

## ABSTRACT

Title of Document: PROJECTING SUBJECTS IN SPANISH AND ENGLISH

Iván Ortega Santos, Doctor of Philosophy, 2008

Directed By: Prof. Juan Uriagereka, Department of Linguistics

The focus of this dissertation is syntactic movement and its relationship to surface semantics, morphology, and licensing relations in syntax, with an emphasis on Spanish and English.

Chapter 2 argues that Herburger's (2000) Neo-Davidsonian approach to the semantics of focus, as syntactically implemented by Uriagereka (2005), allows for a unified treatment of new information focus and contrastive focus (focus movement to the left periphery and in situ focus) in Spanish. The diverse positions that the focused element can take in the sentence are claimed to be determined by contextual anchoring mechanisms of Raposo and Uriagereka (1995). This entails a remnant movement approach in cases of new information focus in Spanish (Ordóñez 2000). It is suggested that these processes take place covertly in English, contra Kayne (1998).

Chapter 3 and Chapter 4 focus on the relationship between syntactic movement and surface semantics by looking at the syntax of preverbal subject in Spanish and English, respectively. According to Chomsky (2001, and subsequent

work) and Uriagereka (2008) a.o., movement yields (at least) scopal and discourse-related properties. Movement to Spec,TP in so-called ‘flexible word order’ languages, like Spanish (contra Alexiadou and Anagnostopoulou 1998, a.o.), and in so-called ‘strict’ word order languages, like English, provides the testing ground for this hypothesis. It is argued here that both Spanish and English show surface semantics effects correlating with movement into Spec,TP, in keeping with the idea that syntactic movement has an effect on semantics.

Chapter 5 explores a number of challenges for the phase-based system dispensing with grammatically significant Spec,H relations. It is proposed here that under a mixed system adopting phases and Long Distance Agreement and, crucially, a Multiple Spell-Out system (Uriagereka 1999), conceptual arguments against Spec,H relations can be circumvented. This is shown to solve a number of problems that the phase-based framework faces.

PROJECTING SUBJECTS IN SPANISH AND ENGLISH

By

Iván Ortega-Santos

Dissertation submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park, in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
2008

Advisory Committee:  
Professor Juan Uriagereka, Chair  
Professor Tonia Bleam  
Professor Kira Gor  
Professor Howard Lasnik  
Professor David Poeppel

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## Acknowledgements

I would like to thank the members of my committee. In particular, I would like to thank J. Uriagereka for his support throughout these years. H. Lasnik, N. Hornstein and T. Blears deserve special credit for their encouragement and comments on my syntax work.

Furthermore, I would like to thank the following individuals for their comments on this work and related research (names are listed in random order): C. Nakao, S. Stjepanovich, C. Boeckx, D. Poeppel, A. Weinberg, A. Gallego, J. Lidz, A. Omaki, D. Huber, J. Nunes, K. Arregi, J. Jurka, V. Hacquard, P. Fernández Rubiera, Y. Sato and I. Cagri. M. Yoshida, T. Fujii and A. Ince deserve special credit for their valuable comments on my work and life in general. Needless to say, all errors are my own.

Furthermore, a number of colleagues deserve special credit for all the little things: H. Taylor, C. Stroud, S. Malhotra, P. Chandra, M. Kishida, S.-O. Hwang, T. Hawes, C. Dyers, M. Wagers and B. Dillon.

Back home, I would like to thank J. Franco, J. Ortiz de Urbina and P. Lavery for introducing me to the world of linguistics. At the U. of Arizona, I would like to thank A. Olarrea, M. Zampini and A. Carvalho for teaching me Hispanic Linguistics. I would also like to thank R. Barnes, J. Bitgood, J. Goldman and S.-O. Hwang for help with my English. Last but not least, I would like to thank those that are most dear to my heart and / or made my life immensely more fun. They know who they are.... Gracias, inike.

A Research Training Grant awarded by the Department of Education,  
Universities and Research of the Basque Government supported this research.

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## Chapter 1: Introduction

It is a central property of human language that phrases can be pronounced in positions different from those in which they are interpreted, as thematic arguments or as modifiers of various sorts. For instance, in (1)a we find the canonical site of object interpretation in English, whereas in (1)b we find the displaced or moved object:

- (1) a. I saw a car.
- b. What did I see \_\_\_\_?
- 

Similarly in (2) and (3) we find variation in the position of the subject, *a man*, in English and in its Spanish equivalent, respectively:

- (2) a. There arrived a man at the station.
- b. A man arrived at the station.
- (3) a. Ha llegado un hombre a la estación.
- b. Un hombre ha llegado a la estación.

Word order has correlated effects on almost every component of the grammar. For instance, the data below exemplify cases of word order variation interacting with morphology, semantics or phonology:

- Morphology { 4.a. There are / There's books on the table.  
b. Books are / \*'s on the table.
- Semantics and Phonology { 5.a. I saw John.  
b. JOHN, I saw, (not Mary).

(4) shows that a postverbal subject DP (Determiner Phrase) need not agree with the verb, whereas a preverbal subject DP must agree. In turn, the two sentences in (5) include the same words with the same grammatical functions (e.g., *John* is the object in both sentences). These sentences differ in word order, and this fact clearly affects the interpretation (e.g., (5)b has a contrastive interpretation that (5a) lacks). (5) also makes the same point with regard to the phonology / phonetics of those sentences, illustrated by capitalizing *John* in (5)b as opposed to (5)a. It goes without saying that the study of word order variations is relevant for understanding the syntactic component.

As a consequence, the study of word order provides a unique perspective on the grammar and how all its components interact. The goal of this thesis is to study word order variations and their relationship to syntactic, morphological, phonological and semantic / pragmatic properties, with an emphasis on the comparative study of Spanish and English. Further attention is paid to the Romance family in general.

Specifically, a number of questions are addressed here. From the realm of Theoretical Linguistics one asks:

- i. Under what conditions does movement take place? E.g., is movement of the subject to the preverbal slot (Spec,TP) obligatory in Spanish (cf. Chomsky 1981, Contreras 1991, Goodall 2001, etc.)?
- ii. How are word order variations to be captured within the biologically-motivated formalism of generative grammar, particularly in its most recent instantiations (e.g. Chomsky 2005a and 2005b). For instance, are there

licensing relations in Spec,H configurations as in Chomsky (1995), a.o., or should these be abandoned as Chomsky (2005a, 2005b, etc.) suggests?

From the realm of phonology / phonetics and pragmatics, one wonders:

- iii. What are the phonological and information structure conditions on such displacements, if any? (For example, how does syntax relate to phonology when fulfilling phonological conditions on word order variation?)
- iv. What are the semantic and pragmatic properties of such variations and why?

In Section 1 of this chapter, I give a roadmap describing how I deal with each of these questions in the dissertation. Then, in Section 2, I introduce the theoretical framework, namely, the Minimalist Program (Chomsky 1995 and subsequent work).

## **1. Structure of the dissertation**

The question of why and where movement takes place, and what its relationship to phonology and semantics / pragmatics is, is dealt with in Chapters 2-4.

Chapter 2 constitutes a study of focalization processes in Spanish. It is argued that Herburger's (2000) Neo-Davidsonian approach to the semantics of focus, as implemented by Uriagereka (2005a and 2008b)) in terms of remnant movement (see Kayne and Pollock 1999; see Ordóñez 2000 for Spanish), allows for a unified treatment not only of new information focus, but also of contrastive focus in the left-periphery and in situ in Spanish (*A JOHN le vi* 'JOHN, I saw' and *Le vi a JOHN* 'I saw JOHN', respectively). A tentative discussion of how this approach might apply to focalization processes in English is also included, arguing that this process takes place covertly, against Kayne (1998).

Chapter 3 and Chapter 4 discuss the relationship between syntactic movement, or *Internal Merge* (IM), and semantics / pragmatics by focusing on the syntax of preverbal subjects in Spanish and English, respectively. There is a growing consensus in the literature that IM adds expressive power to language. For instance, Chomsky (2005: 7) claims that IM yields discourse-related properties such as old information and specificity, along with scopal effects. Similarly, Uriagereka (2008a) argues for the *mapping of a more or less entangled syntax specifically to a semantics of comparable complexity*.

Under the standardly assumed VP-Internal Subject Hypothesis (Koopman and Sportiche 1991 a.o.), preverbal subjects move from *v*P (in the case of transitive and unergative verbs) or VP (e.g., in the case of unaccusatives or passives) to TP. This movement qualifies as complex syntax and, therefore, it is reasonable to expect it to correlate with complex semantics.

Chapter 3 focuses on preverbal subjects in Spanish, and I argue that preverbal subjects in Spanish are the result of movement to Spec,TP, against a base-generation analysis (Alexiadou and Anagnostopoulou 1998, a.o.). The fact that preverbal subjects correlate with surface semantics (e.g., Uriagereka's 2002 categorical judgments or Rizzi 2005's aboutness property of preverbal subjects) is argued to follow from the mapping of complex syntax (IM) onto complex semantics.

The view that preverbal subjects are not base-generated in the C-domain of the clause (e.g., Goodall 2001 and Ortega-Santos 2005, a.o.) is supported with a number of arguments, among them the fact that SVO is the canonical word order in this language. In particular, canonical word order shows that preverbal subjects are

distinct from elements hosted in the C-domain. In the case of apparent counterexamples, namely, presentational unaccusatives, psych verbs and clausal subjects (Contreras 1976) where the canonical order is VS as opposed to SV, it is argued that such recalcitrant instances are explained by independent factors. In particular, elements other than the subject occupy Spec,TP for independent reasons, among them null expletives, for whose existence new evidence is provided.

Chapter 4 addresses a challenge to the view that complex syntax correlates with complex semantics. In particular, movement of the subject into the preverbal slot in English does not seem to result in this kind of *complex* semantics. Two competing hypotheses are tested: The *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* and the *Strict Internal Merge / Surface Semantics Mapping Hypothesis*. The former states that a number of factors might conspire to allow for IM without any expressive enrichment, so that apparent counterexamples to said mapping can be explained away by looking for those conspiring factors. The latter radically denies that there can be IM without adding expressive power and suggests, in cases of apparent counterexamples, a look at the fine grained semantics / pragmatics of the structure to see if it would reveal the existence of surface semantics effects. It is shown that even in English subject movement into Spec,TP correlates with surface semantics, in spite of what a naïve look might suggest at first.

