the portion of the substance.

$$(28) \quad \llbracket \text{MEAS} \rrbracket^g = \lambda x \lambda d. \mu_S(x) \geq d \quad (\text{Solt 2015:236})$$

MEAS encodes an underspecified measure function  $\mu_S$  whose scale of measurement  $S$  is contextually determined. The choice of the scale is not completely unrestricted, but it must be monotonic on the part-whole structure of the object (Schwarzschild 2006). For PC nouns, size of the portion is monotonic (more freedom implies a bigger portion of freedom). Quantifier adjectives such as *a lot of* or *little* (17) measure thus the size of the portion of the substance denoted by the PC noun.

Looking ahead, since size correlates with intensity in PC nouns and size is monotonic for these nouns, the intensity scale shared by the noun and the corresponding adjective is adequate for  $\mu_S$  to use it as the dimension of measurement. This is the dimension ACs use.

## 5.2 Adjectives of completeness are maximizers

Once the degree argument is introduced, the expression *MEAS + PC noun* is a gradable property. Its degree argument can be saturated by degree expressions such as quantifier adjectives (*much*, *little*). I propose that ACs can saturate this degree as well. ACs have the semantics in (29), which is equivalent to that of adverbs of completeness (5). They take a relation between degrees and individuals and return a property with the value of the degree argument set to the maximum of the scale used by the gradable predicate.

$$(29) \quad \llbracket \text{AC} \rrbracket = \lambda G_{\langle d, et \rangle} \lambda x. \exists d [d = \max(S_G) \ \& \ G(d)(x)]$$

In the case of PC nouns, the scale  $S_G$  is provided by the value of the measure function  $\mu_S$ , introduced by MEAS. The choice of the dimension of measurement  $S$  used

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3. MEAS (type  $\langle e, dt \rangle$ ) composes with the noun via a rule of Degree Argument Introduction, which identifies the individual argument of MEAS and the noun and demotes it to second position in the lambda prefix (Solt 2015).

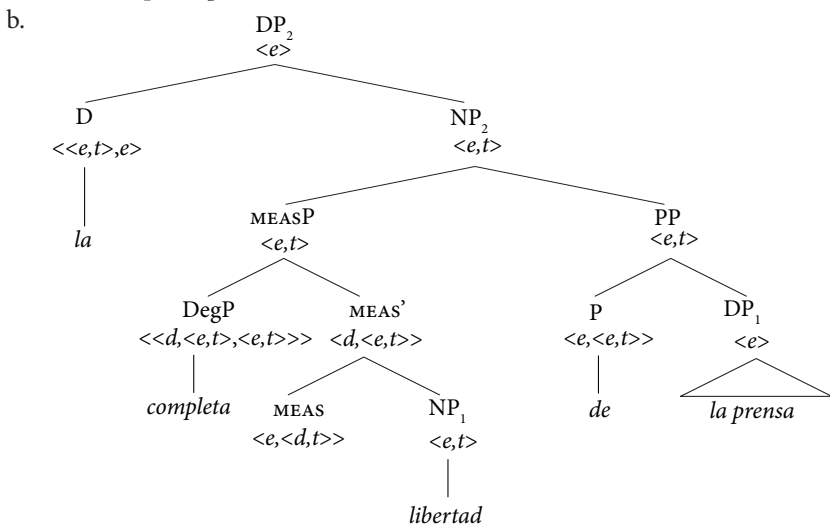
- (i) Degree Argument Introduction (DAI): If  $\alpha$  is a branching node,  $\{\beta, \gamma\}$  are the set of  $\alpha$ 's daughters, and  $\beta = \lambda x. P(x)$ ,  $\gamma = \lambda x \lambda d. Q(d)(x)$ , then  $\alpha = \lambda d \lambda x. [P(x) \wedge Q(x)(d)]$   
(Solt 2015:237)

by  $\mu$  is contextually determined, but must be monotonic. In this case,  $S$  is set to size, and therefore, intensity (see Sections 4.3 and 5.1). For those property concepts that are bounded, there is a maximum size for the portion of the substance their corresponding PC noun denotes, and consequently, for its intensity. The **max** function in the semantics of ACs returns that value for those PC nouns, such as *libertad* ‘freedom’ (30). For unbounded PC nouns, such as *sabiduría* ‘wisdom’, no maximum is available and the function **max** is undefined. This results in unacceptability of ACs (see (13)).

$$(30) \llbracket completa libertad \rrbracket = \lambda p [\mu_S(p) \geq \max(S_{freedom}) \ \& \ freedom(p)]$$

Now, we can put all the pieces together. A phrase such as *la completa libertad de la prensa* ‘the complete freedom of the press’ denotes the unique portion of freedom that the press possesses and that measures the maximum amount (and therefore intensity) of freedom possible (31a). The full derivation for a PC noun with the possessor of the property and an AC is as (31b). The null head **MEAS** combines with the PC noun via **DAI** and introduces the degree argument. Then the AC *completa* saturates the degree argument and fixes its value to the maximum in the scale. The result is a property of individuals that have the maximum amount of freedom. Then the property conjoins with the property of being in a possessive relation with an individual (the press, in this case). Finally, the whole NP combines with the definite determiner.

$$(31) \text{ a. } \llbracket la completa libertad de la prensa \rrbracket = \nu p [\mu(p) \geq \max(S_{freedom}) \ \& \ freedom(p) \ \& \ \pi(\text{the-press}, p)]$$



Note that, in the analysis in (31), ACs compose with the noun through MEAS and target their lexical scale. The possessor acts then as a restrictive modifier of the MEASP. A reasonable alternative would be that, since the possessor of the property has a certain portion of the substance, the part-whole structure of the individual would provide a maximum for ACs. That is not the case, however. For instance, the height of a building is a delimited amount (the interval between 0 and, say, 170 m), but ACs are ruled out in this context (32a). The same applies to *impureza* (impurity) in (32b).

- (32) a. *\*la completa altura del edificio*  
 the complete tallness of.the building  
 b. *\*la total impureza de la muestra*  
 the total impurity of the sample

In the analysis put forward here, ACs are degree modifiers and not regular adjectives when modifying PC nouns. As a consequence, they are not expected to be subject to the difference in interpretation between prenominal and postnominal position for adjectives in Romance languages (see, e.g., Demonte 2008; Cinque 2010). This is borne out. In (33a–b), both versions, with the adjective to the left or to the right of the noun, receive the same reading. However, with nouns other than PC nouns (33c), prenominal position corresponds with a non-restrictive interpretation whereby the committee is said to include a wide variety of members, to be comprehensive, while postnominal position asserts that all the members of the committee arrived.

- (33) a. *La prensa tiene {completa libertad/libertad completa}.*  
 the press has complete freedom/freedom complete  
 ‘The press has complete freedom’  
 b. *Comprobamos la {total aridez/aridez total} del terreno.*  
 checked.1PL the total aridity/aridity total of.the land  
 ‘We checked the total aridity of the land.’  
 c. *Llegó el {completo comité de expertos/comité de*  
 arrived the complete committee of experts/committee of  
*expertos completo}.*  
 experts complete  
 ‘The {complete committee of experts / whole committee of experts} arrived.’

Another prediction of analyzing ACs as degree modifiers is that they should not be able to appear in predicative position, because the degree modifier needs to be adjacent to the degree argument. Yet, ACs do occur predicatively with PC nouns (34). There are reasons to think that this is not a degree reading of ACs, however. First, note that PC nouns using open scales are also acceptable with predicative uses of

ACs (35a), but not with attributive ones (35b), which pattern with the distribution of adverbs of completeness (35c). Second, the predicative AC can be substituted by its negative counterpart *incompleto* ‘incomplete’, which is never a degree modifier, in both cases (36). These facts indicate that ACs here are receiving a reading that can be paraphrased as ‘from all points of view’ or ‘in every respect’ (e.g., Fábregas 2015). For instance, saying that someone’s wisdom is complete does not mean that she has a maximum intensity of wisdom, but rather that she is wise in every respect.

(34) *La libertad de la prensa es {completa/?total}.*  
the freedom of the press is complete/total

(35) a. *Su {bondad/sabiduría} es {completa/?total}.*  
her goodness/wisdom is complete/total

b. *??la completa {bondad/sabiduría} de Esther*  
the complete goodness/wisdom of Esther

c. *Esther es completamente {buena/sabia}.*  
Esther is completely good/wise

(36) a. *La libertad de la prensa es incompleta.*  
the freedom of the press is incomplete

b. *La {bondad/sabiduría} de Esther es incompleta.*  
the goodness/wisdom of Esther is incomplete

To sum up, degrees are introduced in the semantics of PC nouns via a null functional head MEAS (Solt 2015). The dimension of measurement is set to size, and ACs are degree modifiers that can saturate this degree. In particular, ACs have been argued to measure the size of the portion of a substance, which correlates with its intensity, and assert that the size is maximal.

## 6. Conclusion

This paper has argued that ACs are degree modifiers of PC nouns. In particular, it has been shown that they are maximizers. In order to do so, PC nouns have been analyzed as predicates of portions of substances that enter a possession relation with the holder of the property. The domain of PC nouns is ordered, but their semantics does not include degrees. In line with other mass nouns, degrees are introduced by a special functional head. The intensification reading of ACs derives from the collapse of amount and intensity measurements in PC nouns.

It has been put forward that both adverbs and adjectives of completeness target a relation between degrees and individuals and set the degree to the maximum in the scale, reinforcing the parallelism between the adjectival and the nominal

domain and contributing to the understanding of scalarity in the latter. However, degree modification of nouns is still a controversial issue and investigating other uses of ACs with nouns may shed light in this direction. In particular, eventive nominalizations of some verbs (*la total destrucció de la ciutat* ‘the total destruction of the city’) and evaluative nouns (*un complet idiota* ‘a complete idiot’) are candidates to being other instances of gradability in the nominal domain.

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# Romanian dependent numerals as ratios

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The aim of the paper is to present an account of Romanian cardinal DPs containing the distributivity marker *câte* (Dependent Numerals – DNums henceforth), with a view to a possible extension to other DNums attested cross-linguistically. The proposal adopted here is expected to extend to dependency markers which do not enforce their own distributivity and which obligatorily apply to monotonic measures (*câte 200 de grame*, ‘CÂTE 200 grams’ vs. *#câte 20 de grade Celsius*, ‘CÂTE degrees Celsius’). Firstly, distributivity is satisfied by co-indexation with a plurality of events which is independently provided. The indirect relation between the DNum and the participant or runtime sortal key translates as a ratio. A sentence such as *The boys read CÂTE two books* verifies the condition that the ratio of *read books* (SHARE) *per reading boy* (KEY) is two. Secondly, the monotonicity constraint is claimed here to be an outcome of the following facts: *câte* ranges over event-object pairs; it induces event-related (ER) interpretations via the same mechanism as cumulative ER cardinals discussed in the literature, which accounts for the monotonicity constraint.<sup>1</sup>

## 1. Introduction

In DPs of the form  $[[c\grave{a}te\ Numeral\ NP]]$ , as well as  $[[c\grave{a}te\ Numeral\ Measure]]$  the Romanian marker *câte* belongs to the class of co-distributive dependency markers which are found in a number of languages belonging to distinct language families.<sup>2</sup> Its role is to mark the dependency between the marked DP and some plural argument. The dependency relation may be established with respect to a plurality of individuals (1a), or a plurality of events, as in (1b). The plurality of individuals or events on which the acceptability of *câte* depends will be referred to as the ‘sortal key’, while the DNum itself will be referred to as the ‘distributed share’ (Choe 1987).

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1. Krifka (1990), Doetjes & Honcoop (1997).
  2. The distributive suffix *gáa* in Tlingit (Cable 2013), the numeral reduplication in Telugu (Balusu 2006), distributive numerals in Kachikhel (Henderson 2014), among others.

- (1) a. Participant distributivity:

*Copiii* *au* *ascultat* *câte* *două* *cântece*.

children<sub>DEF</sub> have listened CÂTE two songs

'The children listened to two songs.'

DIST-KEY SHARE

= the children listened to two songs per child

- b. Event distributivity

*Maria* *citește* *câte* *două* *poezii* *zilnic*.

Mary reads CÂTE two poems daily

'Mary reads two poems daily.'

SHARE DIST-KEY

= Mary reads two poems per day.

The main proposal will be that DNums differ from plain cardinals in that, unlike plain cardinals, DNums cannot be referential. They have a counting, event-related interpretation.<sup>3</sup> The semantic contribution of *câte* differs from that of plain cardinals in the obligatory scoping under a plurality of events and in the fact that the share-key dependency is explicitly asserted as a mathematical relation. This means two things: if the dimension of measure is cardinality, since, as mentioned above, the interpretation of the DNum is event-related, this allows for the recycling of individuals (see Krifka 1990). For example, the sentence *The boys read CÂTE two books* expresses a 2-to-1 relation between <e, book> pairs and boys. If the dimension of measure is something other than cardinality, the mathematical operations of addition, subtraction, multiplication also need to apply to the n-to-1 ratio introduced by *câte*, which means that non-monotonic measures are prohibited from occurring within DNums (see Krifka 1990 and Schwarzschild 2002 for the property of monotonicity).

The following section presents the main analyses proposed in the literature on dependent numerals, as well as evidence that leads to the rejection of some of the claims therein.

3. Different versions of a distinction between referential and counting denotations of numerical expressions are developed in Krifka (1990), Beghelli & Stowell (1997), Hackl (2001), Kennedy & Stanley (2009), Dobrovie-Sorin & Beyssade (2012), Dobrovie-Sorin & Giurgea (2015).

## 2. Position with respect to previous analyses

### 2.1 DNums in the literature

According to Brasoveanu & Farkas (2011), DNum DPs are necessarily narrow-scoped existential indefinites, as opposed to unmarked indefinites, which may have narrow-scope or wide-scope interpretations. Unmarked indefinites are analyzed as introducing variables that are marked for (in)dependence with respect to the quantifiers that take them in their scope. In (2a) below, the superscript  $\emptyset$  indicates that variable  $y$  is independent of (fixed with respect to) all other variables, including  $x$ . In (2b), the superscript  $\{x\}$  indicates that  $y$  is dependent on (co-varies with) variable  $x$ . These two strategies correspond to the so-called wide- and narrow-scope readings.

- (2) Every <sub>$x$</sub>  student read a <sub>$y$</sub>  paper.  
 a.  $\forall x[\text{STUD}(x)] (\exists y^{\emptyset} [\text{PAPER}(y)] (\text{READ}(x,y)))$   
 b.  $\forall x[\text{STUD}(x)] (\exists y^{\{x\}} [\text{PAPER}(y)] (\text{READ}(x,y)))$

*Câte* (and possibly other ‘co-distributivity markers’ across languages) is a dependency marker, which means that its presence forces the indefinite to be semantically interpreted as in (2b). This explains the obligatory narrow scope of co-distributive markers, as well as the ill-formedness in sentences which lack a suitable variable for dependency, such as in (3).

- (3) *??Un student a vorbit cu câte un profesor.*  
 a student has spoken with CÂTE a professor

Henderson (2014) points out that treating co-distributive markers as plain indefinites plus a dependency condition makes the wrong prediction that, whenever a dependent indefinite (co-distributive marker) is licensed, a plain indefinite should also have a narrow scope (co-varying) reading. That is, across contexts, the only difference should be that co-distributive markers are unambiguously narrow, while plain indefinites are ambiguous. The prediction does not apply to sentences containing pluractional operators. Compare the Kaqchikel examples (4a) and (4b): (a) is false if books co-vary with times/locations, while (b) is true if books co-vary with times/locations and false otherwise.

- (4) a. *X- $\emptyset$ -in-kan-ala’ jun wuj.*  
 CP-A3S-E1S-search-la’ one book  
 ‘I looked for a book (in various locations or at various times).’  
 False if there is only one looking-for event  
**False if there is more than one book**

- b. *X-Ø-in-kan-ala' ju-jun wuj.*  
 CP-A3S-E1S-search-*la'* one-RED book  
 'I looked for a book (in each location or at each time).'  
 False if there is only one looking-for event  
**False if there is only one book looked for**

In these environments, the value of the variable introduced by the plain indefinite is necessarily fixed with respect to the multiple times/locations. Henderson offers the following alternative solution: co-distributive markers are not marked for dependency, but rather are encoded with a post-supposition (a test which applies after value assignment has taken place). The post-supposition requires that the variable corresponding to the DNum marker should be evaluation plural (there are at least two assignment functions which assign different values to the variable in question). For instance, in (4b) above, the post-supposition is satisfied if there are at least two events of reading a book involving different books.

Cable (2013) offers a different solution, one involving domain plurality: the variable contributed by the DP containing the co-distributive marker introduces a plural value which is partitioned into cells of the cardinality indicated by the numeral.

Informally, the contribution of a DNum is that it requires the main eventuality of the sentence to be contextually partitioned in such a way that each cell of the partition contains a participant of the cardinality expressed by the DNum marker. For instance, (4b) above asserts the existence of an event *e* which is partitioned into events *e'*, each containing a book. Consider Example (5), where the distributive key is a definite plural.

- (5) a. *A<sub>x</sub> káa yátx'i nás'gigáa xáat has aawasháat.*  
 my male children **three.DIST** fish 3PLS.3O.caught  
 'My sons caught three fish each.'
- b. Predicted Truth-Conditions:<sup>4</sup>  
 $\exists e. \exists x. *fish(x) \ \& \ *caught(e) \ \& \ *Agent(e) = \sigma y. *my.son(y) \ \& \ *Theme(e) = x$   
 $\&$   
 $\langle e, x \rangle = \sigma \langle e', z \rangle. z < x \ \& \ |z| = 3 \ \& \ e' \in Part(e) \ \& \ Participant(e', z)$   
*There are some fish *x* such that my sons (cumulatively) caught *x*, and *x* is the proper sum of triplets of things that took part in the catching.*

In his analysis of the German *jewels*, Zimmermann (2002) follows a different path from all the other accounts mentioned above. The differing components in the

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4. According to the "augmented" semantics for the Tlingit DNum provided in Cable (p. 38, (72)), the subevents *e'* are required to be elements of a contextually salient partition.

semantic makeup of co-distributive markers are: the fact that the distributive key is anaphorically retrieved and the fact that the co-distributive marker itself introduces a distributive operator.

Zhang (2013) remarks upon a distributional restriction: only monotonic measure functions (length, volume etc., but not temperature) are compatible with binominal *each*. This restriction does not occur in the case of adverbial (floated) *each*:

- (6) a. The hams weighed 20 pounds each.  
 b. \*The hams read 350 degrees each. (cf. The hams each read 350 degrees.)

This observation, plus the fact that binominal *each* only combines with share DPs that are cardinal indefinites (no other determiner possible) leads to the conclusion that *each* expresses a numerical function, namely a fraction. More precisely, the condition introduced by *each* into the semantic interpretation is that the cardinality of the Theme (corresponding to the share DP) divided by the cardinality of the agent (corresponding to the distributive key) should be the numeral in the share DP. For example *The boys saw three monkeys each* means that the sum of monkeys divided by the sum of boys should be three. The fraction only applies to monotonic functions such as cardinality.

## 2.2 Placing the present proposal into the picture

I will offer counter-evidence to the following claims:

1. That DNums induce constraints on value assignments (i.e. impose distinct value assignments to the same variable, e.g. postsuppositions);
2. That DNums can “access” (i.e. establish a direct truth-conditional dependency with) a sum of events which contains events of the cardinality specified by the numeral as in Cable (2013) and Zhang (2013);
3. That DNums themselves supply a distributive operator as in Zimmermann (2002).

The account sketched here preserves in one form or another the following basic insights. The DepNum patterns like a subcase of plain cardinal interpretations in that it displays the same properties as event-related readings of plain cardinals. Moreover, unlike the ER readings of plain cardinals, which are cumulative, DNums are distributive. The two semantic properties of DNums (necessarily ER and distributive) lead to a representation of the dependency marker *câte* as binding  $\langle e_i, x \rangle$  pairs instead of simply individual variables  $x$ , following Doetjes & Honcoop's (1997) account of ER cardinals. The  $e_i$  variable in the pair anaphorically retrieves a cell of a partition of events. ‘Partition’ is taken in a very broad sense to include both



overt and covert Part and distributive operator Dist (which is overt in sentences containing a universal distributive quantifier and covertly (optionally) present with plural DPs on their distributive reading).

The novelty of the present proposal lies in the fact that the dependency relation is not established between individuals in the distributive key and individuals in the share (of a certain cardinality), but rather is to be translated as a mathematical dependency between cardinalities, without reference to sums that are not directly available for computation (as in Cable 2013 and Zhang 2013). The contribution of *câte* is to specify the value of the ratio between the measure (cardinality) of the distributed share and the unit supplied by the distributive key. The distributive key is always a plurality of events, but since Partitions may themselves range over event, individual pairs, then each cell of the partition may also contain an individual unit. Thus, a sentence such as *The children ate two apples* is equivalent to *The children ate two apples per child*, since the distributive operator pairs key-events with atoms of children. The same basic insight (that DNums are always event-dependent) is at the core of the account in Cable (2013), as well Balusu's (2006) analysis of Telugu DNums, with two crucial differences from the present account: the "overall" cardinality condition, and the fact that the DNum provides its own partition.

### 3. The semantic properties of DNums – a look at the distribution

#### 3.1 DNums as counting expressions

Romanian DNums do not outscope distributivity-inducing DPs (definite plurals, universal quantifiers etc.). For instance, modifying (1a) such that the DNum applies to the subject and the direct object is definite plural leads to ungrammaticality, a fact which is attested for DNums cross-linguistically. This indicates that the referential interpretation, available to plain cardinals, is excluded. Moreover, the following sentences provide evidence that DNums can have a purely cardinal interpretation. The following examples will offer positive evidence regarding the availability of this interpretation. Like plain cardinals, DNums may express averages, as shown in (7).

- (7) *Familiile din România au câte 1,5 copii.*  
 families<sub>DEF</sub> from Romania have CÂTE 1.5 children  
 'Romanian families have 1.5 children.'

*Câte* may combine not only with plain cardinals, but also with a subset of the counting expressions: *câte cel puțin doi copii* ('CÂTE at least two children'), *câte cel mult doi copii* ('CÂTE at most two children'), *câte puțin* ('CÂTE a-little'), *câte aproximativ doi copii* ('CÂTE approximately two children'), *câte doi-trei copii* ('CÂTE two-three

children’).<sup>5</sup> Finally, *câte* may occur in measure phrases: *câte doi litri (de apă)* (‘CÂTE two liters (of water)’).