Chapter 5 deals with the issue in (ii.) above (the existence of Spec(ifier),H(ead) relationships in syntax). Recent developments in syntactic theory posit the existence of a Long Distance Agreement mechanism, arguing that grammatically significant Spec,H configurations do not exist (e.g., Chomsky 2005a,

2005b, etc.). This claim is a hallmark of phase-based syntax and, consequently, its evaluation is crucial to our understanding of this framework. The issue is particularly interesting given that there are arguments to the contrary (e.g., Koopman 2006 or Franck, Lassis, Frauenfelder and Rizzi 2006). Specifically, there is a crosslinguistic tendency for moved elements to trigger agreement, as opposed to in situ ones, a fact that calls for an explanation within this framework (Chomsky 2005a). Similar issues arise for any Spec that is not c-commanded by the head expected to license it (e.g., certain phrases base-generated in A-bar positions). In view of these facts, I argue that conceptual arguments against Spec,H relations (e.g., Chomsky (2005a, 2005b) can be circumvented and that Spec,H relations do, in fact, exist in the system, though not in the traditional guise. Following Ortega-Santos (2008), I adopt a Multiple Spell-Out framework (Uriagereka 1999) arguing that alleged evidence for Spec,H relations should be understood as H,H relations, under the assumption that Specs behave like heads in the course of the derivation, a possibility suggested by Chomsky (2001) under different theoretical assumptions. This approach actually expands the current inventory of licensing conditions / configurations, going back to a fruitful line of research in the 90's (e.g. Chomsky 1995), a result that has far reaching consequences.

## **2. A Minimalist Program for Linguistic Theory**

The purpose of this section is to present the main features of the so-called Minimalist Program (Chomsky 1993 and subsequent work). Minimalism and Generative Grammar, in general, view the Faculty of Language as an “organ” of the mind / brain. From this perspective, a given *language* is a particular state of the

Faculty of Language, an I-language, whereas Universal Grammar (UG) is the theory of the initial state of that faculty. Within the presupposed biolinguistic perspective, three factors exist that interact to determine (I-) languages attained: ‘genetic endowment (the topic of Universal Grammar), experience, and principles that are language- or even organism-independent.’ (Chomsky 2005b: 1).

One crucial research question that the MP asks is ‘how much of language can be given a principled explanation, whether or not homologous elements can be found in other domains or organisms’ (Chomsky 2005:2). Chapters 2-5 will focus on this kind of question by looking at the relationship between IM and semantics.

Within the MP these questions are addressed with an emphasis on economy, locality, conceptual elegance and the Strong Minimalist Thesis (SMT) (Chomsky 2000, 2001a, 2001b). According to this thesis, language is an optimal way to link sound and meaning, where these notions are given a technical sense in terms of the interface systems that enter into the use and interpretation of expressions generated by an I-language.

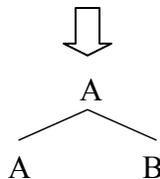
## **2.1. Technical details of the MP relevant to this research**

The purpose of this section is to introduce the technical aspects of the MP that will play a role in this dissertation (other important, though at this point irrelevant, features of this program will be left aside). The reader can read Chomsky (1995), Uriagereka (1998), Hornstein, Nunes and Grohmann (2005) and Lasnik and Uriagereka (2005) for perspective.

In the MP, the Faculty of Language is taken to consist of a *Lexicon* and a *Computational System* ( $C_{HL}$ ), also known as ‘narrow syntax’. The Lexicon makes *Lexical Items* (both lexical and functional ones) available to the computational system. These Lexical Items have phonological, semantic and formal properties. The computational system makes a one time selection of Lexical Items originating a *Lexical Array*. Lexical Arrays are accessed cyclically by means of so-called *numerations*. In turn, the Lexical Items of the numerations are put together using the Merge operation. There are two subcases of the Merge operation. Given a numeration, the  $C_{HL}$  can take Lexical Items A and B from the said numeration and merge them together. This is known as *External Merge* (EM), in the sense that we merge B to A from outside of A. Alternatively, given a syntactic object already formed, SO, we can merge B from within SO. This is *Internal Merge* (IM), also known as ‘Move’ or displacement, in keeping with the idea that language is a system of discrete infinity consisting of hierarchically organized objects. This can be illustrated in the following way, where I leave out irrelevant details:

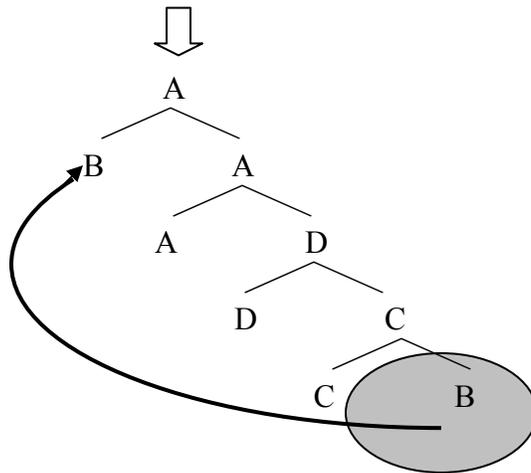
(6) a. *External Merge* (EM)

Numeration: {A, B}



b. *Internal Merge (IM)*

Numeration: {A,B, C, D}

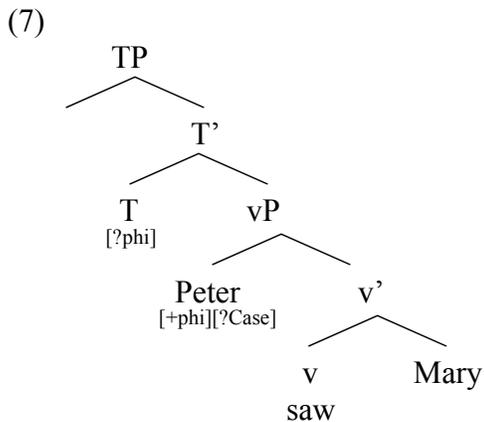


What motivates EM and IM? The formal properties or Formal Features of Lexical Items are the driving force of the derivation, because they are the triggers for the operations in narrow syntax. With regard to EM, it seems reasonable to assume that feature sharing plays a role (cf. Frampton and Gutman 2000, Boeckx 2002 and Pesetsky and Torrego 2006). In turn, IM is implemented as follows:

A formal feature can be either [+ interpretable] or [- interpretable] / unvalued. [+ Interpretable] features receive an interpretation by the C-I system but [- interpretable] or unvalued features cannot. Functional heads (v, T or C) are introduced into narrow syntax with a set of non-interpretable features. Inasmuch as these uninterpretable features are uninterpretable at the interfaces, they must be checked off / valued before reaching the interfaces, or else the derivation will not converge. This valuation procedure is accomplished via the operation *Agree*. In particular, feature-values for these heads are obtained from DPs which carry identical [+interpretable] or valued features. DPs, in turn, must carry non-interpretable Case, which gets valued as a reflex of phi-feature checking with the relevant heads.

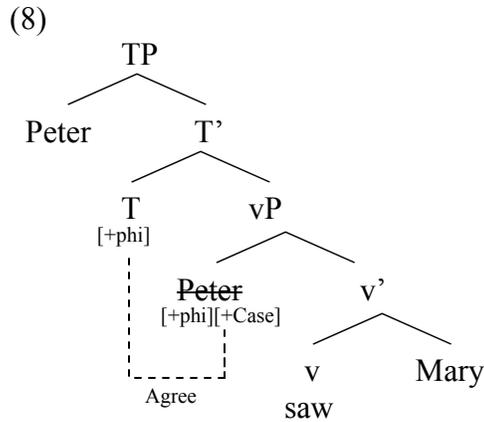
Valuation of uninterpretable features (phi-features on functional heads and Case features on DPs) entails marking these features for deletion. The elimination of the relevant features is assumed to take place as part of the process whereby the derivation reaches the interfaces.

This will be illustrated by the relationship between Tense (T) and a subject after introducing the standard clausal structure. The standard clausal structure is taken to encompass (at least) the following projections, where this is illustrated for *Peter saw Mary*, assuming that *Peter* is generated in Spec,vP (cf. Koopman and Sportiche 1991 a.o.):

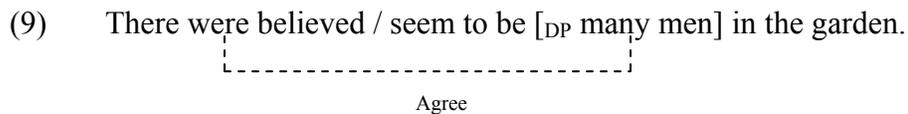


According to Agree, a head with unvalued uninterpretable features (a *Probe*) identifies the *closest Y / YP in its c-command domain* with the relevant set of visible matching interpretable features (a *Goal*), and uses the interpretable features of Y / YP to value its own uninterpretable features. In (7), the head T has unvalued or uninterpretable phi-features (nominal features), whereas *Peter* has valued or interpretable phi-features and unvalued Case features. The Agree relation results in the phi-features of T and the Case features of the DP being valued, and as a consequence, the derivation can reach the interfaces without crashing. Note that this

valuation is independent of movement. In particular, T is taken to have an independent EPP feature that forces *Peter* to move to the Spec of T.



Moreover, the syntax of constructions involving expletives provides an independent argument for the existence of Agree (also known as Long-Distance Agreement, LDA), in that the phi-features of the verb are determined by a DP that is not in a local relation with the verb in point:



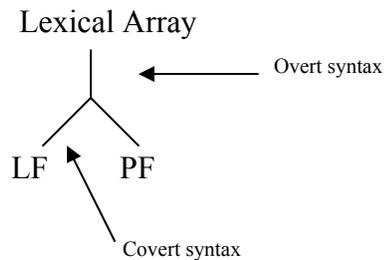
Agree is subject to locality (cf. the closest c-command condition above) and the Activity Condition (for Probes and Goal to enter into the Agree relation they must have unvalued or uninterpretable features)<sup>1</sup>. Furthermore, in an Agree relation between  $\alpha$  and  $\beta$ ,  $\beta$  must be featurally / phi-complete to value the uninterpretable features of  $\alpha$ .<sup>2</sup>

<sup>1</sup> The Activity Condition does not apply to the computation of locality, e.g., an inactive element is taken to be a valid intervener.

<sup>2</sup> According to Chomsky (2001a), participle-object constructions exemplify this point in certain languages, as they manifest phi-agreement but do not assign Case.

The Computational System is assumed to feed (at least) two interface levels, namely, Phonological Form (PF) (the input to the sensori-motor component of the mind / brain) and Logical Form (LF) (the input to the conceptual-intentional systems of the mind / brain). The process whereby the derivation reaches the interfaces is known as *Spell-Out* for PF and *Interpret* for LF, though sometimes the term *Spell-Out* applies to both interfaces under the assumption that both *Interpret* and *Spell-Out* take place at the same point in the derivation. Pre-*Spell-Out* operations, such as IM, are assumed to have an overt reflex. Operations that take place after *Spell-Out* on the LF side (e.g., scope marking at odds with the relations established in narrow syntax) are covert.