Concluding, the data indicate that DNums have a ‘counting’ interpretation in the sense of Beghelli and Stowell (1997). So far, it seems as though there is no difference between a plain cardinal on its counting expression falling within the scope of a plural distributive DP, and a DNum. When applied to measures of cardinality, this seems to be the case. But within measure phrases in which different dimensions of measure are selected, a clear divide unfolds. Without *câte*, the cardinal may apply to any measure function; on the other hand, *câte* consistently excludes non-monotonic measures (references), a fact remarked upon by Zhang (2013) in her analysis of binominal *each*: #*câte 20° Celsius*, #*câte 100 km/h* etc.

### 3.2 *Câte* requires eventive sortal keys

As mentioned above, the distribution of DNums seems to allow for both event and participant keys. One important question in the literature on DNums is whether their distributive dependency can be generalized to one type of key or whether DNums are unselective between plural individual and plural event variables. The answer provided in the present paper is in the same lines as Balusu (2006), Henderson (2014) and Cable (2013) in this respect: DNums are event-dependent. The dependency on other thematic roles is only indirect.

First, one possible obstacle to this claim needs to be addressed. Farkas (2015) supports the opposite view, namely that DNums must be bound by domain variables, not by event variables. The evidence comes from Hungarian reduplicated numerals, but the acceptability judgments also apply to the Romanian DNum. Frequency adverbs and pluractional markers (contrary to Henderson’s 2014 data on Kaqchikel), although introducing a plurality of events, are incompatible as keys for the DNum, cf. (8).<sup>6</sup>

- (8) ??*Maria uneori cumpără câte două cărți.*  
 Maria sometimes buys CÂTE two books  
 ‘Mary sometimes buys two books.’

5. But not \**câte mai mult/ puțin de doi copii* (‘CÂTE more/ less than two children’), \**câte mulți copii* (‘CÂTE many children’), ??*câte puțini copii* (‘CÂTE few children’).

6. One complication stems from the fact that there is one morpheme in Hungarian and Romanian corresponding to both the singular indefinite *a* and the singular cardinal *one*, which is why higher cardinals are used.

The view advocated here follows from the intuition that the plain cardinal sentence *John sometimes buys two books* (and its Romanian translation) is just as odd on the non-referential reading as the Romanian sentence with *câte*, in the absence of an explicit restriction or focus marking. The oddity will not be explained here, but will be left to further research, since it appears that it is a more general phenomenon regarding the (not completely successful) interaction between cardinals and frequency adverbs.

Setting this type of interaction aside, (9) below proves that no covert or contextually provided plurality of individuals is necessary for the licensing of the DNum.<sup>7</sup>

- (9) *Profesorul a lăudat și criticat câte doi studenți.*  
 professor.DEF has praised and criticized CÂTE two students.  
 ‘The professor respectively praised and criticized two students.’

### 3.3 *Câte* as an event-object pair distributive marker

The observations in the previous section lead to the conclusion that *câte* is a marker of event-dependent distributive readings. We assume that the event variable must be anaphorically retrieved.<sup>8</sup> Therefore *câte* does not itself carry distributive force. The fact that DNums are compatible only with monotonic measures, but when applied to cardinality allow for the recycling of individuals will be explained as a consequence of the fact that DNums are the distributive counterparts of (cumulative) ER plain cardinals discussed in Krifka such as:

- (10) 4000 ships passed through the lock last year.

The sentence is ambiguous between an object related and an event related reading. On the latter interpretation, it means that there were 4000 lock-passing events done by ships last year, with the possibility of a particular ship passing twice, and thus being counted twice.

Building on Krifka, Doetjes & Honcoop propose that the event reading of the cardinal is due to the fact that it ranges not over individuals, but over event-individual pairs. Two operations ensure the dependence between a (cardinality) measure of individuals and that of event-individual pairs.

7. Translation of the German sentence in Champollion (2016), with distributive marker *jeweils*.

8. Conversely, the event dependency might also be conceived as a polarity-like relation, in which case the first encountered event plurality is the sortal key (as in Oh, 2006). It is left to further investigation which strategy is more adequate.

- (11) a. Standardization<sup>9</sup>  
 $[\neg\text{ITER}(e,x,R) \ \& \ N(x) \ \& \ R(e,x)] \rightarrow [\mu'(e,x) = n \leftrightarrow \mu(x) = n]$
- b. Generalization  
 $[\neg\langle e,x \rangle \circ \langle e',x' \rangle \ \& \ \mu'(e,x) = n \ \& \ \mu'(e',x') = n'] \rightarrow [\mu'(\langle e,x \rangle \oplus \langle e',x' \rangle) = n + n']$

First, standardization applies to events which do not recycle individuals (non-iterative, see Kifka 1989 for a formal definition). Second, generalization then sums up the measures thus obtained by standardization. By definition, a pair  $\langle e,x \rangle$  overlaps with a pair  $\langle e',x' \rangle$  just in case  $e$  overlaps with  $e'$  AND  $x$  overlaps with  $x'$ . Therefore, non-overlap of events is sufficient to apply Generalization, even if the individual variables overlap. The necessity for both operations becomes apparent in ER cumulative readings with mass nouns, which cannot be computed without a prior partition being applied (that is, event-object pairs cannot be identified by counting event-atom pairs:

- (12) a. 5000 tons of toxic waste passed through the lock last year.  
 b. ER (simplified): portion A of 2000 tons passed twice (in events  $e_1, e_2$ ) and portion B of 1000 tons passed once ( $e_3$ ).  
 c. Possible partition:  $\{(e_1 \oplus e_3, A \oplus B) / (e_2, A)\}$

Standardization applies to the two cells of the partition of toxic waste in (c), portioned such that there is no overlap within any of the cells of this partition – i.e. no portion within the cell is the theme of two different passing subevents, since A and B are distinct. This means that the event corresponding to each cell is non-iterative. The mass of each event-portion of toxic waste pair is equivalent to the amount of toxic waste by Standardization: 3000 tons for the first cell, 2000 for the second. Then, by Generalization, the measures of the cells are added together, yielding the result 5000 tons.

Turning back to DNums, the underlying idea is that they always range over  $\langle e,x \rangle$  pairs and are subject to Standardization and Generalization. These two operations are not defined for non-monotonic measures, which explains the impossibility of *#câte 20° Celsius*. Plain cardinals, on the other hand, can receive a distributive reading in a sentence such as *The liquids are at 20 degrees Celsius*, which is interpreted as meaning “for every liquid, the measure in temperature is 20”.

DPs such as *câte doi copii*, ‘CÂTE two children’ and measure phrases such as *câte 5 kilograme*, ‘CÂTE 5 kilos’ both contain a covert measure function, in the

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9. In words, if an event  $e$  is non-iterative (i.e. there is no recurrence of the same individual as the theta role of two distinct subevents of  $e$ ), then the measure of the event-object pair is equivalent to the measure of the object itself.

former case of cardinality, in the latter case of weight. The difference is that, in the former case, the measure of cardinality ranges over  $\langle e, x \rangle$  pairs, where  $x$  is identified with the NP-variable and only  $e$  is left locally unbound, to be anaphorically retrieved, while in the latter case both  $e$  and  $x$  are identified further in the derivation.

#### 4. The denotation of *câte*

##### 4.1 How the ratio interpretation arises

The role of *câte* is twofold – it selects a measure which ranges over event-individual pairs and anaphorically connects the event variable to the cells of a partition. The term partition is to be understood very broadly, including adnominal distributive determiners, covert distributive determiners as well as operator Part ranging over the temporal or spatial dimension.

$$(13) \quad [[\text{câte } 3 \text{ CARD}]] = \lambda Q_{\langle et \rangle} \lambda P_{\langle et \rangle} [\text{Part/Dist}_i(e) \& \\ Q(\text{Participant}(e)) \& P(e) \& \\ \mu_{\text{CARD}}(\mathbf{e}, \text{Participant}(e)) = 3]$$

$$(14) \quad [[\text{câte } 3 \text{ CARD books}]] = \lambda P_{\langle et \rangle} [\text{Part/Dist}_i(e) \& \\ *book(\text{Participant}(e)) \& P(e) \& \\ \mu_{\text{CARD}}(\mathbf{e}, \text{Participant}(e)) = 3]$$

$$(15) \quad [[\text{read c\^ate } 3 \text{ CARD books}]] = \text{Part/Dist}_i(e) \& *book(\text{Theme}(e)) \& * \\ \text{read}(e) \& \mu_{\text{CARD}}(\mathbf{e}, \text{Theme}(e)) = 3]$$

More exactly, Dist is a special kind of partition which necessarily targets some participant theta role (as opposed to, for instance, a running time) and sets the granularity of the cells to Atom (see the definition and example in Champollion 2016, repeated below as (16) and (17)).

$$(16) \quad \text{Definition of Dist} \\ [[\text{Dist}_\theta]] = \lambda V \lambda e [e \in * \lambda e' (V(e') \& \text{Atom}(\theta(e')))]$$

$$(17) \quad \text{a. The boys } [D_{\text{Agent}} [\text{saw a monkey}]]. \\ \text{b. } \exists e [* \text{Agent}(e) = \bigoplus \text{boy} \& e \in * \lambda e' (* \text{see}(e') \& \text{monkey}(\text{Theme}(e')) \& \\ \text{Atom}(\text{Agent}(e'))]$$

Applying the plural subject plus Dist to (15), assuming the condition  $\text{Part/Dist}_i(e) = * \lambda e'_i, e'_i = e$  is satisfied by co-indexation between  $e$  and some plural event, we get:

- (18) [[The boys DIST (read câte 3 CARD books)]]  
 $= \exists e [ *Agent(e) = \oplus boy \ \& \ e \in * \lambda e'. (*book(Theme(e')) \ \& * read(e') \ \& \ \mu_{CARD}(e', Theme(e')) = 3 \ \& \ Atom(Agent(e')) ]$

Standardization applies to each pair  $\langle e', Theme(e') \rangle$ , then Generalization disregards the repetition of individuals in different  $e'$  events as themes. The outcome for a DNum DP such as *câte 3 CARD books* above is a ratio interpretation – the number of read books per reading child is three.

## 4.2 More examples

The analysis extends to other, non-atomic partitions discussed in Champollion (2016), for instance the partition into pairs below in (19).

- (19) *Pantofii au costat câte 40 de euro.*  
*shoes.DEF have cost CÂTE 40 of euros*  
 ‘The shoes cos 40 euros (per pair).’

Informally, the partitive operator  $Part(Theme, pair)$  distributes the sum of shoes into pairs which have the thematic role Theme. The cells of the partition contain events  $e'$ , such that  $cost(e') \ \& \ \mu_{euros}(e', Theme(e')) = 40$ . That is to say, both the event and the participant are retrieved later in the derivation – the individual variable is identified with the theme via the COST relation, while the event is anaphorically retrieved as discussed above. In these cases, the distributive share is the measure itself. The outcome can also be expressed by a ratio: the cost (of shoes) in euros per pair is 40. Adding two pairs together will yield the cost of 80 euros and so on. With temperature, Standardization and Generalization cannot apply, since adding two portions of liquid with a certain temperature results in a larger portion with the same temperature. The ratio condition is not a primitive, but the result of applying two ingredients: distributivity and event-individual pair measure functions with Standardization and Generalization.

When the unit of temporal key is explicit, the ratio interpretation is also evident, as illustrated in (20).

- (20) a. *Maria citește câte două poezii zilnic.*  
 Mary reads CÂTE two poems daily  
 ‘Mary reads two poems daily.’  
 b.  $\exists e [ *Agent(e) = Mary \ \& \ e \in * \lambda e' (*read(e') \ \& *poem(*Theme(e')) \ \& \ \mu_{CARD}(e', Theme(e')) = 2 \ \& \ days(\tau(e')) \leq 1 ]$

In this case, the Partition takes a runtime as argument and has the granularity set to days. The sentence above also expresses a ratio, between poems and days, which in the example provided is 2:1.

In the case of sentences containing keys with distributive universal quantifiers, we assume, following Champollion (2016), that the licenser for the DNum is none other than the adnominal version of Dist, introduced by the universal quantifier overtly. Its semantic contribution is equivalent to that of covert Dist, cf. (21).

- (21) *Fiecare copil a văzut câte două pisici.*  
 each child has seen CÂTE two cats.  
 ‘Each child/most children saw two cats.’

Even though the paraphrase with a ‘per’ phrase is not readily available in these cases, this may be an indication that ‘per’ phrases are not compatible with strong quantifiers, while DNums are.

## 5. Consequences and conclusion

We saw that *câte* DNums constrain the thematic role they are assigned to be interpreted as distributive and ER. Whenever the event partition is due to the plurality of another thematic role or the units of the running time are explicit, the result is a ratio dependency between the two.

A second welcome result is that, due to Generalization, *câte* is disallowed from applying to non-monotonic measure phrases, as exemplified in (22).

- (22) *\*Fiecare lichid are câte 20 de grade Celsius.*  
 each liquid has CÂTE 20 of degrees Celsius  
 ‘Each liquid measures 20 degrees Celsius.’

This is because, by Generalization, adding the temperature of two distinct liquids equals the sum of the two temperatures.

Also, in consonance with the distinction observed in Zimmermann and further explained in Champollion, distributive markers across languages differ in their area of application and in their level of granularity. The two differences seem to be interconnected. For instance, binominal *each* is only compatible with participant distributivity, cf. (23).

- (23) a. Participant: The boys read two books each.  
 b. Event: \*Every day, John read two books each.

German *jewels* and Romanian *câte*, on the other hand, allow both types of distributivity. The second distinguishing property is granularity. Compare the English and Romanian sentences in (24).<sup>10</sup>

- (24) a. ?The shoes cost 40 dollars each.  
 b. Pantofii costă câte 40 de dolari.

(24a) is pragmatically odd because each distributes down to single shoes. *Câte*, on the other hand is perfectly natural in applying to pairs of shoes. The ratio analysis provided here yields the expected result, namely that the price-shoe dependency is 40:2.

As already mentioned in the introduction, the proposal adopted here is expected to extend to dependency markers which obey two conditions: a. they do not enforce their own distributivity and b. obligatorily apply to non-monotonic measures. The fact that these two conditions are independent from one another would in principle allow for there to be specialized markers which obey one of these constraints. Indeed, *each* and *jewels* seem to obey b, but not a.

An issue which is relevant not only in the study of DNums but in the analysis of expressions of cardinality in general and which is left for further research is the fact that cardinals on their distributive (narrow scope) reading are degraded when a plurality of events without an explicit temporal unit is introduced.

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10. The Romanian equivalent with binominal *fiecare* is just as odd as the English sentence.



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# For an overt movement analysis of comparison at a distance in French

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This paper focuses on nominal comparative constructions in European French, specifically on constructions in which the comparative quantifier can appear separated from its nominal restrictor (hence the name *Comparison At a Distance*). One question is whether the nominal comparative construction in which the quantifier is separated from its restrictor is derivationally related to the corresponding construction in which the quantifier is adjacent to its restrictor (movement analysis) or whether those two constructions are not derivationally related (base-generation analysis). I show that there are arguments in favor of analyzing CAD as a case of overt quantifier movement (locality restrictions) and arguments against a base-generation analysis (reconstruction). Furthermore, I show that nominal comparative quantifiers that can be separated from their restrictor have the same locality restrictions as the quantifier *tout* ‘everything’, which has been argued to move (Kayne 1975), suggesting that *tout* and comparative quantifiers are amenable to the same movement rule.

## 1. Introduction

There is a class of split-DP constructions in French involving certain nominal quantifiers and their restrictors (also known as deP). In (1), the quantifier *trop* ‘too much’ appears next to its restrictor *de vin* (Canonical Quantification), and in (2), it appears before the verb (Quantification At a Distance). QAD has been the topic of much work starting with Kayne 1975 (see Burnett 2009 for an overview).

- (1) *Éva a bu trop de vin.*  
Eva has drunk too much DE wine  
‘Éva drank too much wine.’
- (2) *Éva a trop bu de vin.*  
Eva has too\_much drunk DE wine  
‘Éva drank too much wine.’

The *de* particle obligatorily marking the restrictor needs to be licensed by a quantifier, lest the construction be ungrammatical (3) and (4).

- (3) \**Éva a bu de vin.*  
Eva has drunk DE wine
- (4) \**De gens ont bu du vin.*  
DE people have drunk some wine

The dependency between deP and the quantifier can be analyzed in two different ways. Under a movement analysis, the quantifier is base-generated next to deP and can move overtly to a preverbal position, whereas under a base-generation analysis, the quantifier is base-generated in the position where it appears, and a dependency is established between it and deP. The consensus concerning QAD split-DP constructions is that the quantifier is actually a base-generated adverb modifying the VP to its right. However, the literature has not looked at cases where the quantifier in question is a comparative quantifier, henceforth Comparison At a Distance, as in (6). I argue that the CAD construction in (6) is derived from the non-split construction in (5).

- (5) *Éva a bu plus d' eau que de vin.*  
Eva has drunk more DE water than DE wine  
'Éva drank more water than wine.'
- (6) *Éva a plus bu d'eau que de vin.*  
Eva has more drunk DE water than DE wine  
'Éva drank more water than wine.'

The structure of the paper is the following. Section 2 takes on two generalizations that have been used as arguments for the base-generation analysis of QAD. I show that the first generalization does not extend to CAD and that the second one does not constitute an argument. There is therefore no reason to favor a base-generation analysis for CAD, but there are reasons to favor a movement analysis. Section 3 shows that in some cases, a CAD quantifier can be interpreted below the position where it appears. This is a fact that can be straightforwardly explained under the movement analysis. In Section 4, I show that locality restrictions that apply to CAD can be derived from movement, and more specifically if we assume that CAD involves A-movement. Indeed CAD is subject to restrictions that are typical of A-movement, namely a sensitivity to the difference between finite and non-finite clause boundaries and intervention. Finally I compare the locality restrictions that hold for CAD to those that hold for *tout* 'everything' and conclude that they are co-extensive. This makes a movement analysis of CAD all the more plausible since *tout* has been argued to move (Kayne 1975).

## 2. No support for base-generation analysis

The consensus on the base-generation analysis seems to have been motivated by two generalizations. The generalization in (7) goes back to Obenauer 1983 and was taken as evidence that a quantifier in QAD/CAD not only has scope over the VP, but actually modifies it (Doetjes 1997; Burnett 2009).<sup>1</sup> I show that analyzing CAD as adverbial modification makes wrong predictions. Rather, CAD is a construction in which a quantifier can take scope over a VP without modifying it.

- (7) **Multiplicity of Events (MoE) Requirement** (Obenauer 1983)  
QAD is grammatical only if the context involves multiple events.

MoE has been motivated by examples like (8). The PP *en soulevant le couvercle* ‘as he lifted the lid’ is used to fix a single event reading. The CQ sentence (8a) is felicitous, but the QAD sentence (8b) is reported not to be because it is not compatible with there being just one event of finding gold coins.

- (8) a. *En soulevant le couvercle, il a trouvé beaucoup de pièces d’or.*  
In lifting the lid he has found many DE coins of gold  
‘As he lifted the lid, he found many gold coins.’  
b. \**En soulevant le couvercle, il a beaucoup trouvé de pièces d’or.*

MoE can be understood in two ways when extended to CAD: (MoE extension 1) CAD is grammatical only if the context involves multiple events or (MoE extension 2) CAD is grammatical only if, in that position, the quantifier quantifies over events as well as individuals (Burnett 2009 offers such a treatment of QAD). Either way, I show that extending MoE to CAD makes wrong predictions. Under MoE extension 1, the CAD sentence in (9) should not be felicitous in the single-event context (9a) since there is only one event of sending macarons: Marcel mailed out one box once containing macarons for both Aymeric and Éva. But this sentence can be used felicitously in this context.

- (9) *Au total, Marcel a plus envoyé de macarons à Aymeric*  
In total Marcel has more sent DE macaroons to Aymeric  
*qu’ à Éva.*  
than to Eva  
‘In total, Marcel sent more macaroons to Aymeric than to Eva.’  
a. *Single-event context:* Yesterday, Marcel had one box containing 10 macarons for Aymeric and 5 for Éva delivered to their house.

1. Burnett 2009 gives an adverbial analysis to QAD in Québec French in which the adverb does not modify the VP, but facts do not motivate this adverbial story for CAD in European French.

- b. *Multiple-event context*: Every year, Marcel sends 10 macarons to Aymeric and 3 to Éva. This year is Aymeric's 5th and Éva's 10th birthday.

The hypothesis that CAD is subject to MoE extension 2 predicts that the CAD comparative in (9) can be true only if the following two conditions are met: (condition i) the number of events of sending macarons to Aymeric is greater than the number of events of sending macarons to Éva, and (condition ii) the number of macarons sent to Aymeric is greater than the number of macarons sent to Éva. In the multiple-event context (9b), there is exactly 5 events of sending 10 macarons to Aymeric each time, and exactly 10 events of sending 3 macarons to Éva each time. In this context, only condition (ii) is met, therefore MoE extension 2 predicts that the CAD sentence in (9) is false but in this context too, the CAD construction is true. I therefore conclude that CAD constructions do not have a(n extension of) multiplicity of events requirement. Therefore one cannot appeal to an MoE-like meaning difference to support an adverbial account of CAD.<sup>2</sup>

The second observation is the one posited by Kayne (1975) in (10). The quantifier *beaucoup* 'many' illustrates this correlation: in (11), it may be used as a VP adverb and 'at a distance'. The quantifier *plein* 'many', however, cannot be used as a VP adverb, and it cannot quantify at a distance (12).

(10) **Kayne's generalization**

A degree quantifier can quantify at a distance iff it can be used as a preverbal adverb.

- (11) a. *J'ai acheté beaucoup de pommes.*  
I have bought many DE apples  
'I bought many apples.'
- b. *J'ai beaucoup acheté de pommes.*
- c. *J'ai beaucoup dormi.*  
I have much slept  
'I've slept a lot.'
- (12) a. *J'ai acheté plein de pommes.*  
I have bought many DE apples  
'I bought many apples.'
- b. \**J'ai plein acheté de pommes.*
- c. \**J'ai plein dormi.*

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2. Even if CAD constructions had a MoE requirement, this fact would not be proof that quantifiers in preverbal positions are base-generated. Movement gives rise to scope effects that change the truth-conditions of a sentence.

Kayne (1975) points out that if we explain QAD by movement of the operator, then the unacceptability in (12b) is unexpected, thereby suggesting a causal link between the ability to be used as an adverb and the possibility of QAD. But there is another correlation that holds for the set of QAD operators (13).

(13) **QAD nominal quantifiers generalization<sup>3</sup>**

A degree quantifier can only quantify at a distance iff it can be used pronominally.

Adding *beaucoup* ‘many/much’ in CQ (14a) or QAD (14b) satisfies the selectional requirements of *faire* ‘do’. Adding *plein* ‘much’ does not (15).

(14) a. *J’ai fait beaucoup pour les pauvres.*

I have done much for the poor

‘I did a lot for the poor.’

b. *J’ai beaucoup fait pour les pauvres.*

(15) a. \**J’ai fait plein pour les pauvres.*

I have done much for the poor

b. \**J’ai plein fait pour les pauvres.*

Doetjes (1997) has argued that both the adverbial use and the pronominal uses of the quantifiers follow if one assumes (i) that the quantifier is an adverb (modulo optional participle movement) and (ii) that it can bind a silent restrictor in object position. But such an analysis is not compatible with the fact that all QAD/CAD operators can saturate the subject as well as the object position of a transitive verb, e.g. *plus* ‘more’ (16), *moins* ‘less’ (17), or be used in a PP (18) (*pace* Doetjes 1997).<sup>4</sup>

3. A similar generalization is mentioned in Doetjes (1997).

4. Doetjes (1997) argues that QAD operators are really not used pronominally in such constructions as evidenced by the fact that they cannot be used in all of the syntactic positions in which DPs can be used. In (ib), using bare *beaucoup* ‘much’ as the object of *s’intéresser à* ‘be interested in’ is not possible.

(i) a. *Marie s’intéresse à tout.*

Marie REFL interests to everything

‘Marie is interested in everything.’

b. \**Marie s’intéresse à beaucoup.*

Marie REFL interests to much

Int. ‘Marie is interested in many things.’

However, (ib) only shows us that QAD operators are not just like any other DPs. I don’t know why (ib) is bad, further constraints might apply to the distribution and interpretation of pronominal quantifiers: Doetjes notes that the interpretation of quantifiers used pronominally is very context-dependent. In any case Grevisse and Goosse (2007: 944–945) give many examples of QAD/CAD quantifiers used pronominally in various positions.

- (16) *J ai fait plus pour les pauvres que toi.*  
 I have done more for the poor than you  
 ‘I did more for the poor than you did.’
- (17) *Moins sont venus que ça.*  
 Fewer have come than that  
 ‘Fewer came than this.’
- (18) *Je vais vous confier une façon de voir qui risque de déplaire*  
 I go you confide a way of see that risks to displease  
*à beaucoup.*  
 to many  
 ‘I’ll tell you about a way of seeing things that may displease many (people).’  
 (adapted from Romains, *Lettre ouverte contre une vaste conspiration*, p. 142)

In conclusion, two correlations hold of QAD/CAD quantifiers: the possibility to be used as a VP adverb is therefore not the only feature that is predictive of QAD/CAD. Previous analyses privileged Kayne’s generalization, but there is no reason why this should be so. In fact, assuming that QAD/CAD quantifiers are always adverbs (Doetjes 1997) runs into difficulties when dealing with their pronominal uses. What we observe is that certain quantifiers can appear to have no restrictor, and this may be the reason why they do not need to sit next to deP when it is there.

There are no arguments in favor of analyzing CAD as a base-generated structure but there are arguments in favor of analyzing it as a derived structure. The first argument, to which I turn now, is a direct prediction of the movement analysis: the moved element can be interpreted below its landing position.

### 3. Reconstruction facts

Example (19) contains the modal *devoir* ‘must’ and the downward monotonic degree quantifier *moins* ‘less’ (otherwise the scope ambiguity would yield equivalent readings (Heim 2001)).

- (19) *Vos enfants vont moins devoir envoyer de lettres que ça.*  
 Your children go less must send DE letters than that  
 ‘Your children are required to send fewer letters than that (= 50)’

It has the surface scope reading (*moins* >> *devoir*): ‘the minimal requirement reading’. That such a reading is available is shown by the felicitous use of (19) in context (22). The (simplified) Logical Form for this reading is in (20). It says that the minimal number of letters that the children are required to send is less than 50. It says nothing about an upper end, leaving open that more than 50 letters can be sent.

- (20) The minimal requirement reading (*moins* >> *devoir*):

$[[ (19) ] ] = \text{Max}\{d \mid \forall w' \in \text{Acc}(w). \text{Your children are going to send } d\text{-MANY letters in } w'\} < 50$

What is interesting is that (19) has the lower scope reading (*devoir* >> *moins*) which can be paraphrased as the maximal number of letters that the children are allowed to send is less than 50.

- (21) The maximal requirement reading (*devoir* >> *moins*):

$[[ (19) ] ] = \forall w' \in \text{Acc}(w). \text{Max}\{d \mid \text{Your children are going to send } d\text{-MANY letters in } w'\} < 50$

That such a reading is available is shown by (22). A falsity judgment task needs to be used to show that the maximal requirement reading is there. This is because the maximal requirement reading entails the minimal requirement reading: if the highest possible number is 50 then it is also true that the lowest possible number is less than 50.<sup>5</sup>

- (22) Context: Parents are gathered together in their children's classroom for a meeting with their teachers. The children are all going to apply for an internship over the summer. One teacher tells the parents that one year, a child sent out 50 application letters. Of course, children are free to send as many or even more letters but it's also definitely not necessary for them to send as many.

A: *Les enfants vont moins devoir envoyer de lettres que ça (= 50).*  
The children go less must send DE letters than this

B: *Mais c'est faux voyons! Au contraire, s'ils le veulent, ils peuvent en envoyer à toutes les entreprises du pays.*  
But this is false see! at the contrary if they it want they can of them send to all the companies of the country  
'But that's not true, come on! If they want, they can send letters to every single company in the country!'

The scenario in (22) sets up the minimal requirement reading while making the maximal requirement reading false. The scenario tells us that two parents are talking about a parent/teacher meeting that happened earlier. Speaker A utters the test sentence in (22). Speaker B reacts to A's utterance by denying the stronger maximality reading. Informants were asked to judge whether the dialogue between A and B was coherent. The dialogue in (22) is coherent, we can conclude that the sentence in A has the maximality reading (*devoir* >> *moins*).

5. This is a short version of the argument for reconstruction. For the complete version, see (Pasquereau 2016).



For the scope argument with intensional verbs to hold it is crucial that the scope-bearing element should not be able to raise covertly, otherwise covert movement of this scope-bearing element could give it scope over *moins* where it appears. Modals in French have been argued not to be able to move covertly by Hacquard (2006: 44). A challenge is that Homer (2011: 217) claims that *devoir* ‘must’ is a PPI, which can escape out of the scope of a DE operator by moving covertly out of its scope. Here is how the challenge might be answered. If the scope relation *devoir* >> *moins* obtained because *moins* created a DE environment in its scope that *devoir* wanted to escape, then we would expect negative polarity items to be licensed under *moins*. The examples in (23) show that NPIs are not licensed in the scope of *moins* so there is reason to think that *moins* does not create a DE environment in its scope. Therefore, according to Homer’s theory, *devoir* is not antilicensed and does not need to escape.

- (23) a. \**Jean va moins faire quoi que ce soit que son frère.*  
           Jean goes less do anything than his brother  
       b. \**Jean va moins dormir de la semaine que son frère.*  
           Jean goes less sleep in the week than his brother

#### 4. Locality restrictions

If CAD is obtained via movement, we expect to see locality restrictions and this is what we find. I use *plus* ‘more’ throughout and only mention the other quantifiers when they pattern differently.

##### 4.1 Where can deP be?

A CAD operator can license a deP if the deP meets all of the following 3 conditions: (i) deP is not in a PP, (ii) deP is postverbal, and (iii) deP is an argument. As we have seen CAD is possible with an object argument (24), but only with DP ones: (25) shows that *plus* ‘more’ cannot license deP across a PP boundary even if it is an argument of the verb.

- (24) CAD into object: ✓  
       a. *J’ai vu plus de gens que ça.*  
           I have met more DE people than that  
           ‘I have met more people than that’  
       b. *J’ai plus vu de gens que ça.*

- (25) CAD into (argument) PP : \*
- a. *J'ai téléphoné à plus de gens que ça.*  
I have called to more DE people than that.  
'I've called more people than that.'
  - b. *\*J'ai plus téléphoné à de gens que ça.*

The CAD dependency can also hold for the subject of a verb as long as it is postverbal, which happens under very specific conditions: with unaccusative verbs, in so-called locality inversion constructions, and via clefting of the object (26).

- (26) Clefting of the object, CAD into postverbal subject: ✓
- a. [O            V                    plus de-S    ]  
*Ce sont ces projets qu' ont soutenus plus d' hommes*  
This are those projects that have supported more DE men  
*que de femmes.*  
than DE women  
'Those are the projects that more men than women have supported.'
  - b. [O   plus            V            de-S            ]  
*Ce sont ces projets qu'ont plus soutenus d'hommes que de femmes.*

A generalization recurring in the literature is that QAD is restricted to the (surface) object. This generalization is motivated it seems by examples like (27) in Kayne (1975: 29) and from Burnett (2009: 20) where CAD is not good with the (derived) subject. Notice though that the subject is preverbal.

- (27) *\*De carottes ont été trop mangées cette année.*  
DE carrots have been too eaten this year  
Int. 'Too many carrots have been eaten this year.'

Finally, only postverbal DPs arguments allow CAD.

- (28) CAD into adjunct: \*
- a. *J' ai dormi plus de temps que ça.*  
I have slept more DE time than this  
'I slept longer than this.'
  - b. *\*J'ai plus dormi de temps que ça.*
- (29) CAD into object: ✓
- a. *J' ai passé plus de temps que ça.*  
I have spent more DE time than this  
'I spent more time than this.'
  - b. *J'ai plus passé de temps que ça.*

Under the movement analysis we do not need to explain why the selection of a deP by the quantifier in a CAD sentence appears to be non-local:<sup>6</sup> the comparative quantifier is merged into the structure as the sister of deP and moves from there. Furthermore, if indeed the quantifier itself undergoes movement, then the generalization that CAD can only occur with postverbal arguments follows from the fact that the landing position of the movement is lower than the surface position of subjects.

If CAD involves overt Q-movement, we might expect this movement to be an instance of a known type of movement. I show below that CAD seems to have the profile of A-movement.

#### 4.2 How distant can Q and deP be?

In what follows, I show that the CAD dependency cannot hold across tensed clause boundaries, although it can hold across certain infinitival boundaries. I also show that it is sensitive to extraction islands and intervention. All of this is suggestive of A movement.

The quantifier *plus* ‘more’ cannot be in a different tensed clause from the clause where the deP it quantifies over is (cf. 30a, 30b and 30c). This restriction holds even if the embedded verb is in the subjunctive (31).

(30) CAD into indicative clause: \*

- a. *J'ai pensé que tu avais vendu plus d'encre que de craie aujourd'hui.*  
I have thought that you had sold more DE ink than DE chalk today  
'I thought that you had sold more ink than chalk today.'
- b. *J'ai pensé que tu avais plus vendu d'encre que de craie aujourd'hui.*
- c. \**J'ai plus pensé que tu avais vendu d'encre que de craie aujourd'hui.*

---

6. Kayne (1975) points out that movement is not necessary to explain the distribution of dePs since they are possible in argument position under negation and it is not possible for *pas* to appear next to deP. But there are arguments that the *de* found under negation and the *de* licensed by quantifiers are not the same morphemes (see Milner 1978).

- (31) CAD into subjunctive clause: \*
- a. *Carla a exigé que Nicolas prenne plus de cours de*  
Carla has demanded that Nicolas take<sub>subj</sub> more DE classes of  
*syntaxe que ça.*  
syntax than that  
'Carla demanded that Nicolas take more syntax classes than that.'
  - b. \**Carla a plus exigé que Nicolas prenne de cours de syntaxe que ça.*

CAD is possible across a non-finite boundary in causative constructions (32b).

- (32) CAD into infinitival under faire causativizer:<sup>7</sup> ✓
- a. *Je vais faire tailler plus d'arbres à mon jardinier que*  
I go make trim more DE trees to my gardener than  
*de rosiers*  
DE rose\_bushes
  - b. *Je vais plus faire tailler d'arbres à mon jardinier que de rosiers.*

This could be thought to be a consequence of a possible special status of causative constructions, but CAD is possible into infinitivals in raising constructions, with *paraître* 'to appear' and *devoir* 'to must' for instance (33).

- (33) CAD into infinitival under *paraître* 'appear' and *devoir* 'must': ✓
- a. *Jean a pourtant paru/dû arroser plus de fleurs que*  
Jean has yet seemed/must water more DE flowers than  
*d'arbustes.*  
DE shrubs  
'Yet, Jean seemed to have / must have watered more flowers than shrubs.'
  - b. *Jean a pourtant plus paru/dû arroser de fleurs que d'arbustes.*

Licensing into infinitivals is not restricted to raising constructions. Although judgments are much less clear with control verbs, at least some of them allow CAD, e.g. *essayer* 'try' (34).

- (34) CAD into infinitival under *essayer* 'try': ✓
- a. *Il a essayé de lire plus de livres que de magazines.*  
He has tried DE read more DE books than DE magazines  
'He tried to read more books than magazines.'
  - b. *Il a plus essayé de lire de livres que de magazines.*

---

7. The order in which the standard clause precedes the goal *à mon jardinier* is also possible, maybe preferred.

But it is less clear whether other subject control verbs like *décider* ‘to decide’ are acceptable with CAD (35). If the contrast in acceptability extends to other pairs of restructuring/non-restructuring verbs like *essayer* ‘to try’/*décider* ‘to decide’ (cf. Wurmbrand 1998), then this contrast constitutes an even stronger argument for a movement analysis against a base-generation analysis.

- (35) CAD into infinitival under *décider* ‘to decide’: ??
- a. *Il a décidé de lire plus de livres que de magazines.*  
He has decided DE read more DE books than DE magazines  
‘He tried to read more books than magazines.’
  - b. ??*Il a plus décidé de lire de livres que de magazines.*

To recapitulate, CAD is not possible across finite clause boundaries but it is across at least some non-finite clause boundaries depending on the embedding verb that heads them. This is a difference exhibited by A-movement. We will now see that CAD across extraction island boundaries is not possible as predicted by the movement account. Any sentence in which the *plus-deP* dependency spans a tensed clause boundary will be unacceptable. So I only look at non-finite embedded clauses in the extraction islands which can embed a non-tensed clause: adjunct (cf. (28) and (29)), complex NP (36), wh-island (37), conjunction (38).

- (36) CAD into complex NP: >\*
- a. *J’ai vu un homme à qui vendre plus de choux*  
I have seen a man to whom sell more DE cabbages  
*que de fraises.*  
than DE strawberries  
‘I saw a man to whom I can sell more cabbages than strawberries.’
  - b. \**J’ai plus vu un homme à qui vendre de choux que de fraises.*
- (37) CAD into wh-island: \*
- a. *Christian s’est demandé à qui donner plus de gâteau.*  
Christian REFL is asked to whom give more DE cake  
‘Christian wondered who to give more cake to.’
  - b. *Christian s’est demandé à qui plus donner de gâteau.*
  - c. \**Christian s’est plus demandé à qui donner de gâteau.*
- (38) CAD into one conjunct: \*, CAD into both conjunct: ✓
- a. *J’ai donné plus de temps et plus d’argent à Marie*  
I have given more DE time and more DE money to Marie  
*qu’ à Pauline*  
than to Pauline  
‘I gave more time and money to Marie and to Pauline.’
  - b. \**J’ai plus donné de temps et plus d’argent à Marie qu’à Pauline.*
  - c. *J’ai plus donné de temps et d’argent à Marie qu’à Pauline.*

If CAD does involve movement, specifically A-movement (as evidenced by the fact that CAD is not possible across tensed clauses but is across some non-finite clauses), we might expect there to be intervention effects (Malhotra 2011) and this is indeed what we find.

### 4.3 Intervention

It seems that a CAD cannot span a DP (39) or a PP (40). In (39), *Paul* is the object of the control verb *supplier* ‘to beg’. In (40), *Paul* is the indirect object of the control verb *conseiller* ‘to advise’.

(39) CAD across DP ‘Paul’: \*

- a. *Marie a supplié Paul d’acheter plus de magazines que Marie has begged Paul to buy more DE magazines than de journaux.*  
DE newspapers  
‘Marie begged Paul to buy more magazines than newspapers.’
- b. \**Marie a plus supplié Paul d’acheter de magazines que de journaux.*

(40) CAD across PP à ‘to Paul’: \*

- a. *Marie a conseillé à Paul d’acheter plus de magazines que Marie has advised to Paul to buy more DE magazines than de journaux.*  
DE newspapers  
‘Marie advised Paul to buy more magazines than newspapers.’
- b. \**Marie a plus conseillé à Paul d’acheter de magazines que de journaux.*

However, the CAD quantifier – deP dependency can hold once the intervening DP or PP has gotten out of the way. In (41a) and (41b), the intervener has cliticized and in (42), it has been wh-extracted.

(41) CAD after cliticization of DP/PP: ✓

- a. *Marie l’ a plus supplié d’acheter de magazines que Marie him has more begged to buy DE magazines than de journaux.*  
DE newspapers  
‘Marie begged him to buy more magazines than newspapers.’
- b. *Marie lui a plus conseillé d’acheter de magazines que Marie him has more begged to buy DE magazines than de journaux*  
DE newspapers  
‘Marie advised Paul to buy more magazines than newspapers.’

- (42) CAD after wh-movement of intervening DP/PP: ✓
- Qui est-ce que Marie a plus supplié d' acheter de*  
Who is it that Marie has more begged to buy DE  
*magazines que de journaux ?*  
magazines than DE newspapers  
'Who did Marie beg to buy more magazines than newspapers?'
  - À qui Marie a-t-elle plus conseillé d' acheter de*  
To whom Marie has she more advised to buy DE  
*magazines que de journaux ?*  
magazines than DE newspapers  
'Who did Marie advise to buy more magazines than newspapers?'

This contrast is also observed with the ECM verb *laisser* 'let' in (43). The dependency cannot hold across the raised DP *mes enfants* 'my children' in (43b), and as (43c) and (43d) show, the sentences are grammatical once the DP has gotten out of the way.

- (43) CAD into infinitival under ECM *laisser* 'let': ✓<sup>cl</sup> / \*<sup>DP</sup>
- Je vais laisser mes enfants lire plus de bandes dessinées que*  
I go let my children read more DE comic\_books than  
*de romans*  
DE novels
  - \**Je vais plus laisser mes enfants lire de bandes dessinées que de romans.*
  - Je vais plus les laisser lire de bandes dessinées que de romans.*
  - Qui est-ce que tu vas plus laisser lire de bandes dessinées que de romans?*

Those facts are unexpected under the base-generation account, especially in the face of the acceptability of the examples in (44) where CAD across the unembedded PP *à Marie* 'to Marie' does not cause unacceptability. Arguably though, the object DP (*plus*) *de livres sur Napoleon* in (44) has been extraposed. If the CAD dependency is derived before the extraposition, we then have an explanation for the acceptability of this example.

- (44) CAD into DP over PP in ditransitive construction: ✓
- J' ai prêté à Marie plus de livres sur Napoléon que de*  
I have lent to Marie more DE books on Napoleon than DE  
*livres sur Louis XIV.*  
books on Louis XIV  
'I lent Marie more books about Napoleon than books about Louis XIV.'
  - J'ai plus prêté à Marie de livres sur Napoléon que de livres sur Louis XIV.*

The cases where a DP intervenes in cross-clausal CAD may be likened to a kind of DP intervention that has been discussed in raising constructions: defective intervention, even though it is unclear how the proposed analyses in Anagnostopoulou (2003) and Hartman (2011) for instance could be extended to intervention in CAD. Moreover, it is not only DPs which intervene, adverbials do too: in (45), my informants consistently found a. and c. to be much better than example b, in which the adverbial *à chaque fois* ‘each time’ or *demain* ‘tomorrow’ appears between *plus* and *deP*.

- (45) CAD across adverbial *hier/à chaque fois* :\*
- a. *Il m' a paru hier/à chaque fois avoir emprunté plus d'argent que toi.*  
He to.me has appeared yesterday/at each time have borrowed more DE money than you
  - b. \**Il m'a plus semblé hier/à chaque fois avoir emprunté d'argent que toi.*
  - c. *Hier/à chaque fois, il m'a plus semblé avoir emprunté d'argent que toi.*

This pattern of locality, especially the facts related to intervention, point toward a syntactic explanation. Movement is made more plausible by the fact that there is another word which (i) has been argued to move, (ii) may also be used pronominally, and (iii) exhibits the same locality restrictions as CAD.

## 5. Comparison with *tout* ‘everything’

In this section I show that *tout* ‘everything’, which has been argued to move (Kayne 1975), exhibits the same locality restrictions as *plus* ‘more’, thus suggesting that *plus* should be analyzed similarly. The quantifier *tout* ‘everything’ used as an object can appear in positions that are not positions where objects can ordinarily appear, namely the position to the left of a non-finite verb (cf. 46 and 47).

- (46) a. *J' ai bu du vin.*  
I have drunk some wine  
‘I drank wine.’
- b. \**J' ai du vin bu.*  
I have some wine drunk
- (47) a. *J' ai bu tout.*  
I have drunk everything  
‘I drank everything.’
- b. *J' ai tout bu.*  
I have everything drunk  
‘I drank everything.’



If *tout* appears in an embedded finite clause, it cannot appear in the matrix clause, like CAD Qs.

(48) In indicative clause: \*

- a. *J'ai pensé que tu avais vendu tout.*  
I have thought that you had sold everything  
'I thought that you had sold everything.'
- b. *J'ai pensé que tu avais tout vendu.*  
I have thought that you had everything sold  
'I thought that you had sold everything.'
- c. \**J'ai tout pensé que tu avais vendu.*  
I have everything thought that you had sold

(49) In subjunctive clause: \*

- a. *J'ai exigé qu' il ait pris tout.*  
I have demanded that he have<sub>subj</sub> taken everything  
'I demanded that he should have taken everything.'
- b. \**J'ai tout exigé qu'il ait pris.*  
I have everything demanded that he have<sub>subj</sub> taken

Movement of *tout* is possible across a non-finite boundary in causative constructions (32b).

(50) Infinitival under *faire* causativizer: ✓

- a. *Je vais faire tailler tout.*  
I go make trim everything  
'I'm going to have everything cut back.'
- b. *Je vais tout faire tailler.*  
I go everything make cut\_back  
'I'm going to have everything cut back.'

(51) Infinitival under *paraître* 'to appear': ✓

- a. *Jean a paru/ dû arroser tout.*  
Jean has seemed/ must water everything  
'Jean seemed to water everything/Jean must have watered everything.'
- b. *Jean a tout paru/dû arroser.*  
Jean has everything seemed/must water  
'Jean seemed to water everything/Jean must have watered everything.'

(52) Infinitival under *essayer* 'to try': ✓

- a. *Il a essayé de lire tout.*  
He has tried to read everything  
'He tried to read everything.'
- b. *Il a tout essayé de lire.*  
He has everything tried to read  
'He tried to read everything.'