(10) *Single Spell-Out*

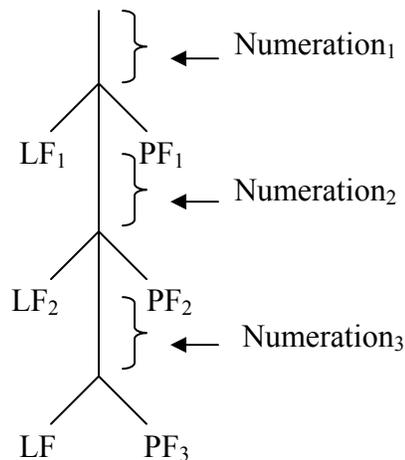


Recent developments have precipitated a change from a single *Spell-Out* to a *Multiple Spell-Out Model*. Within Chomsky's system, both *C* and *v* are cyclic nodes (concretely, *phases* corresponding to the cyclic access to Lexical Arrays or Numerations, as shown above). The propositional nature of *C* and *v* is taken to be responsible for this state of affairs.<sup>3</sup> This model can be illustrated as follows:

---

<sup>3</sup> See Boeckx and Grohmann (2007) for a critical review of this aspect of the framework.

(11) *Multiple Spell-Out*



By assumption, formal features (EPP features among them) are assigned to phase heads, and functional heads, such as T, may inherit them from these phase heads. For example, T would inherit its features from C. Furthermore, for meaningful cyclic computation (to allow for successive-cyclic movement among other phenomena) phases are not spelled-out as a whole (abstracting away from root clauses). Given the phase (PH) in (12),  $\alpha$  is the Spec of H, the head of the projection hosting it. The Spec  $\alpha$  and the head H constitute the *edge* of PH. According to Chomsky,  $\beta$ , the complement of H, is spelled-out at PH, but the edge is not:

$$(12) \quad \text{PH} = [\alpha \text{ [H } \beta]]$$

This derives the *Phase Impenetrability Condition* (PIC):

(13) The (complement) domain of H is not accessible to operations, but only the edge of HP. (Chomsky 2004: 108)

Still another, in fact complementary, Multiple Spell-Out system is presented in Uriagereka (1999), where the chunks that reach the interfaces are determined by

Linearization purposes. This system will be presented in detail in Chapter 2, Section 2.1.4 (see Chapter 4, Section 2.1.5, and Chapter 5, Section 2, for further discussion).

After this brief introduction to the framework, in the next chapter I look at focalization processes in Spanish and English. In this chapter, I address the issues in (iv.) and (v.) above, repeated here for the sake of exposition:

- iv. What are the phonological and information structure conditions on such displacements, if any? (E.g., how does syntax relate to phonology when fulfilling phonological conditions on word order variation?)
- v. What are the semantic and pragmatic properties of such variations and why?

## Chapter 2: When *focus* is the focus

In this chapter, I will be presenting a syntactic / semantic-centric treatment of word order variations determined by focus in Spanish. According to this account, these variations in word order correspond to syntactic variation, in conjunction with the semantic component. Specifically, it will be argued that Herburger's (2000) Neo-Davidsonian approach to the semantics of focus, as implemented by Uriagereka (2005a and 2008b), allows for a unified treatment of new information focus and contrastive focus in the left-periphery and in situ in Spanish. Evidence will be provided for the fact that both rightmost new information focus and left-periphery focus in this language entail movement of the focused phrase to the left-periphery of the clause, while the former is followed by what amounts to topicalization of TP past the focused phrases (Ordóñez 2000 and Uribe-Etxebarria 2002). The presence or absence of this kind of topicalization is argued to be related to contextual anchoring (Raposo and Uriagereka 1995); that is to say, to the way the sentence relates to the context. In turn, in situ contrastive focus is argued to undergo the same processes / movement, though covertly. The pros and cons of this approach for focalization in English will be explored here, arguing that, as in the case of in situ focus in Spanish, these processes take place covertly, in that regard contra Kayne (1998).

Section 1 presents the properties of focus in Spanish. Subsection 1.1 discusses new information focus and a number of treatments put forth to deal with it. Subsection 1.2 illustrates the properties of contrastive focus. Section 2 argues that Herburger's (2000) Neo-Davidsonian approach to the semantics of focus, as

implemented by Uriagereka (2005a and 2008b) in terms of remnant movement, allows for a unified treatment new information focus, focus movement to the left periphery and in situ focus in Spanish. Subsection 2.3 deals with focalization in English, suggesting that this very process takes place covertly.

### **1. On focalization in Spanish <sup>4</sup>**

The purpose of this section is to introduce the properties of focalization processes in Spanish. For the purpose of this discussion, focus refers to the new information that is being asserted in any given proposition. It is “the part of the sentence that answers the relevant wh-question (implicit or explicit) in the particular context in which the sentence is being used” (Gundel 1994 in Casielles-Suárez 2004: 144).

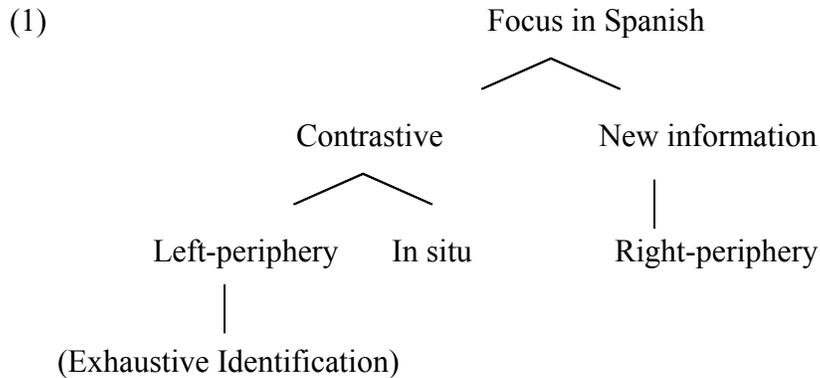
Focalization processes in Spanish can be summarized as follows: New information focus shows a rightmost requirement within the sentence and is non-contrastive. Contrastive focus, on the other hand, comes in two flavors: Left-periphery focus is contrastive and exhaustive. In situ focus is contrastive, though ambiguous in terms of exhaustiveness: It may or it may not express exhaustiveness.<sup>5</sup> This is summarized in the following figure, adapted from Domínguez (2004: 214):

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<sup>4</sup> In what follows I abstract away from focalization via clefting, e.g.:

i. Es a Pedro a quien vi.  
Is to Peter to whom saw-I  
'It is Peter that I saw'

<sup>5</sup> Exhaustive identification identifies a unique referent from the context to be interpreted as Focus.



### 1.1. On new information focus and sentence stress

Descriptively, Spanish shows unmarked rightmost sentence stress. This is illustrated in (2), where the whole sentence constitutes new information.

(2) Qué ocurre?<sup>6</sup>

‘What’s going on?’

Pedro le dio un libro a MARIA. *Neutral word order & default stress*

Pedro gave a book to MARIA

‘Pedro gave a book to María.’

The picture changes slightly when only one constituent of the sentence is focused. Below, I use the question / answer pair to determine the focus of the sentence (cf. the previous section). The most natural answer to any question is the linguistic unit (phrase, word, etc.) that constitutes new information, and to avoid adding the presupposed part. In this sense, the sentences to be discussed next sound slightly odd, inasmuch as they repeat presupposed material. Still, once one abstracts

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<sup>6</sup> In Spanish, an inverted question mark is used to begin interrogative sentences:

i. ¿Qué ocurre?  
 ‘What’s going on?’

Throughout this work, I do not include such initial question marks to avoid that readers unfamiliar with this practice may get confused.

away from this factor, in Spanish new information comes last and bears sentence stress for most speakers, as seen in (3)-(5):<sup>7</sup>

(3) Quién le dio un libro a María?

‘Who gave a book to María?’

Le dio un libro a María PEDRO. *Subject: new information + sentence stress*

Gave a book to María PEDRO

(4) Qué le dio Pedro a María?

‘What did Pedro give to María?’

Pedro le dio a María un LIBRO. *Acc. object: new info + sentence stress*

Pedro gave to María a BOOK

(5) A quién le dio Pedro un libro?

‘To whom did Pedro give a book?’

Pedro le dio un libro a MARIA. *Dat. object: new info + sentence stress*

Pedro gave a book to MARIA

These sentences show that the rightmost requirement on sentence stress found in (2) is also fulfilled when only one constituent of the sentence constitutes new information in that the focused item, which bears sentence stress, appears at the right edge of the sentence (Zubizarreta 1998). One would like to know whether syntax allows for this kind of mapping autonomously or whether prosody drives syntax so as to derive this state of affairs (e.g., see Zubizarreta 1998). It will be shown that a theory of the former kind provides an insight not only into the relationship between syntax and

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<sup>7</sup> It should be mentioned that this tendency is strong but, nonetheless, some speakers find acceptable answers exhibiting canonical word order. I will abstract away from this fact for the time being, focusing on the grammar of those speakers who agree with the judgments above. I will return to this issue once it becomes relevant in Section 2 of this chapter.

sentence stress conditions, but also into the relationship between syntax and the semantics of focus.

### **1.1.1. Evaluation of previous approaches to new information focus**

The goal of this section is to briefly comment on some alternatives to capture the properties of new information focus. In order to do this, I focus on the preverbal / postverbal (SVO / VOS) distribution of subjects, as this is the word order variation caused by focus that has captured more attention in the literature. This variation in Spanish and Romance Null Subject Languages, in general, is captured by positing any of the following processes: <sup>8</sup>

- (i) Regular movement of the subject to TP (SVO order) vs. right adjunction to some projection (VOS order; Torrego, 1984)
- (ii) Regular movement of the subject to TP (SVO) vs. movement to a Focus projection at the VP periphery, with movement of the VP to a clause internal Topic projection higher than said Focus projection (VOS; Belletti 1999)
- (iii) Regular movement of the subject to TP (SVO) vs. p(rosodic)-movement of presupposed phrases past the subject (VOS; Zubizarreta, 1998)<sup>9</sup>
- (iv) All arguments and the verb vacate  $vP$  / VP, arguably for Case checking purposes (Chomsky 1991, 1995) and PF chooses which copy to pronounce (cf. Ortega-Santos 2006a and 2006b, following Stjepanic's 1999 analysis of Serbo-Croatian)

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<sup>8</sup> See Chapter 3 for relevant discussion of the idea that preverbal subjects are dislocated, whereas postverbal subjects are in situ (e.g., Alexiadou and Anagnostopoulou 1998 a.o.).

<sup>9</sup> For Zubizarreta, in the VOS order the objects move past the subject sitting in Spec, $vP$  for prosodic reasons (to allow the subject to be assigned stress at the rightmost position of the sentence).