- (53) Infinitival under *décider* 'to decide': ??
- a. *Il a décidé de lire tout.*  
He has decided to read everything  
'He decided to read everything.'
- b. ??*Il a tout décidé de lire.*  
He has everything decided to read  
'He decided to read everything.'

Just like *plus* 'more', *tout* 'all' cannot move out of extraction islands, cf. (54)–(57).

- (54) Movement out of adjunct: \*
- a. *Il s' est blessé en rangeant tout.*  
He REFL is wounded in putting\_away everything  
'He hurt himself while putting everything away.'
- b. \**Il s est tout blessé en rangeant.*  
He REFL is everything wounded in putting\_away
- (55) Movement out of complex NP: \*
- a. *J' ai vu un homme à qui tout vendre.*  
I have seen a man to whom everything sell  
'I saw a man to whom I can sell everything.'
- b. \**J' ai tout vu un homme à qui vendre.*  
I have everything seen a man to whom sell
- (56) Movement out of wh-islands: \*
- a. *Christian s' est demandé où tout acheter.*  
Christian REFL is wondered where everything buy  
'Christian wondered where to buy everything.'
- b. \**Christian s' est tout demandé où acheter.*  
Christian REFL is everything wondered where buy
- (57) Out of one conjunct: \*, out of both conjuncts: ✓
- a. *J' ai dû tout dire et tout faire.*  
I have must everything say and everything do  
'I had to say everything and do everything.'
- b. \**J' ai tout dû dire et tout faire.*  
I have everything must say and everything do
- c. *J' ai tout dû dire et faire.*  
I have everything must say and do  
'I had to say and do everything.'

The quantifier *tout* is sensitive to DP intervention too as the sentence in (58b) shows, and cliticization improves the acceptability of the sentence (58c). It is also sensitive to adverb intervention (59).

- (58) Movement over DP: \*, over clitic: ✓
- a. *Je vais laisser mes enfants tout lire.*  
I go let my children everything read  
'I'll let my children read everything.'
  - b. \**Je vais tout laisser mes enfants lire.*  
I go everything let my children read
  - c. *Je vais tout les laisser lire.*  
I go everything them let read  
'I'll let them read everything.'
- (59) Movement over adverb: \*
- a. *Je vais essayer demain de tout finir.*  
I go try tomorrow to everythingfinish  
'I'll try to finish everything tomorrow.'
  - b. \**Je vais tout essayer demain de finir.*  
I go everything try tomorrow to finish
  - c. *Demain, je vais tout essayer de finir.*  
Tomorrow I go everything try to finish  
'I'll try to finish everything tomorrow.'

Interestingly, another hint that *tout* and CAD should be given a similar analysis is that both fall within the purview of the pronominal generalization (13). This could suggest that the possibility for quantifiers to be used pronominally is indeed predictive of whether they can undergo movement although I cannot develop this idea further here.

## 6. Conclusion

I have endeavored to show that the CAD dependency is derived via movement. Firstly, there are no arguments favoring a base-generation account. Secondly, reconstruction facts with locality restrictions make a strong case for analyzing CAD in terms of overt movement. I have hinted that CAD looks like A-movement because unlike  $\bar{A}$ -movement, it cannot cross finite-clause boundaries but, like A-movement, it is finite-clause bound and sensitive to intervention. Another observation is that no known  $\bar{A}$ -movement targets the positions that CAD targets: *combien* wh-moves in (60) and cannot be preverbal.<sup>8</sup>

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8. This is admittedly not an observation in favor of A-movement, simply one against  $\bar{A}$ -movement.

- (60) a. *Il a lu combien de livres?*  
He has read how\_many DE books  
'How many books has he read?'
- b. \**Il a combien lu de livres?*  
He has how\_many read DE books
- c. *Combien il a lu de livres?*  
How\_many he has read DE books  
'How many books has he read?'
- (61) a. *Il a lu plus de livres que ça.*  
He has read more DE books than this  
'He has read more books than this.'
- b. *Il a plus lu de livres que ça.*  
He has more read DE books than this  
'He has read more books that this.'
- c. \**Plus il a lu de livres que ça.*  
More he has read DE books than this

I have argued that there are reasons to think that CAD and *tout*-movement involve the same operation but whether the latter is A-movement is not known either. Moreover an analysis in terms of A-movement brings up a number of issues and I must leave this discussion for later. In particular, I think a more precise characterization of this movement partly hinges on how the structure of French quantified dePs is analyzed.

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# The role of L2 exposure in L3A

## A comparative study between third and fourth year secondary school students in the Netherlands

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In this study, we test the L2 Status Factor hypothesis (Bardel & Falk, 2007, 2012), which claims that the L2 is the preferred background language over the L1 in L3 acquisition (henceforth L3A), and we investigate the effect of L2 English exposure on the role of the L1 and the L2 in L3A. We examine how increased developmental L2 exposure changes L1/L2 influence in L3A by comparing third- to fourth-year secondary school students in the Netherlands who are enrolled in either an immersion or a traditional 'regular' secondary school programme. We look at verb placement where French differs from English or from Dutch, reporting data from a grammaticality judgement task.

### 1. Introduction

In this paper we investigate to what extent the amount of L2 English input affects the role of the L1 and the L2 as sources of transfer in the acquisition of a third, Romance language. The aim is to contribute to the L3 acquisition (henceforth L3A) debate by investigating the role of two Germanic languages (L1 Dutch and L2 English) in the acquisition of a Romance target language (L3 French) at a morphosyntactic level. L3A is a complex field of research because both the L1 and the L2 are possible sources of transfer into the L3 and there are various supplementary factors that can interfere in the transfer process, such as L2 metalinguistic knowledge (Thomas, 1988), L2 proficiency (Jaensch, 2009a, 2009b) and L2 exposure (Tremblay, 2006). There is an extensive literature on L3 modelling proposing that transfer primarily depends on (1) (perceived) typological resemblances (Kellerman, 1979; Rothman, 2010, 2015; Mykhaylyk et al. 2015), on (2) the special status of L2 (Hammarberg, 2001, 2009; Bohnacker; 2005, 2006; Bardel & Falk, 2007, 2012; Falk & Bardel, 2010; Rast, 2010) or on (3) the facilitating nature of transfer (Flynn et al., 2004). However,

since the studies on L3A show divergent results, more empirical research is needed to test these different models and interfering factors.

We focus in this paper on the influence of the L2 on L3A by further exploring the L2 status factor hypothesis according to which the L2 is the preferred source of transfer over the L1 in L3A (Hammarberg, 2001, 2009; Bardel & Falk, 2007, 2012; Falk & Bardel, 2010). We build on Stadt, Hulk & Sleeman (2016), who examined the L2 effect on L3 French by comparing L2 English immersion education to a Dutch ‘regular’ education, only finding support for the L2 status factor hypothesis in the immersion group, where students receive more L2 input. Since the L2 status factor hypothesis was partially confirmed by year 3 (henceforth Y3) students (13–15 years), viz. in the immersion group, we could state that L2 education and L2 exposure influence the role of the L2 as a background language.

Now, it is interesting to raise the question to what extent the role of the L2 is stable or develops through the years when the ‘regular’ students have also received more L2 input. Therefore, we collected data from 23 fourth-year (henceforth Y4) students (14–16 years), of whom 12 were enrolled in the immersion programme and of whom 11 were enrolled in the ‘regular’ programme, and we compare the results of the Y4 students to the results of the Y3 students from the earlier study.<sup>1</sup> We investigate verb placement in declarative root sentences by examining two grammatical structures where French differs from English or from Dutch. We concentrate (1) on declarative root sentences containing manner/frequency adverbs or a floating quantifier where the finite verb moves to T in French but not in English, such as in *Thomas mange souvent une pomme* (\*Thomas eats often an apple) and (2) on declarative root sentences where the finite verb does not move to C in French but does do so in Dutch, as in *\*Aujourd’hui mange Thomas une pomme* (Dutch: *Vandaag eet Thomas een appel*, ‘Today Thomas eats an apple’). This rule in Dutch (and other Germanic languages except for English) is often referred to as the V2-rule. We collected data using a grammaticality judgement task.

This paper is organized as follows. In Section 2 we present some theoretical background to our study. This is followed by our research questions and methodology, which are set out in Section 3. Our results are reported in Section 4 and discussed in Section 5. The paper ends with some concluding remarks in Section 6.

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1. We used the same structures and test as in the Y3 study, and we collected data at the same Dutch secondary school.

## 2. Background of this study

### 2.1 Studies on the L2 status at a morphosyntactic level

The L2 status factor hypothesis was firstly postulated at a morphosyntactic level by Bardel & Falk, who performed several studies that supported the claim that the L2 is more important than the L1 in L3 acquisition. In a study from 2007 on initial state L3 Swedish/L3 Dutch learners with different L2's (Dutch, German or English), Bardel & Falk found that in the acquisition of verbal negation, L3 learners prefer the L2 over the L1. In a second study amongst intermediate learners (Falk & Bardel, 2010) on object placement in L3 German (L1 French/L2 English or L1 English/L2 French) they also found evidence for the L2 status factor hypothesis. Other support on a morphosyntactic level came from a study conducted by Bohnacker (2005), who studied verb placement at initial state and intermediate levels. In a study on the acquisition of the V2-rule in main clauses, she found that German (+ V2) learners of L3 Swedish (+ V2) who learned English (non-V2) as an L2 had more difficulties acquiring the V2-rule than German learners of Swedish who did not speak English, suggesting that the knowledge of a non-V2 language as an L2 causes negative transfer, which makes it harder to learn this rule in the L3. Rast (2010) explored the influence of the L2 by testing French learners of L3 Polish with different L2s. She studied the placement of clausal negation with respect to the verb and found evidence for the L2 being an important background language: L3 Polish learners did not place the negation pre-verbally, as in Polish, but placed the negation in a variety of positions based on the placement in the L2s, indicating that the L2 plays a decisive role.

### 2.2 The role of L2 input in L3A

With respect to the influence of interacting L2 factors like L2 proficiency and, related to that, L2 input and L2 frequency of use, there is limited understanding on how they affect L3 learning since, according to De Angelis (2007), few experimental studies analyse these L2 factors as a central variable, and it is a complex subfield of study because there is a lot of individual variation in the L2 learners (to a much greater extent than in L1 acquisition). However, there has been some research on the influence of L2 proficiency and L2 input. Hammarberg (2009) states that L2 influence is favoured if the learner has a high level of competence in the L2 and if there is frequent input and output, which is the case if the acquisition of the L2 takes place in a natural learning environment. In a study on lexical transfer amongst L2 learners with a low to intermediate L2 proficiency, Tremblay (2006) found that L2



exposure has a positive effect on the learners' ability to overcome difficulties in L3 learning. She tested English students who learned French as an L2 and who were enrolled in their second or third year university level of L3 German. In this study, Tremblay distinguished between L2 exposure (based on information obtained using a questionnaire) and L2 proficiency (based on a French proficiency test). Jaensch (2009a, 2009b) found in several studies, for instance on the use of the article and on grammatical gender acquisition in L3 German (L1 Japanese and L2 English), that L2 proficiency has an effect on the selection of L2 features in the L3.

Since in a previous study conducted on third-year (Y3) students (Stadt et al., 2016) we found support for the L2 status factor hypothesis in the immersion programme only, here we further explore the L2 status factor hypothesis by investigating how more generally L2 input influences transfer from L2: does L2 input only further the role of the L2 when learned in a natural learning environment (in this case school immersion) or can the importance of L2 input also be related to the number of years of study, in a secondary school context, as in the regular programme?

### 3. This study

The present study focuses on negative transfer from L1 Dutch and L2 English in the acquisition of L3 French because we test intermediate French learners who have already received a considerable amount of input in French. Therefore, in the case of positive transfer, it would not be possible to distinguish between acquired knowledge of the L3 and transfer. In this section we present our research questions and the hypotheses (§ 3.1). In § 3.2, we describe the learning context, which involves the school system and the teaching method used for the school subjects English and French. In § 3.3 we present the tested constructions, followed by the testing procedure in § 3.4.

#### 3.1 Research questions and hypotheses

##### 3.1.1 *Research questions*

Comparing Y4 and Y3 students, is there a difference:

1. in the role of L2 versus L1?
2. in the role of an immersion school programme versus an L2 'regular' programme?

### 3.1.2 Hypotheses

With respect to the developmental status of the background languages, we expect that more L2 input makes the L2 a more important source of transfer (Tremblay, 2006; Hammarberg, 2009). This leads us to hypothesize that:

- a. we will again find support for the L2 status factor hypothesis in the Y4 immersion group.
- b. we will also find support for the L2 status factor hypothesis in the 'regular' group of Y4 because the students received more L2 input than the Y3 students.
- c. we will find more negative transfer from L2 English and less influence from L1 Dutch in the immersion Y4 group than in the immersion Y3 group.
- d. we will find more negative transfer from L2 English and less influence from L1 Dutch in the 'regular' Y4 group than in the 'regular' Y3 group.
- e. we will again find more negative transfer from L2 English and less influence from L1 Dutch in the Y4 immersion group than in the 'regular' group.

### 3.2 Learning context of the participants

We collected the Y3 and Y4 data at a partially bilingual Dutch secondary school in Laren, the 'Laar & Berg' school, where students can either opt for the MYP, an English immersion educational programme,<sup>2</sup> or the VWO, a regular Dutch school curriculum.<sup>3</sup> The VWO is the preparatory programme for University. The MYP is a four-year programme with a level comparable to the VWO. The immersion students receive at least 50% of their subjects in English.<sup>4</sup> Since a majority of the classes are taught in English, it is a form of content and language integrated L2 learning (CLIL): the students learn English mainly by using English.<sup>5</sup> English as a

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2. In the Netherlands, there are several bilingual school programmes. This particular school offers the four-year Middle Years Programme (MYP) of the International Baccalaureate <http://www.ibo.org/en/programmes/middle-years-programme/>

3. The Dutch secondary school system is divided into different tracks. For this study, we chose the highest level, the VWO (*Voorbereidend Wetenschappelijk Onderwijs*), since it is the one most comparable to the MYP. <http://www.ncee.org/programs-affiliates/center-on-international-education-benchmarking/top-performing-countries/netherlands-overview/netherlands-instructional-systems/>

4. All Y4 students start their closing programme in year 4, in which they start preparing themselves for the Dutch school exams in year 6. Therefore, the percentage in Y3 is 58%, and in Y4, it is around 48% depending on the set of courses selected.

5. <https://www.epnuffic.nl/en/publications/find-a-publication/at-home-in-the-world-a-view-on-bilingual-education-in-the-netherlands.pdf>

school subject in the immersion classes differs: in the first two years of the immersion programme, English is taught as a foreign language with a focus on implicit learning. In Y3 and Y4, the subject English is called ‘Language and Literature’ and is taught as an L1. Concerning the teaching method for L2 English in the ‘regular’ programme, the students receive three hours a week of English as a school subject.<sup>6</sup> The target language is English, and focus on form and explicit grammar explanation are important. The French curriculum is the same in both tracks. The acquisition of French is formal and mainly takes place in the school context. The students receive three hours a week of French, except for the second year students, who receive two hours a week. It must also be mentioned that English is ubiquitous in daily life in the Netherlands. Television and movies are subtitled rather than dubbed, and most of the music broadcast on the radio is in English. In this way Y4 students also have had more L2 input than their younger Y3 counterparts.

All participants are native speakers of Dutch learning English as an L2 and French as an L3. The Y4 students are between 14 and 16 years old, and the Y3 students are between 13 and 15 years old. We collected data from 16 Y3 and 12 Y4 students enrolled in the immersion programme and 11 Y3 and 11 Y4 students enrolled in the ‘regular’ programme. We asked the students to fill in a personal questionnaire about their language background. We excluded bilingual participants and participants who had lived abroad.

### 3.3 Finite verb movement in Dutch, English and French

In order to study the influence of L1 Dutch and L2 English on L3 French, we look at different grammatical structures where French differs from Dutch or English.<sup>7</sup> We concentrate on declarative root sentences containing manner/frequency adverbs or a floating quantifier where the finite verb moves to T in French and in Dutch (and in Dutch arguably even one step further, viz. to C., Den Besten 1983) and cases in which the V2-rule (V-to-C movement) applies in Dutch (but does not apply in French nor in English).

#### 3.3.1 *French differs from English: V-to-T movement*

In English declarative root clauses there is no V-to-T movement over the adverb. The clause structure of English differs in this respect from French, where the finite verb does move to T, leading to a post-verbal position of the adverb, in main clauses

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6. A ‘school year’ consists of 39 weeks (breaks, test weeks and school trips not included).

7. We used the same constructions in Y4 as in Stadt et al. (2016) for Y3.

as well as in subordinate clauses. In this study, we concentrate on finite verb movement to T in the case of manner/frequency adverbs and quantifiers.<sup>8</sup>

- (1) No V-to-T movement (in English)  
Manon sometimes goes to the zoo.
- (2) V-to-T movement (in French)  
*Manon va parfois au zoo. (and not \*Manon parfois va au zoo.)*  
\*Manon goes sometimes to the zoo.

### 3.3.2 *French differs from Dutch: V-to-C movement*

In Dutch declarative root clauses, the finite verb is always raised to C, the second position of the clause (Den Besten, 1983). The finite verb is placed immediately after a sentence-initial adverbial phrase and the subject is in postverbal position. For this study we used clauses starting with a temporal or locative adverbial noun phrase or adverb.

- (3) V-to-C movement (in Dutch)  
*Vandaag gaat Thomas naar Parijs.*  
\*Today goes Thomas to Paris.
- (4) No V-to-C movement (in French)  
*Aujourd'hui Thomas va à Paris. (and not \*Aujourd'hui va Thomas à Paris.)*  
'Today Thomas goes to Paris.'

### 3.3.3 *Predictions*

Taking into account the tested constructions and on the basis of the L2 status factor hypothesis, we make the following predictions with respect to the hypotheses formulated above:

- i. **Both** the Y4 immersion and the Y4 'regular' students will prefer L2 English over L1 Dutch as a background language in L3 acquisition. Therefore, there will be more negative transfer from English in the case of V-to-T movement – leading to the acceptance of clauses such as *\*Manon parfois va au zoo* and the rejection of grammatical clauses such as *Manon va parfois au zoo* – than negative transfer from Dutch in the case of V-to-C movement – leading to relatively more acceptance of grammatical clauses such as *Aujourd'hui Thomas va à Paris* and rejection of sentences such as *\*Aujourd'hui va Thomas à Paris*.

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8. Dutch and French share the same surface structure in this case: in both cases the verb moves from V to T. Nevertheless, in Dutch this is followed by movement from V to C (Den Besten, 1983).



In the tests there were 14 items for each of the constructions of which 7 were grammatical and 7 were ungrammatical. We used distractors to check whether the students had taken the test seriously. The distractors were simple constructions with a subject, a finite verb and a direct and/or indirect object that were known to the students, according to the curriculum.

We decided to use an offline GJT because the students' reaction time was not our main interest: instead, we did not want them to feel that they were under a lot of pressure. Nevertheless, we asked them not to hesitate too much and we emphasised that there were no 'wrong' answers. To make sure that the students were familiar with all the words in the test, we used vocabulary from the curriculum. We also handed out a vocabulary list beforehand for them to study and we provided the same vocabulary list during the test procedure. We checked the French curriculum to make sure that the students did not receive explicit instruction on the constructions being tested. We tested during school hours.

## 4. Results

In this section we give an overview of the results. In § 4.1 we first compare the results of Y4 with respect to V-to-T and V-to-C, which is followed by a comparison with the Y3 results reported in Stadt et al. (2016). In § 4.2, we compare the results of Y3 and Y4, giving an overview of the data *within* and *between* groups.

### 4.1 Comparing (no) V-to-T to V-to-C

In § 4.1.1 we present the results of Y4 with respect to V-to-T and V-to-C *within* the immersion and the 'regular' group. In § 4.1.2, we repeat the results of the Y3 students already reported in Stadt et al. (2016) to be able to make a clear comparison between Y3 and Y4 in § 4.2. In both § 4.1.1 and § 4.1.2, we present the results in tables and diagrams, comparing V-to-T (acceptance of incorrect sentences such as *\*Thomas souvent mange une pomme* or rejection of correct sentences such as *Thomas mange souvent une pomme*) to V-to-C (acceptance of incorrect sentences such as *\*Aujourd'hui va Thomas à Paris* or rejection of correct sentences such as *Aujourd'hui Thomas va à Paris.*)

#### 4.1.1 Comparing the V-to-T to the V-to-C movement construction: Y4

Table 1 and Figure 1 show that the Y4 immersion students misjudged the V-to-T items in 32.7% of the cases. They misjudged the V-to-C items in 11.3% of the cases. In the 'regular' Y4 group these percentages are 25.3% and 2.6% respectively.

To compare the means between V-to-T and V-to-C, we used the Nonparametric 2 Related Samples Test in both years because of the limited number of participants. Table 1 (Y4) and Table 2 (Y3) show the mean numbers of mistakes in the tested items for each group and the standard deviation (sd) for each set of items to indicate the variation from the mean. In both groups, the students had significantly more 'V-to-T wrong answers' than 'V-to-C wrong answers' (the probability of 'no difference' is in both cases  $p = 0.005$ ). The stars used in the diagrams indicate significant differences (\*\*\*) ( $p < 0.001$ ), \*\* ( $p < 0.01$ ), \* ( $p < 0.05$ ).

Table 1. Y4 wrong answers for V-to-T movement and V-to-C movement

| GJT Y4                                               | V-to-T misses                                   | V-to-C misses                                   | V-to-T vs. V-to-C |
|------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------|
| Immersion students<br>(N = 12):<br>N. of items = 168 | 55/168 (32.7%)<br>mean = 4.5833<br>sd = 1.83196 | 19/168 (11.3%)<br>mean = 1.5833<br>sd = 1.97523 | $p = 0.005$       |
| Regular students<br>(N = 11):<br>N. of items = 154   | 39/154 (25.3%)<br>mean = 3.5455<br>sd = 1.91644 | 4/154 (2.6%)<br>mean = 0.3636<br>sd = 0.50452   | $p = 0.005$       |

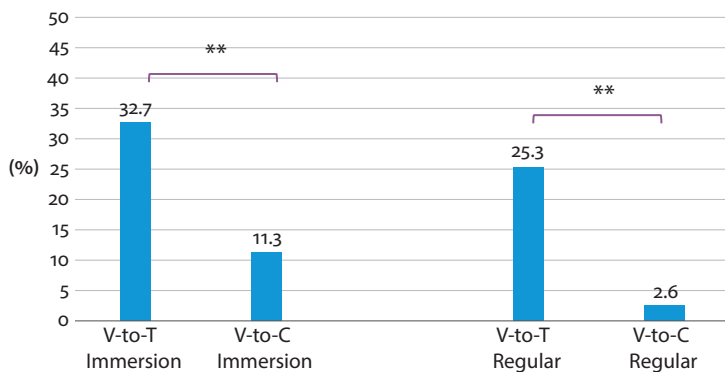


Figure 1. Comparing V-to-T to V-to-C: Y4

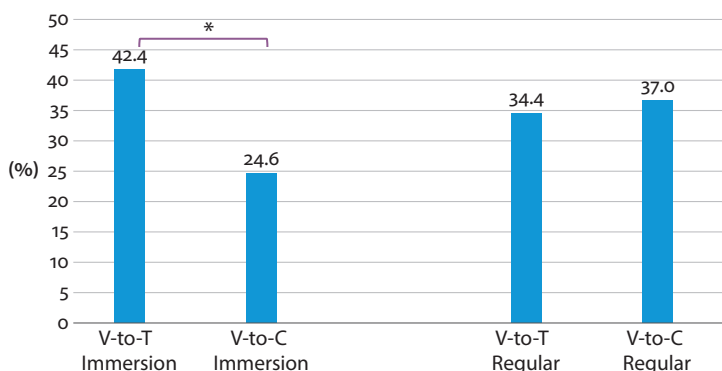
#### 4.1.2 Comparing the V-to-T to the V-to-C movement construction: Y3

In this section we present the Y3 results. The immersion Y3 students misjudged the V-to-T items (acceptance of sentences such as *\*Thomas souvent mange une pomme* or rejection of correct sentences such as *Thomas mange souvent une pomme*) in 42.2% of the cases, whereas the 'regular' Y3 students misjudged the V-to-T items in 34.4% of the cases. Concerning the V-to-C items (acceptance of sentences such as *\*Aujourd'hui va Thomas à Paris* or rejecting correct sentences such as *Aujourd'hui Thomas va à Paris*), these percentages are 24.6% and 37% respectively. The

immersion Y3 group made significantly more mistakes in V-to-T than in V-to-C ( $p = 0.012$ ). However, there is no significant difference in the ‘regular’ Y3 group.<sup>10</sup>

**Table 2.** Y3 wrong answers for V-to-T movement and V-to-C movement

| GJT Y3                                               | V-to-T misses                                   | V-to-C misses                                   | V-to-T vs. V-to-C |
|------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------|
| Immersion students<br>(N = 16):<br>N. of items = 224 | 95/224 (42.4%)<br>mean = 5.9375<br>sd = 2.23514 | 55/224 (24.6%)<br>mean = 3.4375<br>sd = 1.78769 | $p = 0.012$       |
| Regular students<br>(N = 11):<br>N. of items = 154   | 53/154 (34.4%)<br>mean = 4.8182<br>sd = 2.82199 | 65/154 (37%)<br>mean = 5.1818<br>sd = 2.22792   | $p = 0.720$       |



**Figure 2.** Comparing V-to-T to V-to-C: Y3

#### 4.2 Comparing third to fourth year students and immersion to ‘regular’ students

In this section, we show the same results as presented in the section above. However, we compare groups and not constructions to be able to learn more about the role of L2 input. We again concentrate on the V-to-T construction (acceptance of incorrect sentences such as *\*Thomas souvent mange une pomme* or rejection of sentences such as *Thomas mange souvent une pomme*) and on the V-to-C construction (acceptance of incorrect sentences such as *\*Aujourd’hui va Thomas à Paris* or rejection

10. The ‘yes bias’ is minimal in both Y3 and Y4. To calculate the percentage of ‘yes’ answers, we counted the total number of yesses out of all items (the distractors included). In Y3 the percentages were 57.6% in the immersion, and 54.1% in the regular group, while in Y4 the percentages were 50% and 43.1% respectively.

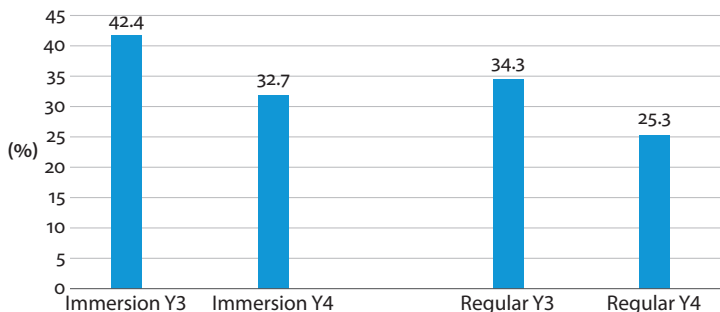


of correct sentences such as *Aujourd'hui Thomas va à Paris*). Since not all variables were normally distributed and the number of participants is limited, we used the Nonparametric Mann-Whitney U Test to establish whether the findings were significant.

Below we present the results of *V-to-T movement* in Table 3 and Figure 3, and the results of *V-to-C movement* in Table 4 and Figure 4.

**Table 3.** Comparing Y3 to Y4: Wrong answers for V-to-T

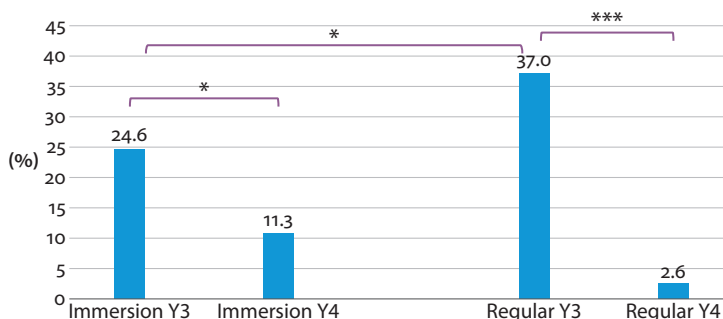
| V-to-T                                     | Y3                                              | Y4                                              | Y3 vs. Y4   |
|--------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------|
| Immersion students                         | 95/224 (42.4%)<br>mean = 5.9375<br>sd = 2.23514 | 55/168 (32.7%)<br>mean = 4.5833<br>sd = 1.83196 | $p = 0.099$ |
| Regular students                           | 53/154 (34.4%)<br>mean = 4.8182<br>sd = 2.82199 | 39/154 (25.3%)<br>mean = 3.5455<br>sd = 1.91644 | $p = 0.272$ |
| Immersion students<br>vs. regular students | $p = 0.222$                                     | $p = 0.168$                                     |             |



**Figure 3.** Wrong answers for V-to-T, immersion vs. 'regular' and Y3 vs. Y4

**Table 4.** Comparing Y3 to Y4: Wrong answers for V-to-C

| V-to-C                                     | Y3                                              | Y4                                              | Y3 vs. Y4   |
|--------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------|
| Immersion students                         | 55/224 (24.6%)<br>mean = 3.4375<br>sd = 1.78769 | 19/168 (11.3%)<br>mean = 1.6667<br>sd = 2.10339 | $p = 0.027$ |
| Regular students                           | 65/154 (37%)<br>mean = 5.1818<br>sd = 2.22792   | 4/154 (2.6%)<br>mean = .4545<br>sd = 0.68755    | $p < 0.001$ |
| Immersion students<br>vs. regular students | $p = 0.033$                                     | $p = 0.129$                                     |             |



**Figure 4.** Wrong answers for V-to-C, immersion vs. 'regular' and Y3 vs. Y4

#### 4.2.1 Comparing Y3 to Y4

Concerning the V-to-T construction, Table 3 and Figure 3 show that the Y3 immersion students misjudged the V-to-T items in 42.2% of the cases, whereas the Y4 immersion students did so in 32.7% of the cases. In the 'regular' group, these percentages are 34.4% and 25.3% respectively. In both cases the differences are not significant. With respect to the V-to-C movement construction (Table 4 and Figure 4), we see that in the immersion group, the Y3 students misjudged 24.6% of the items, and the Y4 students misjudged 11.3% of the items. This difference is significant ( $p = 0.027$ ). The 'regular' Y3 students misjudged the V-to-C items in 37% of the cases and the 'regular' Y4 students in 2.6% of the cases. This difference is also significant ( $p < 0.001$ ).

#### 4.2.2 Comparing immersion vs. 'regular'

Comparing the two educational systems in both years, we see in Table 3 and Figure 3 that both the Y3 and the Y4 immersion students misjudged the V-to-T items more often than the 'regular' students, viz. 42.4% vs. 34.4% of the items for Y3 and 32.7% vs. 25.3% of the items for Y4, respectively. However, these differences are in both years not significant: in Y3,  $p = 0.222$  and in Y4,  $p = 0.168$ .

In the V-to-C construction (Table 4 and Figure 4), the Y4 immersion students made mistakes in 11.3% of the cases and the 'regular' students made mistakes in 2.6% of the cases. However, this difference is not significant ( $p = 0.129$ ). In Y3 it is the reverse: the 'regular' Y3 students made mistakes in 37% of the cases, whereas the immersion Y3 students made mistakes in 24.6% of the cases. This difference is significant ( $p = 0.033$ ).

### 4.3 Summary of the results

Here we present a summary of the results.

Comparing (no) V-to-T to V-to-C:

- Both the Y4 immersion and the Y4 ‘regular’ students misjudged the V-to-T items significantly more often than the V-to-C items, viz. they accepted clauses like *\*Manon parfois va au zoo* and rejected grammatical clauses like *Manon va parfois au zoo* more often than that they accepted *\*Aujourd’hui va Thomas à Paris* or rejected clauses like *Aujourd’hui Thomas va à Paris*.
- The Y3 immersion students misjudged the V-to-T items significantly more often than the V-to-C items. However, the Y3 ‘regular’ students misjudged the V-to-C items slightly more often than the V-to-T items.

Comparing Y4 to Y3:

- The Y3 students misjudged the V-to-T movement items more often than the Y4 students. This holds for both the immersion and the ‘regular’ students. However, this difference is not significant. Y4 misjudged the V-to-C items significantly less often than the Y3 students. This also holds for both the immersion and the regular students.

Comparing immersion to ‘regular’ students:

- Both in Y4 and in Y3, the immersion students misjudged V-to-T more often than the ‘regular’ students, but the difference is not significant.
- In Y3, the immersion students misjudged V-to-C significantly less often than the ‘regular’ students. However, the Y4 immersion students misjudged V-to-C more often than the ‘regular’ students, but the difference is not significant.

## 5. Discussion

In the present study, we concentrate on the role of L2 English in L3 French acquisition and especially on the effect of L2 input on L3A. Therefore, we tested the L2 status factor hypothesis amongst fourth-year secondary school students who were enrolled in either an L2 English immersion programme or a more traditional ‘regular’ L2 education and we compared these results to the findings of third year students following the same educational programme reported in Stadt et al. (2016). To test the L2 status factor hypothesis, we compared V-to-T movement (possible influence from English) to V-to-C movement (possible influence from Dutch), expecting more negative transfer from English to French in the case of (no) V-to-T movement and less transfer from Dutch to French in the case of V-to-C movement.

In this study we examined the effect of L2 input in L3 French acquisition by comparing third-year to fourth-year secondary school students (RQ1).

We predicted that:

- i. *both* the Y4 immersion and the Y4 ‘regular’ students would prefer L2 English over L1 Dutch as a background language in L3 acquisition.

We found support for the L2 status factor hypothesis in both Y4 groups: the results indicate that both the immersion *and* the ‘regular’ students made significantly more mistakes due to transfer from English than due to transfer from Dutch.

To examine the effect of L2 input, we compared Y3 (Stadt et al., 2016) to Y4, predicting that:

- ii. Y4 ‘regular’ students would show more negative transfer from L2 English and less influence from L1 Dutch than the Y3 ‘regular’ students.
- iii. Y4 immersion students would show more negative transfer from English and less influence from L1 Dutch than the Y3 immersion students.

Although our results showed that L2 English is an important source of transfer in Y4, the influence of L2 English in Y4 diminishes compared to Y3 in both tracks. However, the decrease is not significant. When we compare Y4 to Y3 with respect to the influence of L1 Dutch, we see that it decreases significantly in both groups, as expected. Although the role of English diminishes in Y4, the L2 status factor hypothesis is nevertheless supported. This is because the influence of Dutch diminishes significantly in Y4 as compared to Y3. The decreasing influence of both V-to-T and V-to-C in Y4 could be due to an increased L3 French proficiency in Y4, resulting in a more target-like behaviour.

RQ2 addressed the developmental differences with respect to the role of background languages when comparing L2 immersion to ‘regular’ education in both Y3 and Y4. We predicted that:

- iv. *Immersion* students (of both Y3 and Y4) would show more negative transfer from English in the case of V-to-T movement and less negative transfer from Dutch in the case of V-to-C movement than ‘*regular*’ students.

As predicted, both the Y3 and the Y4 immersion students were found to be more negatively influenced by the English word order than the ‘regular’ students, although the differences are not significant. Concerning the influence of L1 Dutch, the results show that the Y4 immersion students are more influenced by Dutch than the ‘regular’ students, which was not predicted. The Y4 ‘regular’ students make hardly any mistakes based on transfer from Dutch, which means that they seem to have overcome the V2-rule in their L3. However, the Y3 ‘regular’ students are significantly more influenced by Dutch word order than the Y3 immersion

students, as predicted. According to the L2 status factor hypothesis, the L1, being a non-foreign language, is suppressed by the L2. In our data, this is especially the case in the immersion group of Y3.

The strong role of L1 Dutch in the 'regular' Y3 group is no longer present in the 'regular' Y4 group. Whereas the Y3 'regular' students still lean a lot on their L1 Dutch, the Y4 'regular' students barely make any mistakes based on transfer from Dutch, which means that they seem to have overcome the V2-rule in their L3. In a study on the second language acquisition of L2 French by L1 Dutch secondary school students, Hulk (1991) also found that the acceptance of V2 decreases dramatically in the three first years of secondary school.

Interestingly, the influence of both English and Dutch decreases more in the 'regular' programme than in the immersion programme. This might be due to the fact that the 'regular' students have more metalinguistic knowledge, because English is taught in a formal way (Thomas, 1988), and that this leads to a more target-like production in French.

Overall, our results suggest that the L2 status factor hypothesis is supported in both year 3 and year 4, apart from the 'regular' Y3 group. The negative influence of L2 is developmentally stable in the immersion group, which has already received a considerable amount of input in year 3. The increased amount of input may account for the fact that the L2 status factor hypothesis is also supported in the year 4 'regular' group, whereas it was not supported in the year 3 'regular' group, where the L1 still plays an important role. Whereas in Y4 the influence of L2 diminishes, it is still important. The role of L1 decreases dramatically, which accounts for the fact that the L2 status factor hypothesis is also supported in the 'regular' programme.

## 6. Conclusion

In this study, we tested the L2 status factor hypothesis (Bardel & Falk, 2007, 2012) according to which the L2 is the preferred background language in L3 acquisition, and we investigated the influence of L2 English exposure on L3 French learning. Therefore, we compared the results of Y3 students to the results of Y4 students in their use of L1 Dutch and L2 English in L3 French, making a distinction between L2 'regular' and L2 immersion education, the latter programme offering more L2 input. We found that in both programmes, the Y4 students use the L2 significantly more than the L1 in their acquisition of L3 French, supporting the L2 status factor hypothesis. Comparing these results to the Y3 study, where we only found support for the L2 status factor hypothesis in the immersion group, we argue that the amount of L2 input affects the role of the L2 as a background language in L3A in two ways: through immersion (Hammarberg, 2009) or through developmental progress

over the years (Tremblay, 2006). Interestingly, it is mainly the role of the L1 that changes. In all four groups the influence of English is considerable – although we see a decline in Y4, where the students show an overall more target-like production in French – but the negative influence of L1 Dutch, being a non-foreign language, is significantly less dominant in the Y3 immersion programme compared to the Y3 ‘regular’ programme, and the negative influence of Dutch diminishes significantly in both Y4 groups with respect to Y3. Overall, the Y4-students show a more target-like production with respect to both the V-to-T movement and the V-to-C movement construction. The more target-like production of both Y4-groups may be due to a higher L3 proficiency. Especially in the Y4 ‘regular’ group, where students have more metalinguistic knowledge, the students have overcome acceptance of the V2-rule in French.

In this study, we have shown that more L2 input – by immersion education or by an increased developmental L2 exposure – furthers the influence of the L2 with respect to the role of the L1 in L3 acquisition. It would be interesting to know if the influence of the L2 stays stable with even more exposure to the L2 over time. We leave that question for future research.

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# European Portuguese focalizing SER ‘to be’

## A verbal focus marker

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### 1. Introduction

The aim of this paper is to argue that the copular verb *ser* ‘to be’ found in the focalizing SER-construction (FSC) is a focus marker. Additionally, it is argued that discourse markers such as SER may project, with consequences for their distribution in the clause (see Cable 2010 for arguments concerning Q-particles). SER in the FSC marks the left edge of a focalized constituent in clause-final position. An example is given below: the focalized direct object *o bolo* ‘the cake’ is marked by *foi* ‘was’. The focalized constituent can constitute both a new information and a contrastive focus.

- (1) *Comi foi o bolo*  
eat.1S.PRF be.3SG.PRF the cake  
‘I ate (SER) the cake.’

Focalizing SER is not unique to European Portuguese, it exists in Brazilian Portuguese (Resenes & den Dikken 2012 among others) and in Caribbean varieties of Spanish (Bosque 1999, Camacho 2006, Méndez-Vallejo 2009, 2012 among others). The proposed account can be extended to these linguistic varieties.

Even though SER in the FSC exhibits tense/aspect inflection and (limited) phi-feature agreement, it cannot be considered to be a real copular verb, since it lacks semantic and several syntactic verbal properties. SER is rather a morphological focus marker, despite being of the verbal category, a property which permits it to carry verbal morphology. From a syntactic point of view, it is argued that SER merges with the focalized constituent and projects. The fact that SER embeds the focalized constituent into a verbal category has consequences for selection.

The paper is organized as follows: first, I argue that SER is a morphological focus marker. Then I propose that SER can project and discuss the consequences for selection. Section 4 illustrates how the proposed characterization of SER correctly



captures its distribution in the clause and Section 5 briefly discusses the details concerning agreement on SER.

## 2. SER is a verbal focus marker

At first sight, SER seems to be a copular verb, since it exhibits tense and aspect inflection and it can exhibit (limited) phi-feature agreement. Several authors have effectively analysed SER as a copular verb (see Toribio 2002; Costa & Duarte 2005 among others). More specifically, they argue that the FSC is a reduced pseudocleft, in which the *wh*-operator introducing the cleft relative is not pronounced (2):

- (2) *O Pedro quer é um livro.*  
 the Pedro wants is a book  
 ‘Pedro wants (SER) a book.’  
 [Op<sub>wh</sub> o Pedro quer t<sub>wh</sub>] é um livro.

There are several indications that analyses along these lines are on the wrong track, since SER in the FSC differs from regular copular verbs in a number of respects. In particular, SER lacks verbal semantics such as an event structure and it does not head the main VP. Rather, FSCs are monoclausal sentences in which what looks like a copular verb consistently marks a focalized constituent, indicating that SER essentially is a morphological focus marker. In the remainder of this section, I discuss the properties of SER that indicate that it is a focus marker, but with some formal verbal properties.

First of all, SER can only exhibit phi-feature agreement in case it marks a subject, while regular copular verbs can agree with all DP constituents. Compare (3a) with (3c): in (a), SER marks the direct object of the verb, which is the plural *livros* ‘books’. Also the subject and the main verb *compraram* ‘bought’ are plural. Nevertheless, SER has to appear in the 3SG, indicating that it cannot agree with any element in the clause. In (b) on the other hand, SER marks the pronominal subject *tu* ‘you’, and appears in the second person singular, indicating agreement with the focalized subject.

- (3) a. *Os superheróis compraram foi/\*foram livros*  
 the superheroes buy.PERF.3PL was.PERF.3SG/\*3PL books  
 ‘The superheroes bought (SER) books.’  
 b. *Gravas és tu!*  
 record.2s BE.3SG you  
 ‘(SER) you make the recording!’

- c. *O que o Batman comprou foram livros.*  
 what the Batman buy.PERF.3SG was.PERF.3PL books  
 'What Batman bought are books.'

Second, the tense and aspect of SER has to match that of the finite main verb (4a), and the semantic contribution of any tense/aspect (TA henceforth) morphology on SER is null: temporal interpretation of the sentence comes solely from the main verb. For instance, example (4a) has a past imperfect interpretation, coming from the verb *queria*. In the absence of the copula *era*, the sentence has the exact same temporal/aspectual interpretation. Real copular verbs, such as the ones in predicational sentences for instance, are capable of independently expressing tense and aspect (4b).<sup>1</sup>

- (4) a. *O macaco queria era/\*é uma banana.*  
 The monkey want.3SG.IMPERF be.3SG.IMPERF/\*PRES a banana  
 'The monkey wanted (SER) a banana.'
- b. *O Batman era rico.*  
 The Batman be.3SG.IMPERF rich  
 'Batman was rich.'

Furthermore, the copula can itself not be negated (5a), modified by adverbs (5b) or aspectual or modal auxiliaries (5c).<sup>2</sup> The copula found in pseudoclefts (6) does not have these restrictions:

- (5) a. *\*O Batman organizou não foi a festa.*  
 The Batman organized not was the party
- b. *\*O Batman organizou foi definitivamente a festa.*  
 The Batman organized was definitely the party
- c. *\*O Batman organizou pode ter sido a festa.*  
 The Batman organized could have been the party
- (6) a. *O que o Batman organizou não foi a festa.*  
 What the Batman organized not was the party  
 'What Batman organized wasn't the party.'

1. The copular verb in pseudoclefts and *it*-clefts has to match the tense and aspect of the verb in the cleft relative in standard European Portuguese.

2. There is speaker variation concerning negation of SER: an anonymous reviewer accepts example (5a). The focalized constituent itself can be negated, resulting in the order SER-*não*-XP:

- (i) *Lamento é não ter feito isso.*  
 regret.1SG SER not have done that  
 'I regret SER not having done that.'

- b. *O que o Batman organizou foi definitivamente a festa.*  
 What the Batman organized was definitely the party  
 ‘What Batman organized definitely was the party.’
- c. *O que o Batman organizou pode ter sido a festa.*  
 What the Batman organized could have been the party  
 ‘What Batman organized could have been the party.’

The assumption that SER lacks semantic content straightforwardly accounts for the restrictions on modifying or negating SER: it cannot be modified by negation, since negation selects propositions, nor by adverbs or aspectual/modal auxiliaries, because these select for events.

Unlike real copular verbs, SER is not an independent verb that heads the main VP. For instance, unlike the copula in pseudoclefts, SER in the FSC is invisible for raising (7) and for clitic climbing (8).