- (v) Regular movement of the subject to TP (or clitic left-dislocation of the preverbal subject; SVO) vs. or object scrambling past the subject (VOS order; Ordóñez 1998 and Gallego 2007)
- (vi) Regular movement of the subject to TP (SVO order) vs. remnant movement (VOS order; Kayne and Pollock 1999 for French and Ordóñez 2000 for Spanish)

As far as (i.) is concerned, even if one allows right adjunction into the system, it is not clear what would drive this operation or, more generally, what would determine the choice between right and left adjunction.<sup>10</sup>

Furthermore, minimalist desiderata are at odds with the proliferation of projections in the clausal skeleton, such as clause internal topic / focus projections at the VP-periphery (Belletti 1999).

In turn, for Zubizarreta (1998), the focused elements come to be last as a consequence of prosodically-motivated movement that scrambles non-focused elements past the focused element, if necessary. This prosodically-motivated movement applies in order for new information focus and sentence final stress to converge. This modifies the standard framework in that it fails to implement movement as a feature-checking operation and, most importantly, it goes against one of the basic tenets of the generative enterprise: the T-model, where *syntax is not affected by PF and semantics and phonology do not ‘talk to each other’*.

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<sup>10</sup> Norbert Hornstein (p.c.) suggests a consistent interaction between new information focus and right adjunction, a link that would avoid such a criticism. Still, I find problems with such a view: At least the Nuclear Stress Rule of Zubizarreta (1998), a Sentence Stress Assignment algorithm, is sensitive to c-command. As a consequence, the ‘rightmost’ requirement on new information focus and Kayne’s (1994) Linear Correspondence Axiom (LCA), a linearization procedure where c-command maps onto precedence, conspire to bar this possibility. In particular, right adjunction does not alter c-command relationships and, therefore, does not generate the right word order (where focused elements appear sentence finally) within Kayne’s LCA.

A PF-centric approach arguing that the SVO / VOS alternation constitutes variation at PF, as opposed to variation at the level of the syntax (cf. Ortega-Santos 2006a and 2006b), faces an obvious issue: it is not clear what drives the movement of arguments out of *vP* / *VP*, given that in current terms Case can be checked in situ (cf. Chomsky's LDA mechanism in Chapter 1.).

An analysis of VOS in terms of object scrambling (Ordóñez 1998) faces the problem that there is (indirect) evidence that the postverbal subject has moved to FP in the left-periphery of the clause. In particular, as is discussed in Section 2 of this chapter, objects that constitute new information focus license parasitic gaps (see (6)), which are generally taken to be licensed by movement to the left-periphery, as seen below (see (7) and (8) for *wh*-movement and left-periphery contrastive focus, respectively):

(6) Qué (libros) tiraste sin haber leído \_\_\_\_?

What (books) threw-you without have read \_\_\_\_?

'What / Which books did you throw away without reading?'

Tiré sin haber leído *DON QUIJOTE Y LA COLMENA*.

threw-I without have read *DON QUIJOTE Y LA COLMENA*

'I threw away *Don Quixote* and *La colmena* without reading them.'

(7) Qué (libros) tiraste sin haber leído \_\_\_\_?

What (books) threw-you without have read \_\_\_\_?

(8) (*Hasta*) *DON QUIJOTE Y LA COLMENA* tiré sin haber leído \_\_\_\_.

(*Even*) *DON QUIJOTE AND LA COLMENA* threw-I without read \_\_\_\_

These sentences provide evidence that objects which constitute new information as in (6) have undergone movement to a Focus Phrase (FP) in the left-periphery. The rightmost position of the focused object, under this view, should be achieved via topicalization of TP past the object in FP. This kind of derivation is known as remnant movement (Kayne and Pollock 1989). Inasmuch as subjects in the VOS order constitute new information focus, it is plausible to conclude that those subjects also have moved to the left-periphery of the clause.

Still, an approach in terms of remnant movement (e.g., Kayne and Pollock 1989 for French and Ordóñez 2000 for Spanish) clearly faces the problem of what motivates the necessary movements to derive the postverbal subject position. In Section 2 of this chapter, it is argued that said movements follow within a framework adopting Herburger's (2000) treatment of focus in Neo-Davidsonian terms, as implemented in Uriagereka (2008b), together with the context-anchoring mechanism put forward in Raposo and Uriagereka (1995). Note that, within this approach, the mapping between new information focus and the rightmost requirement on sentence stress is satisfied while maintaining the autonomy of syntax with respect to prosody.

Next, I illustrate the properties of contrastive focus in Spanish.

## **1.2. On focus movement to the left periphery and in situ focus**

According to Domínguez, left-periphery focus is contrastive and exhaustive, and in situ focus is contrastive, though ambiguous in terms of exhaustiveness. The evidence in favor of this division comes from the following data (from Domínguez 2004, unless otherwise noted; the focused constituent is marked by '[F...]'):

(9) Speaker A: [F La mesa] ha roto Javi.  
[F The table] has broken Javi  
'It is the table that Javi has broken.'

Speaker B: No, y la silla también.  
No, and the chair, too  
'No, he has broken the chair, too.'

(10) Speaker A: Javi ha roto [F la mesa]  
Javi has broken [F the table]  
'Javi has broken the TABLE.'

Speaker B: #No, y la silla también.  
#No, and the chair, too

In (9), the assumption is that *Javi* broke only one object. As a consequence, one can negate exhaustiveness. This contrasts with in situ focus, which is ambiguous – it may or may not be exhaustive. As a consequence, in (10), there is at least one interpretation where exhaustiveness cannot be negated, hence the infelicity of Speaker B's utterance. Moreover, in order for contrastive phrases in Spanish to be fronted, they have to relate to known referents available in the context. This state of affairs is exemplified in (11)-(13). Specifically, if speaker A offers somebody something to eat, for instance, in the context that both interlocutors are in a room where some treats are on display, (12) is the appropriate answer. In contrast, in a context where the possible edible items are not (as) obvious (e.g., they are not in front of the speakers), in situ focus is preferred, (13) (Domínguez 2004: 201-202):

- (11) Speaker A: Quieres algo de comer?  
‘Would you like something to eat?’
- (12) Speaker B: [<sub>F</sub> Helado] quiero  
ice-cream wants-1s  
‘It is ice-cream what I feel like having’
- (13) Speaker B: Quiero [<sub>F</sub> helado]  
wants-1s ice-cream  
‘I feel like having ice-cream.’

## **2. The remnant movement approach revisited**

Having presented the properties of focalization processes in Spanish, I will now provide a unified treatment of these processes. Specifically, I will argue that Herburger’s (2000) Neo-Davidsonian approach to the semantics of focus, as implemented by Uriagereka (2005a and 2008b) in terms of remnant movement, allows for a unified treatment not only of new information focus (cf. Section 1.1 of this chapter), but also of focus movement to the left periphery and in situ focus in Spanish (cf. Section 1.2 of this chapter).

Section 2.1 presents Herburger’s Neo-Davidsonian approach to focus and the corresponding reinterpretation by Uriagereka. Section 2.2 shows how the properties of new information and contrastive focus in this language can be captured by that approach. Section 2.3 explores the pros and cons of applying this analysis to focalization processes in English, arguing for covert remnant movement, against Kayne (1998).

## 2.1. Herburger's (2000) Neo-Davidsonian approach to focus

This section introduces the Neo-Davidsonian approach to focus developed in Herburger (2000) and the corresponding syntactic implementation argued for in Uriagereka (2005a). First, the Neo-Davidsonian framework is introduced, then Herburger's proposal concerning focus and, finally, Uriagereka's implementation.

### 2.1.1. The Neo-Davidsonian framework: Sentences as descriptions of events

Under an understanding of events in a broad sense that also includes states, within the Neo-Davidsonian framework it is claimed that sentences are descriptions of events. In particular, verbs translate as one-place predicates of events and arguments are tied to the verb only indirectly, through a relation that links an event described by the verb to the participants in that event. This allows for a meaningful treatment of adverbials (cf. Davidson's 1967 original argument) and for genuinely optional arguments. As Herburger (2000) shows with regard to adverbs, the fact that (14)a entails (14)b is easily captured by (15)a and (15)b respectively:

- (14) a. Brutus stabbed Caesar in the back with a knife.  
b. Brutus stabbed Caesar.

- (15) a.  $\exists e$  (Stab(e) & Past(e) & Agent(e,brutus) & Theme(e,caesar) & In-the-back(e) & With-a-knife(e))

'There was a stabbing whose agent was Brutus, whose theme was Caesar, which was a stabbing in the back, and which was a stabbing with a knife.'

- b.  $\exists e (\text{Stab}(e) \ \& \ \text{Past}(e) \ \& \ \text{Agent}(e, \text{brutus}) \ \& \ \text{Theme}(e, \text{caesar}))$

‘There was a stabbing whose agent was Brutus, whose theme was Caesar.’

Parsons (1990), in turn, argues that some arguments can be genuinely optional, e.g., datives:

- (16) a. Mary wrote a note  
b. He said something.

Here, there is no implication that the note was written to somebody or that something was said to somebody (cf. Herburger 2000: 8). Full-fledged decomposition of the verb involving the separation of the arguments into their own conjuncts can capture this.

### **2.1.2. Focus within the Neo-Davidsonian framework (Herburger 2000)**

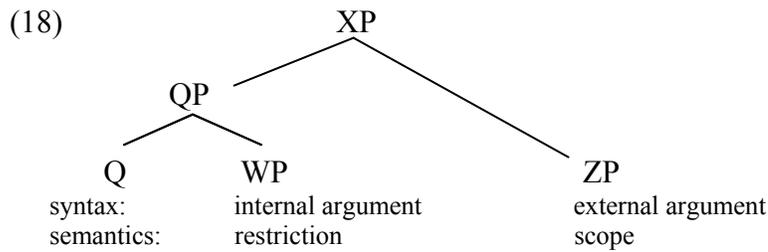
According to Herburger (2000), focus affects quantificational structure. In particular, focus reshapes the quantificational structure of the tacit Neo-Davidsonian event quantifier (here treated as a restricted quantifier) after quantifier scope is assigned. As a consequence, all the nonfocused material in the scope of the event quantifier  $Q$  also restricts  $Q$ . This means that the structured Davidsonian decomposition of (17)a will give us the translation in (17)b:

- (17) a. Rosalía wrote A POEM.

b.  $[\exists e: C(e) \ \& \ \text{Agent}(e, \text{Rosalía}) \ \& \ \text{Write}(e) \ \& \ \text{Past}(e)] [a \ x: \text{Poem}(x)]$

$\text{Theme}(e, x) \ \& \ \text{Agent}(e, \text{Rosalía}) \ \& \ \text{Write}(e) \ \& \ \text{Past}(e)$ <sup>11</sup>

(17)b states that some relevant past event of writing, whose agent was Rosalía had a poem as its theme and was a past event of writing, whose agent was Rosalía. What is relevant for present purposes is the LF implementation of this approach. Under the standard assumption that a quantifier's internal argument is interpreted as its restriction and its external argument is interpreted as the scope of the quantified phrase, the LF implementation is as follows:



This can be illustrated in the following example, where the tacit event quantifier is represented as ~~some~~time, (for events):

(19) Rosalía ~~some~~time wrote A POEM.