- (7) a. *O Batman parece é estar doente.*  
 The Batman seems be.3SG to be sick  
 ‘Batman seems (SER) to be sick.’
- b. \**O que o Batman parece é estar doente.*  
 What the Batman seems be.3SG to be sick
- (8) a. *Querem-se é casar.*  
 Want.3PL-SE be.3s marry  
 ‘They want (SER) to get married.’
- b. *?O que se querem é casar.*  
 What SE want.3PL be.3SG marry

Based on the observation that SER in the FSC does not pattern with regular copular verbs, several authors have argued that FSCs are monoclausal sentences (see for instance Bosque 1999, Méndez-Vallejo 2012, Camacho 2006 and Zubizarreta 2014). This is confirmed by scope effects. When a focalizing adverb occurs in a preverbal position in monoclausal sentences, there are two possible readings: in the first reading, the adverb scopes over the verb, in the second reading, the adverb scopes over the object. The same two readings are possible in the FSC, while in pseudoclefts, a preverbal adverb in the cleft relative can only scope over the verb of the cleft relative, not over the object cleft constituent.

- (9) a. *Só li este livro.*  
 Only read.1SG.PERF this book  
 ‘I only read this book.’  
 I only *read* this book or I read only *this book*.

- b. *Só li foi este livro.*  
 Only read.1SG.PERF be.3SG.PERF this book  
 'I only read (SER) this book.'  
 I only *read* this book or I read only *this book*.
- c. *O que só li foi este livro.*  
 What only read.1SG.PERF be.3SG.PERF this book  
 'What I only read was this book.'  
 I only *read* this book.

The fact that the FSC is a monoclausal structure puts it together with focus constructions with morphological focus markers. Another indication that SER is a focus marker, and not a real copular verb, is the fact that it can occur in a wide variety of positions, as long as it marks a focalized constituent. SER can mark arguments of the verb (10a) and VP-adverbials (10b), predicates (10c) or vP- and TP-shells (10d–g), and even DP- and AP-internal constituents ((10h) and (10i) respectively).

- (10) a. *O macaco quer é a banana.*  
 The monkey wants SER the banana  
 'The monkey wants (SER) a banana.'
- b. *O macaco cortou a banana foi com uma faca.*  
 The monkey cut the banana SER with a knife  
 'The monkey cut the banana (SER) with a knife.'
- c. *O macaco está é cansado.*  
 The monkey is SER tired  
 'The monkey is (SER) tired.'
- d. *Pus foi o livro na prateleira.*  
 put SER the book on.the shelve  
 'I put (SER) the book on the shelve.'
- e. *Pode é ter estado durante oito meses com alguns dias com falhas de água.*  
 Can SER have been during eight months with some days  
*com falhas de água.*  
 with problems of water  
 'During eight months, he could (SER) have had a few days with water problems.'
- f. *Não me parece que seja muscular, deve ter é ficado com uma concussão do caraças devido à pancada que levou.*  
 Not me seem that is muscular must have SER stayed with a  
*concussão do caraças devido à pancada que levou.*  
 concussion of.the shit due to.the blow that received  
 'It doesn't seem to me to be muscular, he must have (SER) gotten a huge concussion due to the blow that he received.'

- g. *Eles estão e têm estado é a servir-se do povo, para*  
 They are and have been SER to serve-SE of.the people for  
*se governarem.*  
 SE maintain  
 ‘They are and have been (SER) serving themselves of the people to maintain themselves.’
- h. *Vi uma casa foi de terra.*  
 Saw.1s a house SER of earth  
 ‘I saw a house (SER) of earth.’
- i. *Estou cansada é de esperar.*  
 Am tired SER of waiting  
 ‘I am tired (SER) of waiting.’

Additionally, copular verbs that are used as focus markers are attested in a number of other, unrelated languages. This is the case for instance of Chinese *shi* (Xu 2003) or Jamaican Creole *a* (Durrleman-Tame 2008) for instance.

- (11) *Wo shi mingtian cheng huoche qu Guangzhou.*  
 I SHI tomorrow ride train go Guangzhou  
 ‘I will go to Guangzhou by train (shi) TOMORROW.’ (Xu 2003:4)
- (12) *A di bami Piita nyam (... nutn muor)*  
 A the bammy Peter eat nothing more  
 ‘What Peter ate was (a) the bammy (... nothing else).’  
 (Durrleman-Tame 2008:74)

Focus markers also often historically derive from copular verbs (see Heine & Reh 1984 for a discussion of several African languages). The claim that SER is a semantically vacuous morphological focus marker thus seems to be on the right track (also see Mioto 2012 or Curnow & Travis 2003). Nevertheless, SER does retain verbal properties, namely the capacity of carrying semantically empty verbal morphology. I will take this to indicate that SER is of the verbal category. This property will reveal to be crucial for its distribution in the clause.

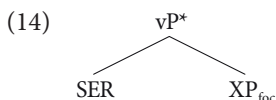
### 3. Projection and selection

In the previous section I argued that SER is a focus marker that can occupy a wide variety of positions in the clause. The wide variety of positions that SER can occupy indicates that it does not occupy a FocP with a fixed position in the clausal spine (*contra* Bosque 1999 and Méndez-Vallejo 2009, 2012), unlike focus markers in some

other languages (Abels & Muriungi, 2008; Aboh 2010 among others).<sup>3</sup> In order to account for the flexible distribution of SER, Mioto (2012) and Curnow & Travis (2003) suggest that SER is adjoined to or occupies the specifier of the focalized constituent it marks. The weakness of these analyses, mentioned by Mioto (2012), is that it is not clear how one can restrict the positions where SER can surface. For instance, SER cannot occur between a determiner and its NP complement:

- (13) \*Quero uma é banana.  
 Want.1s a SER banana

However, if we assume that discourse markers, such as SER, can project (see Cable 2010 for several arguments concerning Q-particles), SER's distribution can straightforwardly be accounted for. More concretely, I propose that SER merges with the focalized constituent and projects a verbal projection  $vP^*$ , as in (14).<sup>4</sup>



This  $vP^*$  will subsequently be merged in the regular position of the focalized constituent. For instance, if the focalized constituent is the direct object of the verb, it will be merged in the VP-complement position. The fact that it is SER that projects, and thus that the focalized constituent is embedded in a verbal constituent, has consequences for selection, since SER changes the category of the focalized constituent. The semantics of the focalized constituent remain unaltered since SER itself is semantically vacuous. Consequently, we expect SER to intervene in c(ategory)-selection contexts but not in s(emantic)-selection contexts. C-selection is traditionally assumed to be the type of selection that functional heads effectuate.

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3. It could of course be the case that there is a FocP not only in the left periphery of the clause and somewhere in the  $vP$  left periphery, but also inside of APs and DPs, all of which can be lexicalized by SER. However, an analysis along these lines requires the stipulation of a lot of additional movement operations in order to arrive upon the correct word order. For instance, SER can surface in all positions in the TP-field, while arguably there is only one FocP in this area of the clause.

- (i) *Ele pode (é) ter (é) estado (é) doente.*  
 he may (SER) have (SER) been (SER) sick

A FocP analysis will thus not be pursued here. I refer the reader to Vercauteren (2016) for a detailed discussion.

4. The \* is a purely notational device to distinguish the  $vP$  projected by SER from the regular clausal  $vP$ .

However, based on the observation that some functional heads, such as aspectual heads, are sensitive to the semantics of their complement, several authors have argued that c-selection should be eliminated from the theory, and that all types of selection are essentially semantic selection (see for instance Pesetsky 1982). It nevertheless does seem reasonable to assume that functional heads are sensitive to the syntactic category of their complement: D's cannot select anything but NPs and P's cannot select anything but DPs for instance. I will thus maintain that functional heads select for categories, even though they may be sensitive to semantics as well. We thus expect the presence of SER to be relevant in cases of selection by functional heads, in the sense that functional heads that do not select for verbal constituents, such as P, cannot select the  $vP^*$ . SER being a semantically vacuous focus marker, the  $vP^*$  consisting of SER and the focalized constituent has the same semantic properties as the focalized constituent alone. Hence, if a functional head can select for a verbal category, and semantically selects for the focalized constituent, it can select for the  $vP^*$ . SER's lack of semantics also makes it invisible in contexts of pure s-selection. Lexical heads are assumed to select for semantic type and do not seem to be sensitive to the category of their arguments (see for instance Pesetsky 1982 for selection by verbs). Hence, lexical heads are predicted to be able to select for the  $vP^*$ .<sup>5</sup>

In the remainder of the paper, I discuss and illustrate the implications of the proposed characterization for SER. I first turn to the consequences of the proposal for the distribution of SER in the clause, illustrating that there effectively is a difference between lexical and functional heads when it comes to selecting  $vP^*$ , as predicted by the proposal. Then I briefly discuss the details concerning agreement on SER.

#### 4. Distribution of SER in the clause

In this section I discuss how the characterization of SER put forward in Section 3 accounts for the distribution of SER in the clause. The fact that the copula takes the focalized constituent as a complement and projects a  $vP^*$  has consequences for selection, in the sense that the  $vP^*$  can only be selected by functional heads that

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5. One potential issue for the proposal are cases of lexical selection, i.e., cases of lexical heads that select for specific words, such as *to depend on*, *to object to*. These cases do not seem to be reducible to semantic selection plus case assignment. Nevertheless, SER is invisible in these contexts:

- (i) *Depende é de ti.*  
depends SER of you

select for verbs and by lexical heads. These predictions are borne out. First of all, the copula can surface to the left of complements of verbs (15a), nouns (15b) and adjectives (15c), all lexical heads.

- (15) a. *Não temos* [<sub>VP</sub> [<sub>vP\*</sub> *é* [<sub>DP</sub> *solução nenhuma*]]].  
Not have [<sub>VP</sub> [<sub>vP\*</sub> SER [<sub>DP</sub> solution none]]].  
'We don't have (SER) any solution.'
- b. *Vi a* [<sub>NP</sub> *destruição* [<sub>vP\*</sub> *foi* [<sub>PP</sub> *da cidade*]]].  
Saw the [<sub>NP</sub> destruction [<sub>vP\*</sub> SER [<sub>PP</sub> of.the city]]].  
'I saw the destruction (SER) of the city.'
- c. *Estou* [<sub>AP</sub> *contente* [<sub>vP\*</sub> *é* [<sub>PP</sub> *com o desfecho*]]].  
Am [<sub>AP</sub> happy [<sub>vP\*</sub> SER [<sub>PP</sub> with the outcome]]].  
'I am happy (SER) with the outcome.'

Second, the vP\* can surface as the complement of T° (16a) and Asp° (16b), functional heads that can select verbal constituents, but it cannot surface as the complement of D's (17a) or P's (17b), functional heads that do not select verbs.<sup>6</sup>

- (16) a. [<sub>TP</sub> *Está* [<sub>vP\*</sub> *é* [<sub>AspP</sub> *prejudicando*]]].  
[<sub>TP</sub> is [<sub>vP\*</sub> SER [<sub>AspP</sub> harming]]]  
'He is (SER) doing harm.'
- b. [<sub>TP</sub> *Deve* [<sub>AspP</sub> *ter* [<sub>vP\*</sub> *é* [<sub>AspP</sub> *ficado com uma concussão*]]]].  
[<sub>TP</sub> should [<sub>AspP</sub> have [<sub>vP\*</sub> SER [<sub>AspP</sub> stayed with a concussion]]]]]  
'He must have (SER) gotten a huge concussion.'
- (17) a. \**O João queria* [<sub>DP</sub> *um* [<sub>vP\*</sub> *era* [<sub>NP</sub> *bolo*]].  
The João wanted [<sub>DP</sub> a [<sub>vP\*</sub> SER [<sub>NP</sub> cake]].
- b. \**O João está* [<sub>PP</sub> *em* [<sub>vP\*</sub> *é* [<sub>NP</sub> *sarilhos*]].  
The João is [<sub>PP</sub> in [<sub>vP\*</sub> SER [<sub>NP</sub> trouble]].

The data illustrate that SER may mark arguments of lexical heads and complements of functional heads that select for verbs, in line with the proposal in Section 3. Predicates and adjuncts need some more discussion since it is not obvious what kind of functional head they are selected by, if any. However, the restrictions on

6. Note that data such as the following might indicate that D's can take verbal constituents as their complement. However, SER is inflected for tense and D can only combine with non-finite verbs.

- (i) *O estares cansado não me suprrende.*  
the be tired not me surprises  
'Your being tired does not surprise me.'

The proposal also predicts that the vP\* cannot be selected by C, which is borne out, but independently ruled out by reasons of agreement (see Section 5).



SER-marking of adjuncts and predicates provide additional evidence for the proposed analysis, although the validity of the argumentation below depends a great deal on one's assumptions concerning the syntax of predicates and adjuncts.

Following Bowers (1993) and Svenonius (1996, 2008), I will consider a predicate to be any constituent that predicates of a subject. Predicates can be of several syntactic categories, namely DPs, APs, PPs and VPs. Predicates can surface in a number of syntactic structures, all of which allow for the predicate to be marked by SER. The sentence in (18a) illustrates a copular sentence, the example in (18b) a raising structure, (18c) a control context, (18d) an ECM context, (18e) a restructuring context, (18f) a secondary predicate predicating over the direct object of the higher verb and (18g) a secondary predicate predicating over the subject of the higher verb.<sup>7</sup>

- (18) a. *A minha mente<sub>i</sub> está* [<sub>VP\*</sub> *é* [<sub>AP</sub> *já fraquita<sub>i</sub>*]].  
The my mind is [<sub>VP\*</sub> SER [<sub>AP</sub> already weak<sub>i</sub>]].  
'My mind is (SER) weak already.'
- b. *O macaco<sub>i</sub> parece estar* [<sub>VP\*</sub> *é* [<sub>AP</sub> *preocupado<sub>i</sub>*]].  
The monkey<sub>i</sub> seems be [<sub>VP\*</sub> SER [<sub>AP</sub> worried<sub>i</sub> ]]  
'The monkey seems to be (SER) worried.'
- c. *Queremos* [<sub>VP\*</sub> *é* [<sub>VP</sub> *ver-te*]]  
Want [<sub>VP\*</sub> SER [<sub>VP</sub> see-you]]  
'We want (SER) to see you.'
- d. *A Maria viu-os<sub>i</sub>* [<sub>VP\*</sub> *foi* [<sub>VP</sub> *vencer<sub>i</sub>*]].  
The Maria saw-them<sub>i</sub> [<sub>VP\*</sub> SER [<sub>VP</sub> win<sub>i</sub>]].  
'Maria saw them (SER) win.'
- e. *Não te queremos* [<sub>VP\*</sub> *é* [<sub>VP</sub> *ver*]]  
Not CL want [<sub>VP\*</sub> SER [<sub>VP</sub> ver]]  
'We don't want (SER) to see you.'
- f. *Nós aqui usamos a castanha<sub>i</sub>* [<sub>VP\*</sub> *é* [<sub>AP</sub> *cozida<sub>i</sub>*]].  
We here use the chestnut<sub>i</sub> [<sub>VP\*</sub> SER [<sub>AP</sub> cooked<sub>i</sub>]].  
'We use the chestnut<sub>i</sub> (SER) cooked<sub>i</sub> here.'
- g. *Ela<sub>i</sub> chegou à meta* [<sub>VP\*</sub> *foi* [<sub>PP</sub> *sem fôlego<sub>i</sub>*]].  
She<sub>i</sub> arrived at.the finish [<sub>VP\*</sub> SER [<sub>PP</sub> without breath<sub>i</sub>]].  
'She<sub>i</sub> arrived at the finish (SER) [out of breath]<sub>i</sub>.'

7. Predicates in complements of epistemic verbs seem to resist SER-marking:

- (i) ??*O João considera a Maria é culpada.*  
the João considers the Maria is guilty

Note that the sentence is considered grammatical in Brazilian Portuguese by Resenes & den Dikken (2012).

In order to account for the lack of restrictions on marking predicates, I will follow Bowers (1993) and Svenonius (1996, 2008), who argued that all predication involves a functional head *Pred*, that takes a subject DP in its specifier and a property-denoting XP as a complement and establishes a predicational relation between both. Since the  $vP^*$  has the same semantics as the focalized constituent alone, i.e. if it denotes a property, the  $vP^*$  denotes a property as well, and since verbal categories can be predicates, we do not expect to encounter any restrictions on marking predicates with SER, which is borne out.

An additional comment concerning secondary predicates is needed, as it has been argued that these predicates do not enter a *Pred* structure with a PRO subject (as in Stowell 1983, Bowers 1993 among others), but are rather immediately adjoined to some projection of V (see Rothstein 2005 for an overview). If the second analysis for secondary predicates reveals to be more adequate, secondary predicates would have a syntax very similar to what has been proposed for VP-adverbials (see Steube 1994 a.o.). Since VP-adverbials also can be marked by SER, to be discussed in what follows, this alternative analysis for secondary predicates should not pose any problem.

Evaluating the current proposal in light of the possibility of focalizing adjuncts is not an easy task, since there is no consensus concerning the external syntax of adjuncts. It is for instance not clear whether adjuncts should be analysed as functional specifiers (as in Alexiadou 2003, Cinque 1999, 2005 among others) and whether all adjuncts can be assumed to have the same syntax (see Cinque 1999 among others for a discussion).

Concerning SER, the following generalization seems to hold: only those adjuncts that can be extraposed to clause-final position can be marked by SER.<sup>8</sup> The generalization is valid both for DP-adjuncts and for VP/TP-adjuncts. This can be accounted for if extraposed adjuncts are syntactically adjoined instead of occupying functional specifiers: we do not expect the  $vP^*$  to intervene for adjunction, since no selection is involved, while it does intervene for selection by functional heads. It goes without saying that if the discussed analysis of adjuncts turns out to be inappropriate, the proposal concerning SER needs to be reviewed.

Concerning adjuncts of TP/VP, only circumstantial adjuncts can be marked by SER. Those adverbs that Cinque (1999: 28) calls AdvPs proper cannot be marked by SER:

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8. 'Extraposition' here is to be understood in a broad sense: any adjunct that can occupy a position not immediately adjacent to the head it modifies is extraposed.

- (19) a. *A toupeira vive é debaixo da terra.*  
 The mole lives SER underneath of.the earth  
 ‘The mole only lives (SER) underneath the earth.’ (ALC40)
- b. *??O João fala com a sua mãe é frequentemente.*  
 The João speaks to the his mother SER frequently

The pattern observed is in line with the frequent observation that AdvPs have different syntactic properties than circumstantials. In order to account for the data, I assume, following Cinque (1999), that AdvPs proper occupy the specifier of functional heads. Arguably, these heads only select for adverbs, hence the vP\* cannot be merged in their specifier. The external syntax of circumstantials on the other hand seems to differ, given their freer distribution in the clause (see Cinque 1999 for a comparison of AdvPs and circumstantials). I assume that, unlike AdvPs proper, circumstantials can be syntactically adjoined (also see Ernst 2002, Frey 2003 among others) and are when they are extraposed to clause final position, even though it might be the case that sometimes they occupy functional specifiers (as in Cinque 2004). Since adjunction does not involve selection, SER can mark circumstantials.

The syntax of adjuncts to the DP is less well studied than the syntax of adjuncts to the VP/TP, which complicates the evaluation of the proposal concerning SER. However, the same pattern can be observed: only adjuncts that can be extraposed can be marked by SER.

DP-internal adjectives cannot be extraposed. This is evidenced by the following contrast: the sentence in (20a) has two readings: one in which I ate raw meat, the adnominal reading, and one in which I ate the meat while it was raw, the secondary predicate reading. When the adjective *crua* is extraposed (20b), or marked by SER (20c), only the second reading is available:

- (20) a. *Comi a carne crua.*  
 ‘I ate the raw meat/I ate the meat raw.’
- b. *Comi a carne que estava no frigorífico crua.*  
 ‘I ate the meat that was in the fridge raw.’
- c. *Comi a carne foi crua.*  
 Ate.1s the meat SER raw  
 ‘I ate the meat (SER) raw.’

PPs modifying the DP that cannot be extraposed cannot be marked by SER.<sup>9</sup> (21a) is ambiguous: it has a reading in which the dog is in the garden at the speech time, the DP-modifying reading, and one in which the dog was in the garden when Bruno

9. I do not know why PPs adjunct to the DP exhibit this variation.

saw it, the VP-adverbial reading. When the PP is extraposed (21b), or marked by SER (21c), only the VP-adverbial reading is available.

- (21) a. *O Bruno viu o cão no quintal.*  
 'Bruno saw the dog in the garden.'  
 b. *O Bruno viu o cão no outro dia no quintal.*  
 'Bruno saw the dog the other day in the garden.'  
 c. *O Bruno viu o cão foi no quintal.*  
 The Bruno saw the dog SER in.the garden  
 'Bruno saw the dog (SER) while it was in the garden.'

Other PP-adjuncts to the DP can be extraposed: the reading of the sentence in (22a), namely that the house is made of earth, is maintained when the PP is extraposed (22b), or when SER is introduced (22c).

- (22) a. *Vi uma casa de terra.*  
 'I saw an earthen house.'  
 b. *Vi uma casa no outro dia de terra.*  
 'I saw a house the other day of earth.'  
 c. *Havia muita casa era de terra.* (Cordial-SIN, MIG05)  
 Had much house SER of earth  
 'There were many houses (SER) of earth.'

Also the fact that restrictive relative clauses can be marked by SER indicates that adjuncts to the DP that can be extraposed can be marked by SER.<sup>10</sup>

- (23) *Há muita gente é que tem essa mania que uma cobra e que*  
 Have much people SER that has this mania that a snake and that  
*isto e que aquilo.* (Cordial-SIN, AJT25)  
 this and that that  
 'There's a lot of people (SER) that has this mania that a snake and that this and that.'

The data concerning DP-adjuncts thus seem to indicate that only those adjuncts that can be extraposed can be marked by SER. DP-internal adjectives cannot be extraposed, but some PPs can and relative clauses can. We could take the different mobility of DP-adjuncts to reflect their underlying syntax. Since all DP-internal adjectives seem to have the same behaviour in the FSC, namely they cannot be marked by SER, there has to be some underlying syntactic property unifying all DP-internal adjectives. This is argued for instance by Cinque (1994, 2005), who argues that all DP-internal adjectives occupy a functional specifier. Presumably,

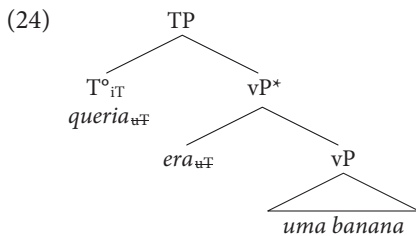
10. There seems to be speaker variation concerning relative clauses in the FSC.

the head of the functional projection where the adjective is merged is sensitive to categorial restrictions, in the sense that no verbal constituents such as the  $vP^*$  can be merged there. Although Cinque does not discuss PP-adjuncts, it could be the case that some of these adjuncts occupy the same functional specifiers as APs, which explains the impossibility of being marked by SER. Concerning the other adjuncts, I assume that these can be marked by SER if they are extraposed, independently of what their non-extraposed syntax is. If extraposition involves adjunction and no functional heads, we expect extraposed adjuncts to allow for SER-marking.

Summarizing, we observe a parallel between DP and clausal adjuncts: only those adjuncts that can be extraposed to a clause-final position can be marked by SER. Although the syntax of adjuncts is controversial, it is reasonable to assume that extraposed adjuncts are syntactically adjoined and hence permit marking by SER.

## 5. Agreement

In order to account for the tense/aspect (TA) agreement on SER and the lack of semantic contribution of the TA morphology, I propose that SER has uninterpretable tense features. I assume that  $T^{\circ}$  has interpretable TA features (Pollock 1989, Pesetsky & Torrego 2007, Zeijlstra 2012 among others) and values SER's TA features through agreement. The same  $T^{\circ}$  also values the uninterpretable TA features of the finite verb, hence the obligatory TA matching of SER and the finite verb.<sup>11</sup>



Note that the analysis presupposes that agreement can be upward (see for instance Baker 2008 or Zeijlstra 2012 and references cited). Assuming that TA agreement is an instance of upward agree also provides a straightforward explanation for why SER has to be c-commanded by  $T^{\circ}$ :

- (25) a. \**O macaco foi dançou.*  
 The monkey SER danced

11. See Von Stechow (2002) for evidence that tense morphology is not semantically interpreted, but that tense interpretation comes from a higher temporal variable.

- b. \**Foi o macaco dançou.*  
SER the monkey danced
- c. *Dançou foi o macaco.*  
Danced SER the monkey

The analysis also presupposes that TA agreement can take place in a non-local configuration. There is independent evidence that this is possible in Portuguese: the tense and aspect of the copula and of the verb in the cleft relative in standard Portuguese *it*-clefts have to match, while they are not in a local configuration at any point of the derivation, under any existing analysis.<sup>12</sup>

- (26) *Era/\*é uma banana que o macaco queria.*  
Be.3S.IMPERF/PRES a banana that the monkey want.3S.IMPERF  
'It was a banana that the monkey wanted.'

Under the current proposal, the FSC involves multiple agreement, in the sense that one single T° checks the features of both SER and the finite verb. As far as I can tell, under an agreement-based approach to inflection, this should not be problematic, since only potential goals count as interveners for agreement, nothing bans multiple probes. Note however that the proposal is not compatible with the assumption that tense morphemes are merged in T°, and 'picked up' by the verb, since in this case there are not enough T°s available to host the morphemes for both the inflected verb and SER.

Although SER exhibits tense and aspect inflection, it can only exhibit phi-feature agreement when it marks the subject, especially when it is pronominal, as is illustrated in (27), which indicates that it is not T° that triggers phi-feature agreement on SER. Assuming that only nominative constituents can trigger phi-agreement on verbs, this property of SER can be accounted for as follows: Baker (2008) observed, based on a typologically diverse group of languages, that person agreement is strictly local: it can only take place in a Spec-Head or Head-Complement configuration (Baker 2008: 52). The only context in which SER is in a local configuration with a nominative DP is when it marks the subject. Since the presence of person morphology on the copula also permits number morphology, not subject to strict locality requirements, we get full phi-feature agreement. In contexts in which SER does not appear in a local configuration with the subject, person agreement is ruled out and SER surfaces in the 3rd singular, cf. (27).

12. In non-standard varieties, TA agreement on the copula in *it*-clefts may be absent.

- (27) a. *Lemos o livro ?fomos/\*foi nós.*  
 Read.3PL.PST the book be.3PL/PL.PST we
- b. *Lemos foi/\*foram os livros.*  
 Read.3PL.PST be.3S/\*3PL.PST the books

Summarizing, both the finite verb and SER have uninterpretable TA features that are checked by T°. SER can only exhibit phi-feature agreement in case it marks the subject because person agreement is subject to very strict locality requirements.

## 6. Conclusion

In this paper I argued that the copular verb found in the FSC is a verbal focus marker. It is verbal in the sense that it has a verbal category and exhibits TA and phi-feature agreement, but it lacks any verbal semantics and is a semantically vacuous focus marker. Additionally, I showed that the idea that discourse markers may project (Cable 2010) is on the right track, since it permits us to straightforwardly account for the distribution of SER in the FSC, by ascribing restrictions to selectional requirements.

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# Occitan, verb second and the Medieval Romance word order debate

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This study presents a discussion of the word order properties of Old Occitan, a Medieval Romance language which remains under-studied in comparison to many of its sister languages. I argue that it was a V2 system and in particular that the locus of the V2 property was a low left-peripheral head, namely Fin, yielding a descriptively ‘relaxed’ V2 grammar, with systematic V-to-Fin<sup>0</sup> movement but widespread verb-third or more orders. Data are presented from a wide range of related properties that show that Occitan occupies a unique position within the wider typology of V2 languages.

## 1. Background

### 1.1 Old Occitan

The correct analysis of the syntax of the medieval languages is one of the most controversial areas of Romance scholarship (see Benincà 2013 vs. Sitaridou 2012 for opposing views). However, the significance of the data available on Old Occitan remains surprisingly obscure in this regard. There is nevertheless a small yet thorough literature on Old Occitan grammar (Hamlin, Ricketts & Hathaway 1967; Jensen 1990, 1994; Kunert 2003) and Occitan data have figured in a number of theoretically-informed comparative studies of Medieval Romance word order (Vanelli, Renzi & Benincà 1986: 53f; Benincà 2004: 263–265, 2006: 63–64, 2013: 75; Sitaridou 2005: 366–369, 2012: 570–574). In several recent works focussing on the left periphery of Old Occitan, it has been argued to be a Verb Second (V2) language (Vance, Donaldson & Steiner 2009: 318; Donaldson 2015: 163, 2016: 41) with a richly articulated C-domain (Vance, Donaldson & Steiner 2009: 313–318; Donaldson 2016: 43, 47–50). Building in particular on this more recent work, I set out in this paper to explore the issue of where Occitan fits within the emerging

typology of Medieval Romance syntax (cf. Wolfe 2016b in particular) and indeed how, if at all, it fits into the typology of Verb Second languages in general.<sup>1</sup>

## 1.2 Issues in the Medieval Romance V2 typology

The arguments in favour of a V2 analysis of Old Occitan's sister language, French, are particularly well developed. Drawing in particular on the insights of Adams (1987a, 1987b, 1988), Roberts (1993) and Vance (1988, 1993, 1997), the core argumentation centres around three particularly pervasive properties. Firstly, we observe the attestation of so-called Germanic-inversion structures where the finite verb in  $C^0$  is followed by a postverbal subject which itself is followed by an element demarcating the left edge of the  $v$ -VP-complex (Adams 1987b: 4; Roberts 1993: 56; Vance 1997: 78–79; Salvesen & Beck 2014: 223), cf. (1).

- (1) *Ja vos avoit il si longuement servi*  
 Already you=have.3SG.PST he so long serve.PTCP  
 'He has already served you such a long time' (OF *Quête* 119)

These data therefore rule out an analysis with V-to- $T^0$  movement where postverbal subjects occupy a  $v$ /VP internal position.<sup>2</sup>

Secondly, it has long been noted that Old French licensed  $XP_{\text{Non-Subject}} V_{\text{Fin}}\text{-}(S)$  clauses, many of which would not be licit in Modern French, yet bear striking resemblances to parallel structures in Germanic V2 languages (Vanelli, Renzi & Benincà 1986: § 4.1; Adams 1987b: 4–5, 1988; Roberts 1993: 85–87; Hulk & Van Kemenade 1995: 235–236; Vance 1997: 43–47). Strikingly, fronted direct objects are licensed in Old French without the need for clitic-resumption which is again in marked contrast to Modern French (see Priestley 1955 and Rowlett 2007: 177–180 in particular), cf. (2).

- (2) *Ceste avision vit li rois Mordrains en son dormant*  
 This vision see.3SG.PST the king Mordrain in his sleep  
 'King Mordrain had this vision in his sleep' (OF *Quête* 135)

Thirdly, (later) Old French has been shown to license sharp matrix/embedded asymmetries where the V2 syntax of matrix clauses gives way to an embedded SVO order (Adams 1987b: 5; Vanelli, Renzi & Benincà 1986: § 4.2; Roberts 1993: 142,

1. On this see Holmberg (2015) for a recent overview and Vikner (1995) for a seminal treatment of the Germanic data.

2. See Hulk & Pollock (2001) for free-inversion structures in Modern Romance for which this appears to be the correct analysis.

2007: 61–63; Jensen 1994: 359; Vance 1997: 133; Salvesen 2013: 140). Again, this falls out naturally from a V2 account where the presence of a complementiser or relativiser is predicted to block V-to-C raising in many cases (Den Besten 1977 [1983] amongst many others), as illustrated in (3).<sup>3</sup>

- (3) *si manda li pseudons a son frere qu'il li*  
 si ask.3SG.PST the man to his brother that-he him =  
*envoiaſt armes et cheval*  
 send.3SG.PST.SBJV arms and horse  
 'The man asked the brother to send arms and a horse...' (OF *Quête* 117)

French is in this regard perhaps the best studied Medieval Romance language and therefore provides a clear point of comparison for our study of Occitan. This long-standing analysis of French syntax, leaves at least three issues unresolved which have a bearing on any typology of Old Gallo-Romance in general. Firstly, data from the attestation of V1 and V3, 4 and 5 orders have been argued by certain scholars to weaken the V2 hypothesis for French (Kaiser 2002; Rinke & Elsig 2010) and indeed Occitan (Sitaridou 2012: 590–591). On close scrutiny of the Occitan textual evidence, should we indeed dismiss a V2 account? Secondly, Old French has been noted in various sources to show 'stricter' V2 effects than other Medieval Romance languages (Vanelli, Renzi & Benincà 1986: 53; Benincà 1995: 329, 2004: 279; Vance, Donaldson & Steiner 2009). Is this the case for Occitan, or does it pattern distinctly from Old French, if it is indeed V2? Thirdly, if these two issues are in some sense resolved, where do both French and Occitan sit on a broader typology of Medieval Romance word order and, quite possibly, V2 systems in general?

Drawing on a small-scale quantitative analysis of 1000 clauses of the 13th century Occitan text *La Vie de Sainte Douceline* and a hand-search of the troubadour bibliographies from the 13th and 14th centuries and the 12th and 13th century legal *Chartes*, the present study seeks to make progress in answering these three significant questions.

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3. Note that the "in many cases" here is a necessary caveat once a more articulated C-layer is assumed. If, for example, a complementiser lexicalises a high functional projection within the C-layer, V-raising to a lower position within the C-layer may not be blocked. See Benincà (2004: § 5.4) and Salvesen & Walkden (2017) for a comparative analysis of Old Romance and Old French respectively along these lines.

## 2. A V2 grammar

### 2.1 Verb placement

Within recent theoretically informed work on the topic, a V2 syntax is not understood as instantiating any form of linear ordering requirement, but rather a systematic requirement that the finite verb raise to a C-related head with this verb-raising accompanied by internal or external merge of a phrasal constituent in a CP-specifier (see Holmberg 2015; Haegeman & Greco 2016 and Wolfe to appear). Nevertheless the observation holds that these two properties ‘conspire’ towards a syntactic system where second position is predicted to be the most frequent for the finite verb (Vikner 1995: 41; Holmberg 2015: 1). The analysis of matrix clauses within *Sainte Douceline* reveals this to be the case for Old Occitan (Table 1).

**Table 1.** Verb placement in old occitan matrix clauses (excluding coordination)

|                       | V1    | V2     | V3     | V4    | V5    | V6    | V7    |       |
|-----------------------|-------|--------|--------|-------|-------|-------|-------|-------|
| Transitive/Unergative | 20    | 171    | 79     | 17    | 5     | 2     | 0     |       |
| Unaccusative          | 8     | 24     | 14     | 4     | 1     | 0     | 0     |       |
| Reflexive             | 4     | 13     | 19     | 4     | 0     | 2     | 0     |       |
| Impersonal            | 0     | 2      | 0      | 1     | 0     | 0     | 0     |       |
| Athematic             | 9     | 54     | 49     | 19    | 2     | 0     | 0     |       |
| Copula                | 6     | 63     | 24     | 5     | 0     | 0     | 0     |       |
| Raising               | 0     | 1      | 0      | 0     | 0     | 0     | 0     |       |
|                       |       |        |        |       |       |       |       | Total |
| Total                 | 47    | 328    | 185    | 50    | 8     | 4     | 0     | 622   |
| Percentage            | 7.56% | 52.73% | 29.74% | 8.04% | 1.29% | 0.64% | 0.00% |       |

Any account of Old Occitan syntax, however, must be able to capture the preference for linear-V2 word order (4) alongside the ample attestation of V1 (5) and V3\* (6) orders found in both *Douceline* and other Occitan texts of the period, which have also been noted by other scholars (Jensen 1994: 359–360; Kunert 2003: § 3; Vance, Donaldson & Steiner 2009: 315; Sitaridou 2012: 570; Donaldson 2015: 9–10; 2016: 43–49), cf. (4)–(6).

- (4) *Motas autras consolacions li=fes* *le Senhers*  
 Many other consolations her=make.3SG.PST the lord  
 ‘The Lord made her many other consolations’ (*Douceline*, 47)
- (5) *Corregron tantost après per seguir=las*  
 run.3PL.PST soon after to follow.INF=them  
 ‘They ran soon after to follow them’ (*Douceline*, 54)

(6) *E [per aisso], [illi] [adoncs], [am gran confusion],*

And for this she therefore at great confusion

*comandet a totas*

command.3SG.PST to all

‘Because of this, to much confusion, she commanded everyone to...’

(*Douceline*, 130)

In the discussion that follows, it is argued that the correct analysis of Old Occitan, based on these data and others presented below, is a Verb Second account (in line with Vanelli, Renzi & Benincà 1986, Benincà 1995, 2004, 2006, Vance, Donaldson & Steiner 2009 and Donaldson 2015, 2016). However, I argue that Occitan has a special significance in the medieval period, as it shows certain properties which pattern distinctly from Later Old French, rendering it typologically more similar to Old Southern and Central Italo-Romance varieties.

## 2.2 The left periphery

### 2.2.1 V2 clauses

The V2 account predicts that the Old Occitan preverbal field will not be a privileged subject position, but rather host constituents from various grammatical categories with different discourse-pragmatic values, as in V2 languages (see in particular Lightfoot 1995:40). This results from ‘EPP-effects’ being located in the C-layer rather than the T-layer and the verbal prefield thus being made up of functional projections with a range of discourse-pragmatic functions (Rizzi 1997; Benincà & Poletto 2004).<sup>4</sup> As predicted, the preverbal field can indeed host a range of constituents (7–9).

(7) a. *Aquesta obedientia de caritat tenc illi tant cant le*

This obedience of charity hold.3SG.PST her such that her

*paires visquet*

father live.3SG.PST

‘She undertook this exercise in charity such that her father lived...’

(*Douceline*, 47)

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4. For the purposes of the present discussion I analyse these ‘EPP-effects’ as the result of a feature-blind Edge Feature (henceforth EF) on a C-related head which requires merger of any maximal category in the specifier of the relevant head (see Cardinaletti & Roberts 2002; Roberts 2012 and Holmberg 2015 for other accounts along these lines).

- b. *El boscal d'Aimert al Pas donero Matfres Bec e*  
 The thicket-wood of Aimert al Pas give.PST.3PL Matfre Bec and  
*sos fraire ellor maire*  
 his brother and = their mother  
 'Matfre Bec, his brother and their mother donated the thicket wood of  
 Aimert al Pas' (Chartes, 20)
- c. *E de totas aquestas razons fetz En Bertrans de*  
 And of all these subjects make.3SG.PST Bertran de  
*Born lo sirventes que ditz*  
 Born the songs that say.3PL  
 'And Bertran de Born wrote the verses that say... regarding these subjects'  
 (Vidas, 80,32)
- (8) a. *Acostumat avia li sancta de pagar a Dieu las horas*  
 accustom.PTCP have.3SG.PST the saint to pay.INF to God the hours  
 'The saint had become used to reciting her hours to God' (Douceline, 159)
- b. *Hom fo de paubra generacion...*  
 Man be.3SG of poor lineage  
 'He was a man from a poor background' (Vidas, VI)
- (9) a. *Adoncs dis le lectors mot consolatz que...*  
 Thus say.3SG.PST the clerk very comfortingly that  
 'The clerk thus said very comfortingly that...'  
 (Douceline, 150)
- b. *Lonc temps duret lor amors*  
 Long time last.3SG.PST their love  
 'Their love lasted a long time' (Vidas, VI)

An important observation is that direct object fronting in Old Occitan as in (7) does not trigger clitic resumption within the clausal core, as is required in the majority of modern Romance languages (Zubizarreta 1998: 103–5; Benincà 2001: § 1.2.1; Benincà & Poletto 2004: § 2) and indeed Modern Occitan (Wheeler 1988: 272; Olivieri & Sauzet 2016: 19.4.2.2), but rather patterns with V2 systems in requiring no resumptive clitic (Vikner 1995: 43). Crucially, XP<sub>Non-Subject</sub>-V-(S) clauses such as (7–9) are in no way a marginal phenomenon in Old Occitan (cf. also Kunert 2003: 199). Our analysis of *Sainte Douceline* shows 76.22% (250/328) of matrix linear-V2 clauses to feature a preverbal non-subject, with object fronting specifically accounting for 35.98% of V2 clauses.<sup>5</sup> A qualitative and small-scale quantitative analysis of the textual records available therefore lends support to a V2 analysis.

5. Significantly, these figures in fact surpass parallel statistics given for uncontroversial V2 systems in Lightfoot (1995), Yang (2000) and Westergaard (2009). See Wolfe (to appear) for a full discussion of these parallels.

Convincing evidence that the ‘inversion’ structures showing postverbal subjects across the texts are not within a *v*-VP-internal position come from the following clauses. Note that these show unambiguous V-to-C movement if we adopt the null hypothesis that infinitival complements demarcate the left edge of the *v*P as in Modern Romance (Cinque 2001 amongst others), cf. (10).

- (10) a. *Acostumat avia li Sancta de pagar a Dieu las horas*  
 Accustom.PTCP have.3SG.PST the Saint of pay.INF to God the hours  
 ‘The Saint had become used to reciting her hours to God’  
(Douceline, 128)
- b. *La qual cauza plus fizelmens a far e plus veraia*  
 The which thing more faithfully to do.INF and more truly  
*volc illi aver per lo dechat e-l conseill*  
 want.3SG.PST she have.INF for the words and-the advice  
 dell saint paire  
 of-the holy father  
 ‘In order to this more truthfully, she wanted to have the words and guid-  
 ance of the Holy Father’  
(Douceline, 61)

These data are particularly important as they demonstrate the same ‘Germanic-inversion’ construction reported above which was crucial in establishing the V2 status of Old French.

### 2.2.2 CP Information-Structure

A number of questions remain as to how Information Structure is encoded in the Old Occitan left periphery. This question is important in itself as recent work has shown that the encoding of Focus in particular varies across Medieval Romance both synchronically and diachronically (Steiner 2014; Poletto 2014; Wolfe 2016a), therefore showing similar microvariation to that attested today (see Belletti 2008 and Paoli 2010 for recent discussion). Medieval Occitan has not as yet figured in this discussion.

A close reading of our texts reveals that thematic constituents occupy a dedicated functional projection, or layer, within the left periphery. Thus the initial constituents in (11) feature highly on Lambrecht’s (1994: 165) Topic Acceptability Scale and are ‘active’ in the preceding discourse in the terms of Prince (1981: 243).<sup>6</sup> Especially telling in this regard is the presence of the enclitic pronoun in (11a), which has been acknowledged since Benincà (1995: 325–328) to be a clear syntactic reflex of an empty Focus layer in Medieval Romance.

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6. The diagnostic used to test activity in this case was whether the entity had been previously mentioned within the same thematic paragraph in the terms of Fleischman (1991).



- (11) a. *E illi servi lo am gran misericordia*  
 And she serve.3SG.PST= him in great pity  
 ‘And she served him with great pity’ (Douceline, 46)
- b. *E totz aquestz laitz faitz remenbret En Bertrans de Born*  
 And all these facts remind.3SG.PST Bertran de Born  
*al rei d’Arragon...*  
 to-the King of Aragon  
 ‘And Bertran de Born reminded the King of Aragon of all these facts’  
 (Vidas, 80, 35)

The examples given in (11) feature no resumptive element within the clausal core. As discussed recently by Donaldson (2015), however, we also find an alternative topicalisation strategy in Old Occitan (cf. (12)) akin to Modern Romance Left Dislocation (Benincà & Poletto 2004: § 1), where an initial LD Topic is followed by the particle *si*, which we return to below.

- (12) *Betrans de Born si fo uns castellans...*  
 Bertran de Born *si* be.3SG.PST a nobleman  
 ‘Bertran de Born was a nobleman’ (Vidas, XIA, as in Donaldson 2015: 169)

We therefore reach the interim conclusion that in Old Occitan V2 clauses the initial constituent could be topical, with this constituent either resumed or not within the clausal core (see Donaldson 2016 for a pragmatico-syntactic account of the two alternatives). However, the preverbal field is not specialised in hosting topical/thematic expressions. In addition, the data examined also suggest that Old Occitan licensed Information Focus within the CP, which is understood here following Cruschina (2006: 375) as encoding information which is non-contrastive yet ‘informationally new’, cf. (13).

- (13) a. *e voluntiers fasia lur mandament*  
 and voluntarily do.3SG.PST their order  
 ‘and she did what they commanded voluntarily’ (Douceline, 44)
- b. *Mortification de carn comenset a penre tantost*  
 Mortification of flesh begin.3SG.PST to take.INF early  
 ‘She began to flagellate herself early [in the morning]’ (Douceline, 48)
- c. *Longuamen duret lo precx d’En Gauselm Faidit*  
 Long-time last.3SG.PST the prayer of Gauselm Faidit  
 ‘Gauselm Faidit’s prayers lasted a long time’ (Vidas, 167, 52)

Finally note that we can also observe Frame-Setters in the left periphery, which have an adverbial quality that scopes over the entire clause and anchors the speech act in terms of temporal or spatial deixis (Haegeman 2000: § 5.5.1; Benincà & Poletto

2004: 70). These elements consistently precede other Topics or Foci within CP, as shown in (14).

- (14) a. *E adoncs uns fraires li dis, qu...*  
 And then a monk her = say.3SG.PST that  
 ‘And then a monk said to her’ (Douceleine, 150)
- b. *E en aquela sazo si avia una molt prezada dona...*  
 and in that time si have.3SG.PST a very sought-after woman  
 ‘And in that time there was a much admired woman...’