(20) a.  $[\text{~~some~~time} [\text{Rosalía wrote A POEM}]]$

b.  $[[\text{~~some~~time} [\text{Rosalía wrote}]] [\text{Rosalía wrote A POEM}]]$

---

<sup>11</sup> Herburger (2000) assumes that every quantifier is restricted by a context predicate C, whose value is fixed by the context of the utterance. Furthermore, for the sake of concreteness, she assumes that *a poem* takes narrow scope.

### 2.1.3. Syntactic implementation of the Neo-Davidsonian approach to focus

In the Neo-Davidsonian terms argued for by Herburger (2000), the following state of affairs obtains:

- (21)
- a. Event quantification is restricted (binary).
  - b. The predicate content of any given quantified expression is copied so that it appears twice in the structure.
  - c. One of those copies becomes part of the restriction of the event quantifier.
  - d. The other copy *minus the focused material* becomes part of its scope.

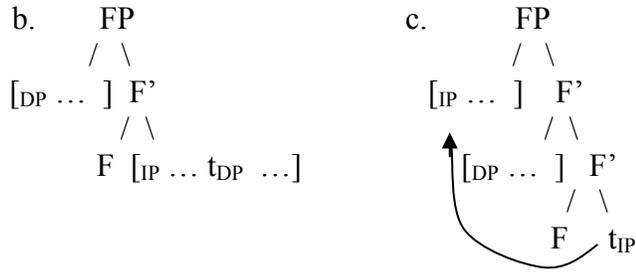
Uriagereka (2005a and 2008b, cf. also Hornstein, Lasnik and Uriagereka 2007) suggests that a possible syntactic configuration to express the semantics in (21) can be attained by remnant movement, which has the effect of reprojection.<sup>12</sup> This entails that the syntax of focused elements in Spanish is as follows (trees taken from Hornstein, Lasnik and Uriagereka 2007: 8):

(22) *Remnant movement / Reprojection of focus* (Uriagereka 2005a)

- a.
- |         |               |
|---------|---------------|
|         | FP            |
|         | / \           |
| matrix  | F'            |
| (focus) | / \           |
|         | F restriction |

---

<sup>12</sup> According to Hornstein and Uriagereka (1999), reprojection is a process whereby a phrase marker's label changes in the course of the derivation. This process allows binary quantifiers to take scope (at LF). See Hornstein and Uriagereka (1999) for details. See Chapter 5, Section 2.1.3, for further discussion.



This approach is appropriate for the syntax of Spanish because it deals successfully with the rightmost requirement on new information focus (cf. Zubizarreta 1998), given that the focused element ends up at this phonological position.

Ordóñez (2000) independently argues for a remnant movement approach, providing a number of arguments with various degrees of success (cf. Ortega-Santos 2006a for discussion; cf. also Uribe-Etxebarria 2002 for further relevant discussion; cf. Ortíz de Urbina 2002 and Irurtzun 2007 for related approaches to Basque). What is new at this point is how the idea fits with the Neo-Davidsonian approach to focus. Below, I explore this analysis arguing that (i.) novel evidence supports this approach and (ii.) the steps of the remnant movement operation are independently motivated, as part of the process of contextual anchoring (Raposo and Uriagereka 1995), thus avoiding the major criticism against the remnant movement account.

#### 2.1.4. Some movement around islands

The guiding idea of Uriagereka's (1999) Multiple Spell-Out (MSO) proposal is that Specs are flattened 'for the purposes of linearization', a fact that derives Huang's (1982) Condition on Extraction Domains. Uriagereka's approach addresses some shortcomings of the Linear Correspondence Axiom as originally formulated

(Kayne 1994). Kayne’s proposal concerning linearization essentially includes a Base step and an Induction step:

(23) *Linearization Procedure for Terminal elements*

- a. Base: If X asymmetrically c-commands Y, X precedes Y.
- b. Induction: If X is dominated by Z, and Z precedes Y, X precedes Y.

The intuition behind the induction step is this: if we cannot linearize X with respect to Y because neither X nor Y asymmetrically c-command the other (cf. (24)), we must look at X's mother, Z; if we can, somehow, linearize Z (typically, we will do this through the base step of (23)), then we will treat Z's daughters as if they were already linearized with respect to whatever we have linearized in terms of Z.

(24)

$$\begin{array}{c}
 \text{YP} \\
 / \quad \backslash \\
 \text{ZP} \quad \text{Y}' \\
 / \quad \backslash \quad / \quad \backslash \\
 \text{X} \dots \text{Y} \dots
 \end{array}$$

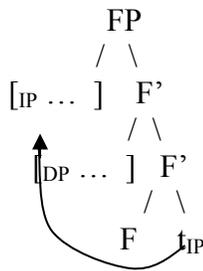
According to Uriagereka, the stipulative Induction step is unnecessary. The logic of the MSO proposal is to spell-out ZP prior to connecting it to the structure which is still live in the derivation. If, prior to ZP’s combination, the system had *already decided upon its linearity properties* -having sent that chunk of structure to Spell-Out- then the elements under ZP would be frozen in place. As a consequence, the issue that motivates the Induction step does not arise and Specs should be opaque for extraction. This framework derives Huang’s (1982) Condition on Extraction Domains (see Chapter 4, Section 3, and Chapter 5, Section 2, for further discussion of Uriagereka’s proposal).

A problem for Uriagereka's MSO system is that extraction out of postverbal subjects is more or less marginally grammatical in Spanish (cf. (25)a and (25)b):

- (25) a. De qué dice Pedro que ha llegado un libro?  
of what says Pedro that has arrived a book?
- b. \*? De qué dice Pedro que un libro ha llegado?  
of what says Pedro that a book has arrived?

According to native speakers, in (25)a *a book* constitutes new information. In contrast, in (25)b *a book* constitutes presupposed information. This fact actually draws the line between both examples. If the postverbal subject (*a book*) is focused in (25)a and the rest of the clause has undergone remnant movement, then the subject is sister to an element that will not be pronounced:

(26)



As a consequence, Spell-Out of this subject is not forced and, consequently, it does not become an island, in contrast to the regular fate of Specs under the MSO system (Uriagereka 2005a and 2008b, and Hornstein, Lasnik and Uriagereka 2007). This explains the contrast in (25), as the subject becomes an island only in (25)b, where it constitutes presupposed information and its sister *has arrived* is pronounced. In contrast, the subject in (25)a has the same spell-out properties as an object in a regular SVO structure, meaning it is not an island because it is not forced to spell-out as a

unit, but rather undergoes spell-out with the XP containing it. This way, the puzzle that the MSO system faces is solved. Inasmuch as this system can deal successfully not only with linearization properties, but also with Huang's generalization and the puzzling data from Spanish, it gains further support.

In the next section, other arguments in favor of the remnant movement approach to new information focus in Spanish are provided. Later sections will discuss how the approach deals with left-periphery and contrastive focus.

### **2.1.5. Evidence in favor of the Neo-Davidsonian approach to new information**

Support for the remnant movement / Neo-Davidsonian approach comes from (i.) the fact that pragmatic effects, like focus, are traditionally linked to movement (Chomsky 1978, 2006, etc.; see Chapters 3 and 4 below for detailed discussion of the link between pragmatics effects and movement), (ii.) the interpretation of bare NPs, as discussed by Longobardi (2000), (iii.) scope relations between negation and subjects and (iv.) facts concerning parasitic gaps and Weak Crossover effects.<sup>13</sup>

As stated, there is a tradition linking focus to movement, thus underscoring the parallelism between focus and quantifier raising (e.g., Chomsky 1978). Recently, there is an intuition in the literature that IM, or syntactic movement, correlates with surface semantics (Chomsky 2000, 2006, etc.; see Chapters 3 and 4 for detailed

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<sup>13</sup> Ordóñez (2000) argues that, in the VOS order, the object c-commands the subject. This does not directly argue against the remnant movement approach, but it does not support the remnant movement analysis of postverbal subject either. The most natural instantiation of remnant movement starts from an SVO structure, then moves the subject to the left and, subsequently, moves the VP or TP past the subject. There is no point in the derivation at which the object c-commands the subject. Therefore, such facts should result from still another operation moving the object to a position where it c-commands the subject (see Ordóñez 2000 for discussion). Note that this object shift is independently needed for objects to be able to precede adverbs, under the standard assumption that VP adverbs are generated higher than objects. See Gallego (2007) for further discussion on object shift in Spanish.

discussion). For example, according to Chomsky (2006: 8), ‘the two types of Merge correlate well with the duality of semantics that has been studied from various points of view over the years. EM yields generalized argument structure, and IM all other semantic properties: discourse-related and scopal properties.’ Under the strongest interpretation of this view, focalized elements subject to the rightmost requirement on new information focus should be the result of movement.

Furthermore, the interpretation of bare NPs provides another argument for the remnant movement account. In particular, Longobardi (2000) argues that, in Italian, postverbal bare NPs with a generic interpretation are the result of remnant movement. The evidence in favor of this analysis is provided by the fact that preverbal and postverbal bare NPs with a generic interpretation show similar constraints and prosodic features. Under a remnant movement approach, the (overtly) postverbal generic bare NPs end up at the postverbal position via movement through the position hosting preverbal bare NPs. This approach explains why preverbal and postverbal generic bare NPs have so many features in common. This analysis accords well with Diesing’s (1992) Mapping Hypothesis.<sup>14</sup> From this hypothesis, it follows that generically bound DPs cannot occur inside VP, in contrast to existentially bound DPs.

There seems to be some dialectal variation in Spanish as to whether bare NPs can have a generic interpretation (cf. Benedicto 1998 and Casielles-Suárez 2004 in this regard), but, nonetheless, Longobardi’s argument is straightforwardly applicable

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<sup>14</sup> The two main theorems of the Mapping Hypothesis read as follows:

- i. a. Gen only binds variables outside VP.
- b. Ex only binds variables inside VP.

I do not follow the specifics of this hypothesis, based on DRT (Discourse Representation Theory; see Kamp 1984) conceptions of grammar. Still, the mapping might be true in some form (cf. Hornstein 1995). Within the resulting approach, these would not be theorems but postulates of some sort.

to Spanish. Specifically, generic bare NPs, whether preverbal or postverbal, are separated by an intonation break from the rest of the sentence and need to be modified to yield a grammatical result. These facts are relevant in the present context because, at the very least, they provide evidence that remnant movement applies to ‘superficially’ postverbal generic bare NPs.<sup>15</sup>

First, these matters are illustrated with Italian (Longobardi’s data), then with Spanish. Constraints on preverbal bare NPs are exemplified in (27) and (29), respectively. In turn, the postverbal bare NP facts are illustrated in (28) and (30), respectively.

(27) *Italian*

a. \**Medici vengono chiamati spesso.*

doctors are called up often

b. *Medici del reparto di pronto intervento vengono chiamati spesso.*

*(Ex / Gen)*

doctors of the first aid department are called up often

‘It is often the case that doctors (of the first aid department) are called up.’

*or*

‘Doctors (of the first aid department) have the property that they are called up often.’

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<sup>15</sup> Under the current approach, existential bare NPs, which constitute new information focus, undergo remnant movement, too. Still, these bare NPs are peculiar in that even when they are the result of remnant movement, there is no intonational break separating them from the rest of the sentence, unlike generic bare NPs. This suggests that generic and existential bare NPs target different projections in the left-periphery in the course of the remnant movement derivation, e.g., a topic and focus projection, respectively. I leave this issue for future research. See Chapter 3, Sections 2.1.3 and 2.1.4.1, for further discussion of the syntax of bare NPs.

- (28) a. Vengono chiamati spesso medici. (*Ex*)  
are called up often doctors
- b. Vengono chiamati spesso medici del reparto di pronto intervento. (*Ex / Gen*)  
are called up often doctors of the first aid department
- (29) *Spanish*
- a. \*Médicos reciben llamadas con frecuencia.  
doctors are called up often
- b. Médicos de primeros auxilios reciben llamadas con frecuencia.  
(*Ex / Gen*)  
doctors of the first aid department are called up often  
‘It is often the case that doctors (of the first aid department) are called up.’  
*or*  
‘Doctors (of the first aid department) have the property that they are called up often.’
- (30) a. ??Reciben llamadas con frecuencia médicos. (*Ex*)  
are called up often doctors
- b. (?)Reciben llamadas con frecuencia médicos de primeros auxilios.  
(*Ex / Gen*)  
doctors of the first aid department are called up often  
‘It is often the case that doctors (of the first aid department) are called up.’

*or*

‘Doctors (of the first aid department) have the property that they are called up often.’

Some interfering factor seems to be at work in (30)a, given the deviance of this sentence, but the parallelism between Italian and Spanish works well in other contexts:

(31) *Italian*

- a. Sono visibili insetti. (*Ex*)  
are visible insects
- b. Sono visibili insetti di grandi dimensioni. (*Ex / Gen*)  
are visible insects of large size

(32) *Spanish*

- a. (Ahora) son visibles insectos. (*Ex*)  
are visible insects
- b. Son visibles insectos de grandes dimensiones. (*Ex / Gen*)  
are visible insects of large size

These data show that preverbal and postverbal bare NPs with a generic interpretation are subject to similar constraints and prosodic features. Following Longobardi’s proposal, this state of affairs is interpreted as evidence that (overtly) postverbal generic bare NPs end up at the postverbal position via remnant movement, which occurs through the position hosting preverbal bare NPs. The interpretation of bare NPs, therefore, provides one further argument for the remnant movement approach to sentence final subjects in Spanish and other Romance NSLs.

Still another argument, similar in spirit to Longobardi's analysis of the bare NPs facts, can be made for the remnant movement approach. This approach predicts that the SVO and VOS order pattern together in terms of scope, as opposed to the VSO order. This prediction follows from the fact that, in the VOS order, the position of the subject is derived from the SVO order. In contrast, the scope relations are predicted to be different for the VSO order because, in this order, the subject has not made it to the preverbal position. The prediction is fulfilled as far as the scope of negation over the subject is concerned:

(33) a. SVO *many* > *not*

Realmente muchos estudiantes no tienen un presupuesto maravilloso.

Really many students not have a budget marvelous

b. VSO *not* > *many*

Realmente no tienen muchos estudiantes un presupuesto maravilloso.

Really not have many students a budget marvelous

b. VOS *many* > *not*

Realmente no tienen un presupuesto maravilloso muchos estudiantes.

Really not have a budget marvelous many students

These scope facts provide further support for the remnant movement account, because this approach emphasizes the parallel between SVO and VOS structures as opposed to VSO structures.

Further evidence for the present approach is provided by parasitic gaps, as discussed in Section 1.1 of this chapter (the examples are repeated now for the sake of

exposition). These are known to be licensed under A-bar movement, as seen in the following cases:

(34) \*Tiré *Don Quijote y La Colmena* sin haber leído \_\_\_\_.

Threw-I *Don Quijote* and *La Colmena* without have read \_\_\_\_

‘I threw away *Don Quixote* and *La colmena* without reading them.’

(35) Qué (libros) tiraste sin haber leído \_\_\_\_?

What (books) threw-you without have read \_\_\_\_?

‘What / Which books did you throw away without reading?’

(36) (*Hasta*) *DON QUIJOTE Y LA COLMENA* tiré sin haber leído \_\_\_\_.

(*Even*) *DON QUIJOTE AND LA COLMENA* threw-I without read \_\_\_\_

In (34), the object is not focused. Therefore, it has not been A-bar moved and, consequently, it cannot license a parasitic gap, in contrast to what one witnesses in (35) and (36).<sup>16</sup> Interestingly, if the object constitutes new information focus, the remnant movement approach predicts that the parasitic gap should be licensed, as by hypothesis the (sentence final) object would be the result of movement, going through an intermediate stage analogous to (36). This prediction is fulfilled, as (37) shows (compared to (34)).

(37) a. Qué (libros) tiraste sin haber leído \_\_\_\_?

What (books) threw-you without have read \_\_\_\_?

‘What / Which books did you throw away without reading?’

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<sup>16</sup> Note that parasitic gaps are not licensed by in-situ operators (e.g., Chomsky 1982).

b. Tiré sin haber leído *DON QUIJOTE Y LA COLMENA*.

threw-I without have read *DON QUIJOTE Y LA COLMENA*

‘I threw away *Don Quixote* and *La colmena* without reading them.’

Unfortunately, since subjects do not license c-commanded parasitic gaps, one cannot test whether they do so when relevantly focused. Still, the properties of objects directly support the view that elements which constitute new information focus have moved to the A-bar layer. Inasmuch as new information focus, with its rightmost requirement, is not restricted to objects but extends to subjects as well, it seems coherent to conclude that postverbal subjects are also the result of A-bar movement, and, concretely, remnant movement as discussed above.<sup>17</sup> Interestingly, in situ wh-elements do not license parasitic gaps (see n. 16 above).

(38) ?Tiraste qué (libros) sin haber leído \_\_\_?

throw-you what (books) without have read \_\_\_?

In situ wh-elements are assumed to move covertly to C. (38), therefore, constitutes evidence that covert movement does not license parasitic gaps. Given this conclusion, however, elements which constitute new information focus indeed undergo overt movement to the left-periphery followed by topicalization of TP, as shown by the fact that they license parasitic gaps. This observation constitutes my main argument for the remnant movement approach to new information focus.

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<sup>17</sup> The same facts are obtained in Italian (Frascarelli 2000: 90, her data):

- i. a. UN LIBRO DI STATISTICA<sub>i</sub> ho buttato via t<sub>i</sub> senza leggere t<sub>i</sub>.  
A book of statistics (I) have thrown away without to-read  
‘A book of statistics I have thrown away without reading.’  
b. Ho buttato via t<sub>i</sub> senza leggere t<sub>i</sub> UN LIBRO DI STATISTICA<sub>i</sub>.  
(I) have thrown away without to-read a book of statistics

Weak Crossover effects provide still another argument for the present approach. Frascarelli (2000) shows that new information focus triggers WCO effects in Italian (just as focus movement to the left periphery or wh-movement do).<sup>18</sup>

Specifically, the person whose parents saw Luigi cannot be Luigi:

- (39) a. \*Chi<sub>i</sub> hanno visto I suoi<sub>i</sub> genitori?  
‘Who did his parents see?’
- b. I suoi<sub>i</sub> genitori hanno visto LUIGI<sub>i</sub>.  
the his parents have seen Luigi

Similar facts hold true for Spanish:

- (40) a. \*A quiéni<sub>i</sub> han visto sus<sub>i</sub> padres?  
‘Who did his parents see?’
- b. Sus<sub>i</sub> padres han visto a LUIGI<sub>i</sub>.  
his parents have seen Luigi

It is plausible to conclude, then, that subjects which constitute new information focus have moved to the left-periphery. If this is true, their rightmost position in the sentence is the result of remnant movement.

This section provided a number of arguments in favor of the remnant movement approach to new information focus in Spanish, coming from various domains. Nonetheless, two questions suggest themselves regarding the present approach: How does one deal with the properties of contrastive focus, which is divided into left-periphery and in situ focus, in Spanish? Furthermore, what is the

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<sup>18</sup> Cf. Chomsky (1972) for early discussion on the relationship between focus and WCO effects in English.

crosslinguistic validity of this kind of approach to focus? I turn to these questions next.

## **2.2. On the Neo-Davidsonian approach to focus and contrastive focus**

If the interpretation of Spanish focused elements differs along the lines pointed out by Domínguez (2004), it is legitimate to wonder how such diverse interpretations are captured. However, as Casielles-Suárez (2004) and Brunetti (2003) note, the existence of such diverse interpretations does not imply that there are distinct focalization processes in Spanish or in any language. In the words of Casielles-Suárez (2004: 142), “focus in general has been claimed to make a set of alternatives salient (Rooth’s 1985 p-set) in all cases. From this point of view, the fact that some of these alternatives may be in some cases more obvious or even totally spelled-out does not change the nature of focus”. Even though the Neo-Davidsonian framework assumed here is incompatible with Rooth’s approach to focus, the same reasoning applies. Exhaustiveness and contrastiveness are not intrinsic properties of focus (cf. Herburger 2000: 52-58). According to Herburger, these ‘effects’ in English, for instance, result from the pragmatics of intonation contours and, again, not from the properties of focus. In what follows, I will accept this reasoning (though I still refer to Spanish as having these kinds of focus for the sake of exposition).

One piece of evidence in favor of this view is provided by the variability in the judgments concerning the rightmost requirement on new information focus in Spanish (see n. 7 above). This variability accords well with the present view: Given that (i.) the division into new information and contrastive focus does not play a role in

the mechanism explored to express focus (that is to say, in remnant movement), and (ii.) word order variations, by standard assumptions, are determined by the syntactic component (cf. the autonomy of syntax), the systematic correlation between certain word order patterns and these notions would be surprising.