To summarise, we observe that the Old Occitan left periphery can host preverbal constituents from a range of different grammatical categories. These constituents can also have an array of discourse-pragmatic values.

### 2.2.3 *Verb Third*

In the previous section, it was shown that a preverbal Topic or Focus satisfies the part of the V2 constraint that requires a phrasal constituent to be merged in the left periphery. However, such orders where a sole preverbal constituent sits in the left periphery account for only 52.73% of matrix clauses. A substantial 39.71% of clauses have more than one constituent before the finite verb (Table 1) and Verb Third orders have been discussed in the small literature that exists on Old Occitan syntax (Vance, Donaldson & Steiner 2009; Sitaridou 2012: 570–574; Donaldson 2015: 164–167, 2016: 43).

A brief excursion is necessary here into the broader typology of V2 grammars. Above, we adopted the working hypothesis (essentially following Holmberg 2015) that a V2 system requires (i) V-to-C raising and (ii) merger of a phrasal constituent in a C-related specifier. Although within a model such as that employed in the 1970s and 1980s assuming a single CP projection the issue of where the verb movement and phrasal merger targets is somewhat moot (Figure 1), a number of possibilities are presented if a more articulated left-peripheral structure is assumed where *a priori* these two operations could target any one of the proposed projections making up the fine structure of the left periphery (Rizzi 1997; Benincà & Poletto 2004; Benincà & Munaro 2010) (Figure 2).

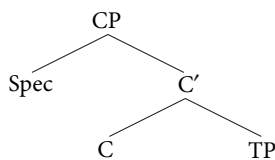


Figure 1. Single CP projection

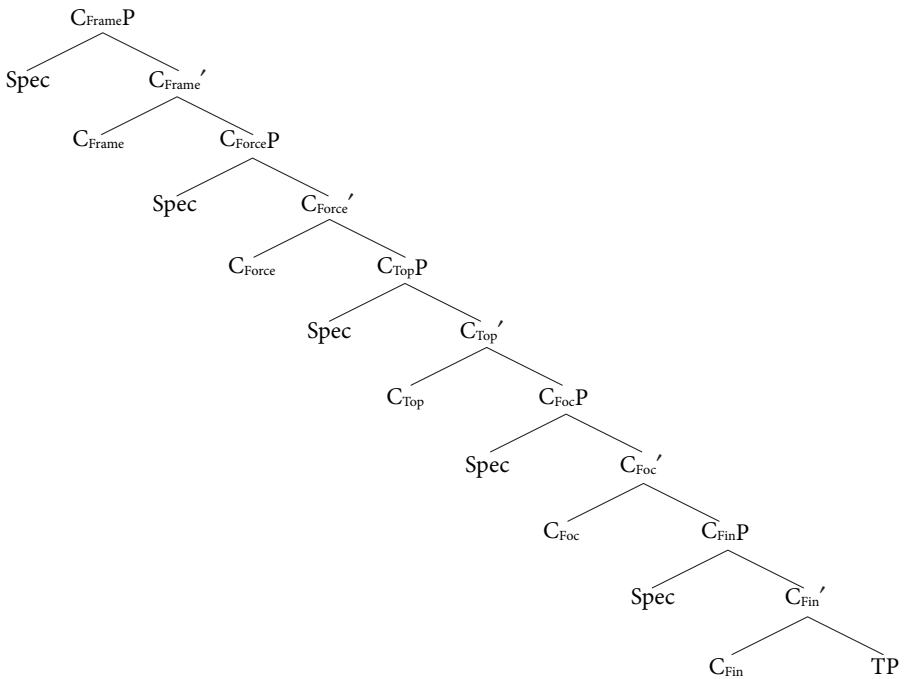


Figure 2. More articulated left-peripheral structure

A range of proposals have been adopted for Medieval Romance, with Fin-V2 (Ledgeway 2008: 438; Salvesen 2011: § 4; Wolfe 2015a: 54), Focus-V2 (Benincà 2004: 285–292; Labelle 2007: 301–305; Poletto 2014: 1–33) and Force-V2 (Rouveret 2004; Wolfe 2015c: 139–142) analyses all proposed in the literature. Putting aside the possibility that Frame, Topic or Focus host the finite verb in the unmarked case, on the grounds that these positions are by definition *discourse-marked*, we are left with both Fin and Force as possible loci for the V2 property. Following insights developed for Raeto-Romance in Poletto (2000, 2002), Wolfe (2016a) notes that these hypotheses make different predictions which are clearest in the domain of orders where the verb is third or more in the linear ordering (V3\*).

Following Figure 2, we can see that requirement that the finite verb targets Force<sup>0</sup> and the XP Spec-ForceP makes a very strong prediction. V3 will only ever be triggered by a constituent in Spec-FrameP and V4\* orders are effectively ruled out. This may be the type of system we observe in Old French from approximately 1200 onwards (Rouveret 2004; Wolfe 2016a: § 3), certain varieties of 13th century Spanish (Wolfe 2015c: 139–142) and Ladin Raeto-Romance varieties (Poletto 2002). On the contrary, in Fin-V2 systems where the verb only standardly moves as high as Fin<sup>0</sup>, we predict the possibility that the Frame, Topic and Focus layers could all

be filled by overt XPs, predicting types of V3 not licit in Force-V2 systems and V4\* to be licensed within the system. Systems of this type have been described most commonly for Old Italo-Romance (Benincà 2004, 2006; Ledgeway 2008; Poletto 2014) and also Early Old French (Rouveret 2004; Labelle 2007). Where would Old Occitan fit in this typology?

As already observed above (see 14), orders where a Frame-Setter co-occurs with a Topic or Focus are licensed in Old Occitan and trigger V3 (15).

- (15) *Et, un dia, el dompnejava com ella...*  
 and one day he court.3SG.PST with her  
 ‘And one day he was courting her...’ (Vidas 295, 1)

As the possibility for this configuration is possible in both a Fin-V2 (16a) and a Force-V2 system (16b), the finding is inconclusive as a diagnostic and tells us nothing with regard to the position of the subject.

- (16) a. ...<sub>[FrameP</sub> un dia <sub>[ForceP...<sub>[Topic</sub> el <sub>[FocP</sub> [<sub>FinP</sub> [<sub>Fin</sub><sup>0</sup> dompnejava] [TP...]]]]]]]]  
 b. ...<sub>[FrameP</sub> un dia <sub>[ForceP</sub> el <sub>[Force</sub><sup>0</sup> dompnejava] <sub>[Topic</sub> el <sub>[FocP</sub> [<sub>FinP</sub> [<sub>Fin</sub><sup>0</sup> dompnejava] [TP...]]]]]]]]</sub>

More telling, however, are examples like the ones in (17) which are found across all the texts examined. Here a Topic precedes a focal constituent which typically encodes new information.

- (17) a. [<sub>Topic</sub> *lli*], [<sub>FocP</sub> per amor del Senhor, [<sub>FinP</sub>... lur  
 she for love of-the Lord them =  
*lavava los pes*]]  
 wash.3SG.PST the feet  
 ‘Through her love of the Lord, she washed their feet’ (Douceline, 45)
- b. E [<sub>Topic</sub> sobre tot aizo [<sub>FocP</sub> per amor de Deu e de sant  
 and above all this for love of Lord and of Saint  
 Antoni [<sub>FinP</sub>... donam segur a totz aquels omes et totas  
 Anthony give.1PL insurance to all those men and all  
 las femenas...]]]  
 the women  
 ‘And in addition to this, for our love of the Lord and Saint Anthony, we insure all those men and women...’ (Chartes, 41)
- c. [<sub>Topic</sub> En Savaric, [<sub>FocP</sub> per far a luy honor [<sub>FinP</sub>...  
 Savaric to make.INF to him honour  
 li mostret...]]]  
 him reveal.3SG.PST  
 ‘Savaric, in order to honour him, revealed...’ (Vidas 432, 3)

- (18) E [<sub>FrameP</sub> adoncs [<sub>TopP</sub> illi, [<sub>FocP</sub> ab amars critz, [<sub>FinP</sub>...  
 and thus she with bitter cries  
**dizia** a la Verge]]]]  
 say.3SG.PST to the Virgin  
 ‘and she cried in a bitter tone to the Virgin...’ (Douceline, 136)

The attestation of these examples across the texts is significant on two counts. Empirically, it shows us that what Benincà (2004:275) terms the ‘multiple accessibility of CP’ where Frame-Setters, Topics and Foci co-occur is not limited to Italo-Romance. Indeed, this pattern which is widely reported for Medieval Italian Dialects (Ledgeway 2007: 124; Salvi 2012: 105; Poletto 2014: 16) appears fully productive in Old Occitan. Theoretically, these orders are important as they pattern very clearly with the predictions of the Fin-V2 hypothesis. Therefore we can postulate that in the Old Occitan varieties examined, Fin<sup>0</sup> is the locus of finite V-movement and also bears an XP-merger-triggering movement diacritic, with these two properties responsible for Verb Second. This yields a descriptively ‘relaxed’ V2 grammar.

#### 2.2.4 A note on *si*

The picture emerging from the analysis is of a V2 language with systematic V-to-Fin<sup>0</sup> movement, where this lowest head in the articulated left periphery also bears an movement diacritic which must be satisfied by merger of a phrasal constituent. Crucially, we have observed above that once this constituent is merged, nothing *a priori* precludes base-generation of constituents higher in the functional structure, yielding V3\* orders. An additional piece of evidence for this account of Old Occitan word order comes from the distribution of the particle *si*.

Even restricting ourselves to Gallo-Romance, there is an enormous literature on this particle, which is derived from Latin *sic* ‘thus, so’. The core point to note for our purposes is that *si* is standardly analysed as a left-peripheral element, evidenced by its (near-)absence in embedded clauses (Fleischman 1991: 270; Van Reenen & Schøsler 1992: 106–108, 2000: 60; Lemieux & Dupuis 1995: 96) and is viewed in many, though not all, analyses as a form of last-resort expletive element to satisfy the V2 constraint (Vance 1995: 184; Benincà 2004: 267; Ferraresi & Goldbach 2002: 11; Salvesen 2013: § 3.4.1; Donaldson 2016: 61; Wolfe 2016a: § 4.1). Observe the data in (19) from the *Vidas* which show both *si*-initial clauses and those where it is preceded by other left-peripheral constituents.<sup>7</sup>

7. The *si* particle is not found across all Medieval Romance texts and is essentially absent from *Douceline*. We therefore present examples here taken from the *Vidas* which have recently been discussed in detail by Donaldson (2015, 2016).

- (19) a. *Guillems de la Tor si fon joglars...*  
 Guillem de la Tor si be.3SG.PST jongleur  
 ‘Guillem de la Tor was a jongleur...’ (Vidas, XXXII)
- b. *E en aquesta [a]legressa, lo marques de Monferrat si se croset*  
 And in this happiness the marquis of Monferrat si REFL=cross.3SG.PST  
 ‘In the midst of this happiness, the Marquis of Moferrat crossed himself’...  
 (Vidas, 167, 33)
- c. *Bertrans, quan auzi so qu’En Richartz avia*  
 Bertran when hear.3SG.PST that which Richard have.3SG.PST  
*jurat, e sabia qu’ el era abandonatz*  
 swear.PTCP and know.3SG.PST that = he be.3SG.PST abandon.PTCP  
*de totz aquestz que vos avetz ausit, si-l det*  
 of all these that you have.2PL hear.PTCP SI him = give.3SG.PST  
*lo castel e si venc a son comandamen*  
 the castle and SI come.3SG.PST to his service  
 ‘When Bertran heard what Richard had sworn, knowing that he had been  
 betrayed in all these things about which you have heard, he gave him his  
 castle and rendered himself at his service’ (Vidas, 80, 21)

See Donaldson (2015, 2016) for a full discussion of the relevant facts. For our purposes, the key observation is that *si* can readily be preceded by multiple left-peripheral constituents as in (19b/c). This follows naturally from *si*’s role as a last-resort expletive to satisfy V2: as the locus of the V2 property is low on Fin, *si* will occupy Spec-FinP and therefore not preclude the base-generation of constituents higher in the functional structure (most commonly Left Dislocated elements, as discussed by Donaldson 2015, 2016).

### 2.2.5 Null constituents

We can now turn to our final sub-type of matrix clause, those where the finite verb appears superficially in initial position, which have been noted for Old Occitan varieties by a number of scholars (Jensen 1994: 359–360; Kunert 2003: 200; Sitaridou 2012: 570; Wolfe 2016a: § 3.1). The textual record is far from homogeneous in this regard however. Whilst V1 orders account for a minority, though by no means marginal, 7.1% of matrix clauses in *Douceline*, Donaldson (2016: 64) notes only four V1 clauses in the whole troubadour *Vidas*. Focussing first on *Douceline*, these clauses have been argued in Wolfe (2015d: 158) to encode rhematicity (20a) or topic continuity (20b).

- (20) a. *Corregron tantost après per seguir las*  
 run.3PL.PST soon after to follow.INF=them  
 ‘They ran soon after to follow them’ (Douceline, 54)

- b. *Amava e queria luechs solitaris*  
 love.3SG.PST and want.3SG.PST places solitary  
 ‘She loved and wanted places where she could be alone...’

(*Douceline*, 107)

Drawing on a parallelism with Null Subject SVO languages, where a null pronoun *pro* is able to satisfy an EF on T (Rizzi 1986; Holmberg 2005; Roberts 2010), it is argued that V2 Medieval Romance varieties like the Occitan variety instantiated in *Douceline* feature a variant of *pro* which acts as a Null Shift Topic in the terms of Frascarelli & Hinterhölzl (2007).<sup>8</sup> This null pronoun is also licensed in varieties of Occitan found in the *Chartes*, where it has two main functions, either indicating thematic continuity with the Topic of a preceding clause (21) or acting as a form of ‘default topic’ in rhematic clauses such as (22) which are reported in Jensen (1990: 535) for the 11th century text *Sainte Foi* and found across 11th century Medieval Romance texts (Wolfe 2016b: § 2).

- (21) *Laiset tot lo quart del blat que avia a Solpiac*  
 Leave.3SG.PST all the section of-the land that have.3SG.PST at Solpiac  
 ‘[She] left all the portion of the land that she had at Solpiac’

(*Chartes* 92, 1160)

- (22) *arss Deus cell lin*  
 burn.3SG.PST God that lineage  
 ‘God burnt that lineage’

(*Sainte Foi*, 589, as in Jensen 1990: 535)

We can therefore identify an additional method of satisfying part of the V2 constraint triggered by a movement diacritic on Fin: the possibility to move a null pronoun, *pro*<sub>Top</sub> into the left periphery. We can assume, following Wolfe (2015b), that this pronoun moves to the Topic layer in order for its *u*Topic feature to be valued.

Further research on a wider variety of texts is needed to establish exactly why V1 matrix declaratives are so rare in the *Vidas* yet relatively widespread in *Douceline* in particular. However, it may well be that a clue lies in the widespread attestation of *si* in the *Vidas*, which is near-absent in *Douceline*. Given that this particle in Old Occitan (Donaldson 2015: 169, 2016: 53–54 and references therein) and Old French (Fleischman 1991: 270; Lemieux & Dupuis 1995: 97; Vance 1997: 54; Van Reenen & Schøsler 2000: 84) has a very significant role in indicating continuing thematicity, we might speculate that the functional overlap between *si* and *pro*<sub>Top</sub> eventually contributed towards the marked decrease in the employment of the latter option within the grammar. A better understanding of the dialectal variation is needed before reaching any firm conclusions however.

8. This explicit formulation is not original but first found in Poletto’s (2014: 20–21) discussion of V1 clauses in Old Italian, but has its roots also in proposals by Benincà (2004: 290, 2006: 77) amongst others.

### 2.3 Clause-type asymmetries

A widely reported property of V2 systems is that they show strong asymmetries between matrix and embedded clauses (Koster 1975; Den Besten 1977 [1983]; Vikner 1995). This issue is particularly pertinent in the case of Romance, where there is ongoing debate as to whether symmetrical V2 systems where V2 is licensed uniformly across clause types are attested the medieval period (Fontana 1993; Poletto 2002: 1; Labelle 2007) or not (Mathieu 2006, 2012; Wolfe 2015c: 143–148).

Limiting ourselves to *Douceline*, we in fact see very clear evidence that there are strong clause type asymmetries. Whilst, as noted above, 76.22% of matrix V2 clauses are non-subject-initial and 23.78% SVO, the figures are almost perfectly inverse for the small sample of complement clauses collected, where 76.47% are SVO (65/85) and 23.53% are non-subject initial (20/85). We see the typical SVO pattern exemplified from *Douceline* and the *Vidas* in (23).

- (23) a. *disseron qu' illi non si movie*  
 say.3PL.PST that she NEG REFL=move.3SG.PST  
 '...they said that she wasn't moving' (Douceline, 143)
- b. *E qan Betrans de Born saup qe'treis*  
 and when Bertran de Born know.3SG.PST that=the king  
*devia e[i]ssir de preison...*  
 should.3SG.PST leave.INF of prison  
 'And when Bertran de Born found out that the king was to leave prison...'  
 (Vidas, 80, 8)

Although we do observe fronting of internal arguments which can be considered unambiguous cases of embedded V2 (24), these are all embedded under uncontroversial 'bridge' verbs which are generally acknowledged to select structurally larger complement clauses (Rizzi & Roberts 1989: 22; Heycock 2006). In the case of the sample from *Douceline*, the verbs in question are *say* (7 occurrences), *respond* (2 occurrences), *make swear* (2 occurrences), *hear* (1 occurrence), *know* (1 occurrence), *show* (2 occurrences) and *seem* (1 occurrence).

- (24) a. *E dizia li sancta que belguina era*  
 And say.3SG.PST the saint that saintly be.3SG.PST  
*de plorar e non de cantar.*  
 to weep.INF and NEG to sing.INF  
 'And the Saint said that it was saintly to weep and not to sing'  
 (Douceline, 198)
- b. *e ben mostrava que d'aquest mont non era*  
 and indeed show.3SG.PST that from-this world NEG be.3SG.PST  
 'and [this] indeed showed that she was not from this world'  
 (Douceline, 145)



Although this particular dataset is small and more work needs to be done in this area across a greater variety of texts, the data are suggestive that a symmetrical V2 analysis, that would not predict such substantial asymmetries, is unmotivated in the case of *Douceline*.

### 3. Occitan in the V2 typology

Although the preceding discussion has been brief and raised a number of questions which have not yet been resolved, we are now better placed to fit Old Occitan within a broader typology of V2 languages. Consider the following properties:

**The Fin/Force V2 Distinction:** Against the backdrop of the emerging picture that V2 can have both a structurally ‘high’ locus on Force or a ‘low’ locus on Fin within the left periphery (Poletto 2002; Rouveret 2004; Wolfe 2015c, 2016b) we identified that Old Occitan was a Fin-V2 system. The principal evidence for this comes from the attestation of V4\* orders and V3\* configurations where a Topic + Focus co-occur. This property is uniformly found across the texts examined, which suggests that in this regard Occitan patterns with other ‘conservative’ Medieval Romance varieties (Wolfe 2016a) such as Old Italian (Poletto 2014) and Old Southern Italian Dialects (Benincà 2004; Ledgeway 2008; Wolfe 2015b) where these orders are also licensed. Crucially, no Occitan texts from the 12th and 13th centuries have yet been reported that show a Force-V2 syntax, where V3 becomes far more restricted; this change is observed in 13th century French (Rouveret 2004) and certain varieties of Spanish (Wolfe 2015c). The recent studies of Vance, Donaldson & Steiner (2009) and Donaldson (2015, 2016) are therefore welcome in providing further insight into a ‘relaxed’ V2 language which has not yet receive the attention it deserves.

**The Syntax/Information-Structure Mapping:** Along with seemingly all Romance V2 systems, the texts examined show clear evidence for left-peripheral projections which host Frame-Setters and Topics. More significantly, we also observed widespread evidence that Information Focus is encoded within the CP in Old Occitan, in contrast to modern Occitano-Romance varieties. Although we have not adopted the Focus-V2 account of Benincà (2004, 2006), Poletto (2014) and Donaldson (2015, 2016), the licensing of left-peripheral Information Focus is nevertheless a significant property in which Old Occitan again patterns with Old Italian (Poletto 2014: 9–11) and Southern Italian Dialects (Cruschina 2011).

**Null Left-Peripheral Elements:** *Sainte Douceline* shows relatively widespread verb-initial matrix clauses as a discourse-marked word order pattern, yet these are (near)-absent in a number of texts from 12th and 13th centuries (Donaldson 2016). The empirical generalisation that texts such as the *Chartes* and *Vidas* which

show clear evidence for widespread V4\*, yet heavy restrictions on the licensing of V1 suggests that caution should be exercised in assuming that these two 'deviant' word orders pattern together in the Medieval Romance languages and furthermore suggests that accounts such as Wolfe (2016b) where the licensing of V4\* and Null Topics are tightly linked may need some qualification.

*CP Expletive si*: Despite an enormous literature on Medieval Romance CP-expletives,<sup>9</sup> Occitan has not figured prominently in this discussion (Donaldson 2015, 2016 being recent notable exceptions). Our data suggest strongly that the distribution of *si* is indicative of the low locus of V2 within the Old Occitan left periphery, a property Occitan may share with both Early Old French (Marchello-Nizia 1985) and Old Sicilian (Wolfe 2016a).

*Asymmetric/Symmetrical V2*: Although a wider data sample is needed to reach wide-ranging conclusions, historical Occitan data may be relevant in yet another regard, namely the ongoing debate about whether symmetrical V2 languages exist at all (see Wiklund et al. 2009 in particular). Given that we find no positive evidence for a symmetrical V2 analysis at present and the data motivating such an analysis for Spanish and Southern Italian Dialects also point in a similar direction (Wolfe 2015b), it may well be that no compelling evidence for a symmetrical V2 system exists within the medieval textual records.

Overall this discussion has raised as many questions as it has sought to answer. The clear message arising from the data, however, is that Old Occitan deserves a more prominent place within the V2 typology. With this established and a better understanding of the role of both regional and diachronic variation, resolving a number of outstanding puzzles in Old Gallo-Romance dialect syntax may be closer than previously thought.

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9. See Marchello-Nizia (1985), Fleischman (1991) and Ledgeway (2008) for extensive references and discussion.

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In the three decades of its existence, the annual Going Romance conference has turned out to be the major European discussion forum for theoretically relevant research on Romance languages where current theoretical ideas about language in general and about Romance languages in particular are exchanged. The twenty-ninth Going Romance conference was organized by the Radboud University and took place in December 2015 in Nijmegen.

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