As mentioned before, the rightmost requirement on new information focus illustrated in (3)-(5), renumbered here for the sake of exposition, are robust for some speakers, while others answer the relevant questions with in situ focus:

(41) Quién le dio un libro a María?

‘Who gave a book to María?’

Le dio un libro a María PEDRO. *Subject: new information + sentence stress*

Gave a book to María PEDRO

(42) Qué le dio Pedro a María?

‘What did Pedro give to María?’

Pedro le dio a María un LIBRO. *Acc. object: new info + sentence stress*

Pedro gave to María a BOOK

(43) A quién le dio Pedro un libro?

‘To whom did Pedro give a book?’

Pedro le dio un libro a MARIA. *Dat. object: new info + sentence stress*

Pedro gave a book to MARIA

One possibility to explain the rightmost effect is to argue that it is the result of performance factors. Priming has been argued to influence word order, e.g., to underlie the crosslinguistic tendency for old information to precede new

information.<sup>19</sup> This tendency accords well with the rightmost requirement on new information focus as shown below for the remnant movement derivation of (41), where the topicalized TP constitutes old information and the subject constitutes new information:

(44) *New information focus (overt syntax), derivation of (41)*

|  |   |
|--|---|
| $[\text{TopP } [\text{TP } t_i \text{VO}_j]_n]$<br>Old information<br>primed | $[\text{FP } S_i t_n ]]$<br>new information<br>not primed |
|--|---|

Presupposed information is primed due to its given information status and shows a tendency to appear early in the sentence, e.g., by means of topicalization. In contrast, new information is not primed and, consequently, has a tendency to appear later in the sentence. In other words, both the surface position of TP and the surface position of the subject are consistent with the dynamics of priming, a tendency that ultimately might be coded in the grammar (see Chapter 5 for discussion of these sorts of questions). It is then natural that ‘new information focus’ correlates with remnant movement.

Be that as it may, it is important to notice that, pragmatically, sentences have to be *about something*. It is only normal that the presupposed information acts as the topic of a sentence. Topics in Spanish (and crosslinguistically) appear (high) in the left-periphery of the clause. As a consequence, the presupposed part of the sentence

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<sup>19</sup> Cf. Bock and Irwin (1980), Ferreira and Yoshita (2003) for experimental evidence from English and Japanese, respectively, and Yamashita (2002) for evidence based on corpus studies in Japanese; see also Horn (1986: 175) and Prince (1992) for English, and Wind Cowles (2003) a.o. Cf. Erteschik-Shir (1997) and related work by this researcher.

precedes the focused part.<sup>20</sup> If anything, these pragmatic requirements are soft constraints, in keeping with the variability found in the judgments.

Still another line of reasoning helps derive the rightmost position of new information focus. As a number of scholars working on Italian have shown, the background material preceding focalized elements and the background material following these have rather different properties (e.g., see Brunetti 2003: 158 and references therein). In the words of Brunetti, ‘prefocal material has a “richer” set of functions’ (Brunetti 2003: 158). Under the view that IM adds expressive power to the system, it is consistent to argue that this underlies the movement of presupposed material to the prefocal slot.<sup>21</sup> This is consistent with the view that there is only one kind of focus in Spanish and that focused XPs sit in the left-periphery of the clause.

In cases of ‘contrastive focus’, due to the saliency of the set of alternatives, the context would be rich enough not to need further anchoring by the presupposed information. This can be seen in the discussion around (11)-(13), repeated here for the sake of clarity (Domínguez 2004: 201-2; her data):

(45) Quieres algo de comer?

‘Would you like something to eat?’

(46) [F Helado] quiero

ice-cream wants-1s

‘It is ice-cream what I feel like having.’

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<sup>20</sup> Cf. Erteschik-Shir (1997) and Kiss (2002) for related discussion.

<sup>21</sup> This applies also to Clitic Left-Dislocation (CLLD), which corresponds to presupposed material, under the assumption that CLLD is the result of movement (cf. Pablos 2006 and references therein for discussion). Hanging topics in the left periphery, though, would make a similar semantic contribution (though they are considered to base-generated).

(47) Quiero [F helado]

wants-1s ice-cream

‘I feel like having ice-cream.’

In a context where both interlocutors are present and some treats are on display, (46) is the appropriate answer. The pragmatic need for the presupposed information to anchor the focused XP is lessened. In fact, in such cases not only the presupposed information is primed, but also the ‘contrastively’ focused information. As a consequence, the focused XP will have a greater tendency to appear at the beginning of the sentence than phrases which constitute new information focus. It is interesting to notice that in exactly this case, focus information has a tendency to correlate with a left-periphery requirement.

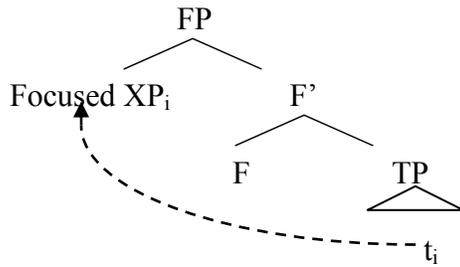
In contrast, in a context where the possible things to eat are not (as) obvious (e.g., they are not in front of the speakers), in situ focus is preferred as there is a higher pragmatic need to anchor the focused phrase. Additionally, the focused phrase is primed to a lesser extent (cf. (47)).

The present perspective entails that the syntax / semantics of new information and contrastive focus in Spanish are fairly similar. Both left-periphery and rightmost focus show uniform movement of the focused XP to FP, but the topicalization of TP takes place covertly in the former case and overtly in the latter. This view is illustrated below, where I leave out irrelevant details:<sup>22</sup>

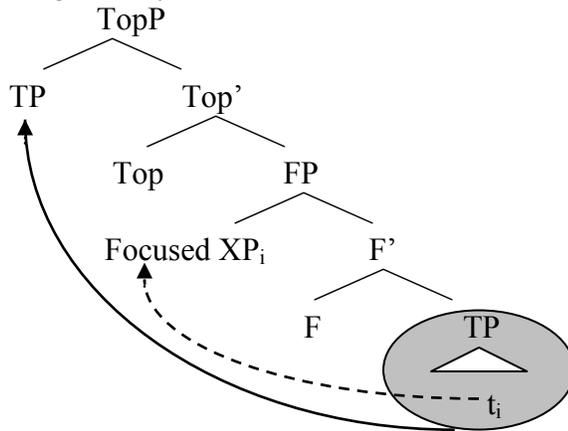
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<sup>22</sup> Cf. Ortíz de Urbina (2002) for Basque.

(48) *Left-periphery focus*



(49) *Rightmost focus*



To summarize, focus constructions in Spanish all have the same syntax, in keeping with the idea mentioned above that there is only one kind of focus ( see below for some discussion of the complexities introduced by in situ focus). The difference between left-periphery and rightmost focus is not in the syntax of focus itself, but in variation of the discourse function of the presupposed material. This results in a variation in (superficial) word order which is easy for the child to detect, with all the advantages that this brings to the task of language acquisition.

**2.2.1. Context-Anchoring in the syntax: Left-periphery vs. rightmost focus**

The syntax of focus in Spanish has been approached in terms of notions as the ‘pragmatic need’ to anchor a focused phrase and priming. These notions, nonetheless,

are not part of the grammar per se, though they might cause specific patterns of word order to become grammaticized (see Chapter 5 for related discussion). The purpose of this section is to provide a framework able to capture the previous intuitions *within the grammar* by adopting the context-anchoring proposal of Raposo and Uriagereka (1995).

Frascarelli (2000) and Brunetti (2003) put forth closely related approaches to capture the position / interpretation of presupposed material in the sentence in Italian: In the former approach, the distinction between prefocal and postfocal presupposed information is dealt with in terms of the scope relations between focused phrase and the presupposed information. In turn, Brunetti (2003) assumes that one can achieve the same pragmatic effects by having left-periphery focus be the result of movement and rightmost focus be in situ, without any specialized projections to express pragmatic notions whatsoever. I agree with the spirit of both approaches, but the mechanism to achieve the pragmatic effects seems slightly underspecified. Moreover, I do not consider rightmost focus to be in situ.

Raposo and Uriagereka (1995; henceforth R&U) provide a relevant framework, going back to the categorial / thematic distinction (Kuroda 1972). Categorial predication introduces the standing characteristic of a category (which, in semantic models allowing for a variety of ontological complexities for lexical notions, is taken as an ‘individual-level’ predicate), whereas the thematic predication introduces a non-standing characteristic of a standard subject argument (‘stage-level’ predication, in the models in question).<sup>23</sup> The crucial point is that, in languages like Spanish and many others, this distinction actually correlates with different word orders.

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<sup>23</sup> See Raposo and Uriagereka (1995) on the differences between these approaches.

Specifically, Uriagereka (2002) shows that (50)a is a categorical judgment about a given individual, whereas (50)b is athetic judgment expressing a mere event:

- (50) a. El rey ha muerto.  
the king has died  
'The king has died.'
- b. Ha muerto el rey.  
has died the king

Raposo and Uriagereka argue that predicates, including, of course, N's, come with a second-order context variable. Most importantly, contexts are set within other contexts, much as quantifiers have scope inside one another. Under the assumption that X is the context of the subject S and Y is the context of the predicate P, a sequence of contexts  $\langle X, Y \rangle$  is interpreted differently from a sequence of contexts  $\langle Y, X \rangle$ . 'The first of these sequences would introduce a context Y for predicate P within the context X for subject S. Conversely, the second sequence would introduce a context X of the subject within the context of the predicate' (R&U: 191). This makes predictions for the SV vs. the VS order: In the SV order, the subject will anchor the predicate, whereas in the VS order the predicate will anchor the subject. This results in categorical and thetic judgments, respectively.<sup>24</sup>

Even though R&U illustrate the discussion with the relation between subjects and predicates and take sequencing to be relevant, they explicitly note that the same considerations apply to topicalized elements in general, e.g., dislocated arguments and how these relate to predicates. Whereas languages may resort to a number of

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<sup>24</sup> See Chapter 3 for further discussion of the properties of preverbal subjects in Spanish. The mechanism used by R&U is conceptually desirable in that it captures a relevant aspect of the syntax of subjects without having to posit a specific Subject Criterion à la Rizzi (2005).

ways to express these distinctions, ranging from word order to morphology (cf. Kuno 1972 for Japanese), Spanish, generally speaking, is a language where sequencing makes a difference, as seen in thethetic / categorical alternation (though see R&U: 192 for some cases where the confinement of the range of the predicate to that of subject, or vice versa, takes place covertly). This context-anchoring mechanism, arguably, draws the line between prefocal presupposed information and postfocal presupposed information.

As a consequence, the topicalization of TP taken for granted in the remnant movement approach to focus is not stipulated, but rather is driven by the way the speakers conceptualize events, their participants, corresponding predications and their contexts.

Under current assumptions that EPP features responsible for syntactic movement, in general, are optionally assigned to yield a new outcome, the left periphery of the clause includes an EPP feature in FP (Focus Phrase) and, optionally, it may include an EPP feature in TopP. Depending on the presence or absence of an EPP feature in TopP, the presupposed information will or will not surface there, thus deriving rightmost and left-periphery focus, respectively.<sup>25</sup>

To sum up the discussion so far, there is only one kind of focus in Spanish (and other languages), cf. Rooth 1985, Herburger 2000, Brunetti 2003, and Casielles-Suárez 2004, a.o. In keeping with this idea, I have posited a uniform syntax for both new information and contrastive focus (these terms being used as labels without any

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<sup>25</sup> The existence of specialized projections to host presupposed or focused XPs is not crucial. These are used for the sake of exposition. What is relevant in this approach is that focus reshapes the quantificational structure of the tacit Neo-Davidsonian event quantifier after quantifier scope is assigned and that the context is anchored according to the situation.

theoretical import). Still, the position of the presupposed information with respect to the focalized material called for an explanation. Some initial insights by Frascarelli and Brunetti were reinterpreted here within the framework of Raposo and Uriagereka's (1995) contextual anchoring mechanism. One appealing result of this view is that the topicalization of TP, taken for granted in the remnant movement approach to rightmost focus, does not have to be stipulated: the topicalization process is determined by context-anchoring considerations. In syntactic terms, context-anchoring is implemented through the optional assignment of EPP features in the C domain, to yield a new output.

Next, I address the issue of how in situ focus fits the resulting picture.

### **2.2.2. On in situ focus**

It is not clear how to deal with in situ focus in the present approach. In situ focus seems to represent an intermediate form of context-anchoring - should this intermediate anchoring be achieved by some derivational mechanism including focus movement, e.g., some limited remnant movement where only part of TP moves? Or by leaving the focused element in situ? For one thing, it is not clear that one can provide a remnant movement derivation for some of the relevant sentences and get the right word order:

(51) Pedro quiere regalarle UN COCHE a María.

Pedro wants to give-cl A CAR to María.

'Pedro want to give a CAR to María.'

‘Pedro wants to give’ is not a constituent, so it cannot be topicalized, leaving ‘to María’ behind, under the well-established assumption that only constituents move. I would like to argue that this is not a coincidence. In situ focus is singled out by its syntactic behavior in ways that left-periphery and rightmost focus are not.

In spite of the fact that it triggers WCO, in situ focus does not license parasitic gaps (examples repeated when necessary for the sake of exposition):

(52) *Weak Crossover Effects*

- a. \*A quiéni<sub>i</sub> han visto sus<sub>i</sub> padres? *Wh-movement*  
 ‘Who did his parents see?’
- b. A LUIGI<sub>i</sub> han visto sus<sub>i</sub> padres, no a Juan. *Left-p.*  
 Luigi have seen his parents, not Juan
- c. Sus<sub>i</sub> padres han visto a LUIGI<sub>i</sub>. *Rightmost*  
 his parents have seen Luigi
- d. Sus<sub>i</sub> padres han visto a LUIGI<sub>i</sub>, no a Juan. *In situ*  
 his parents have seen Luigi, not Juan

(53) *Parasitic gaps*

- a. Qué (libros) tiraste sin haber leído \_\_\_\_? *Wh-movement*  
 What (books) threw-you without have read \_\_\_\_?  
 ‘What / Which books did you throw away without reading?’
- b. (Hasta) DON QUIJOTE Y LA COLMENA tiré sin haber leído \_\_. *Left-p.*  
 (Even) DON QUIJOTE AND LA COLMENA threw-I without read \_\_
- c. Tiré sin haber leído DON QUIJOTE Y LA COLMENA. *Rightmost*  
 threw-I without have read DON QUIJOTE Y LA COLMENA

- d. #Tiré *DON QUIJOTE Y LA COLMENA* sin haber leído. *In situ*  
threw-I *DON QUIJOTE Y LA COLMENA* without have read

Given the impossibility of deriving this kind of anchoring through syntactic movement, it appears that Spanish is forced to resort to another kind of focus licensing for such intermediate anchoring.

In situ licensing resembles in situ wh-phrases in French, where intonational morphemes have been argued to mediate mapping to semantics.<sup>26</sup> In the present terms, though, it should be noted that there is no reason why the remnant movement approach to focus is forced to apply overtly. Given that one single mechanism to express the semantics of focus at LF is to be preferred to the addition of two separate licensing mechanisms to the grammar, I conclude that remnant movement in the case of in situ focus takes place covertly.

To conclude: I provided evidence from the syntax of Spanish for the Neo-Davidsonian approach to focus. The resulting system can deal not only with the syntax of new information focus but also with the syntax of left-periphery focus. Moreover, topicalization processes to the left periphery or to clause internal positions (e.g., p-movement or object-shift) are reinterpreted in terms of context-anchoring devices (Raposo and Uriagereka 1995), which are independently needed for the syntax of preverbal subjects (cf. thethetic / categorical alternation). Such a context-anchoring mechanism explains the topicalization of TP in derivations involving remnant movement and, thus, helps avoid the conceptual problem of what motivates this step.

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<sup>26</sup> Cf. Cheng and Rooryck (2000) for French and Domínguez (2004) for related claims for in situ focus in Spanish.

### 2.3. The remnant movement approach to focus and the syntax of English

The purpose of this section is to discuss the pros and cons of a remnant movement approach to focus in English. A remnant movement approach to focus in this language has been put forth in Kayne (1998).<sup>27</sup> As will be shown, this view is worth exploring for a number of constructions where English shows a Spanish-like rightmost focus behavior. Still, a number of challenges are noted suggesting that, while this approach is intriguing, a covert remnant movement analysis finds more support within the data.

A priori, a remnant movement approach to focus in English does not seem to be too promising because focus does not appear to correlate with any particular word order. This can be illustrated with the following examples:

(54) What's going on?

John has told me to go home.

(55) Who told you to go home?

JOHN told me to go home.

The fact that English allows destressing of presupposed material, as opposed to Spanish, ought to be relevant (cf. Zubizarreta 1998), but I would like to address the question of how the syntax / semantics of English express focalization processes within the Neo-Davidsonian framework. One way of dealing with the English facts, while maintaining a remnant movement approach to focus in the (overt) syntax, is to argue that in this language, in contrast to Spanish, the constituent in the restriction of

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<sup>27</sup> Kayne's remnant movement is slightly different from the one assumed above in that, for instance, the element topicalized past the focused phrase is not TP but VP. I abstract away from this fact, as it does not affect the discussion below.

Q (cf. Herbuger's (21)) is pronounced. This is exemplified below for (54), in keeping with the idea that variation among languages is superficial, just a PF factor:

(56) [John<sub>x</sub> told me to go home]<sub>k</sub> John<sub>x</sub> t<sub>k</sub>

Another plausible alternative is that remnant movement applies to these structures covertly, a conclusion that I will ultimately adopt. Before that, though, I will present the virtues and limitations of a radical alternative put forward by Kayne (1998), where the syntax of English is as 'altruistic' as the syntax of Spanish, meaning that the remnant movement approach to focalization is taken to apply in the (overt) syntax of English. If correct, this means that the derivations put forth by Ordóñez (2000) and Ortiz de Urbina (2002) can be found in fairly different languages, including English.

Kayne (1998) argues that scope is expressed hierarchically without covert LF phrasal movement and without feature raising affecting scopal properties. Crucially, within this framework, new information focus (and focalization with *only*) entails remnant movement in English, in spite of what (54) and (55) would seem to suggest initially.

According to Kayne, the derivation for (57), with focus on *a linguistics term*, would be (58):

(57) He is looking up a linguistics term.

- (58) ...Foc<sup>0</sup> he is looking up a linguistics term -> (attraction to Foc)  
 ...a linguistics term<sub>i</sub> Foc<sup>0</sup> he is looking t<sub>i</sub> up  
 ...-> (raising of Foc to W)<sup>28</sup>  
 ...Foc<sup>0</sup><sub>j</sub>+W a linguistics term<sub>i</sub> t<sub>j</sub> he is looking t<sub>i</sub> up -> (VP-preposing)  
 ...[looking t<sub>i</sub> up]<sub>k</sub> Foc<sup>0</sup><sub>j</sub>+W a linguistics term<sub>i</sub> t<sub>j</sub> t<sub>k</sub>

The interesting thing to notice about this derivation is that it imposes a right edge requirement on the focused element, analogous to the one found in Spanish. Indeed, the focused element, *a linguistics term*, is subject to this requirement, a fact that constitutes evidence in favor of Kayne's view:

- (59) What is he looking up?  
 a. ?He is looking a linguistics term up.  
 b. He is looking up a linguistics term. (Kayne 1998: 163)

Both of these options are fully grammatical in non-focused contexts. Within Kayne's (1998) independently motivated approach to such data, remnant movement applies deriving the rightmost position of the focused phrase.

Apart from Kayne's observation, a similar rightmost requirement on focused phrases can be found in a number of constructions in English. Whereas it is beyond the scope of this section to provide evidence for a remnant movement analysis of the

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<sup>28</sup> Kayne (1998: 149-152), when discussing focalization processes involving 'only' in English, gives independent evidence in favor of this movement. Uriagereka's system also posits the existence of this kind of movement, but such a movement is motivated from the point of view of semantics. In Uriagereka's words (2008, Chapter 3, p24):

'Concretely, to reorganize the sentence around the event operator (paying close attention to what is presupposed and what is asserted information), in Herburger's view we have to treat the event operator *as a binary quantifier*. We may then think of the remnant movement as a form of 'Scope Raising', except that, for that to be of any use, there has to be a quantificational site to which this scope associates. This is where the T-to-F-&up head movement makes sense, particularly if T carries the event operator, as is argued by Higginbotham (1995). Moreover, it makes sense for remnant movement to associate to an event site *as a specifier*, so that it can be taken as the scope of this quantifier, as per the Hornstein and Uriagereka (1999) reasoning; by the same logic, it also makes sense for the restriction of this event quantifier to be mapped as its complement.'

rightmost requirement in the cases to be discussed below, I believe that the existence of such constructions is not a coincidence and may go beyond regular performance factors (priming) explored above in the section on Spanish. Locative Inversion, PP and relative clause extraposition, or Inverse Copular constructions, all demonstrate the relevant rightmost requirement on focus.

A rightmost requirement is found in Locative Inversion structures, in that the inverted subject necessarily constitutes new information.<sup>29</sup> For example, (60)a can be paraphrased as in (60)b, a fact that shows that in (60)a the subject is focused (Rochemont 1978: 25):

- (60) a. Out of the house walked John.  
b. It was John that walked out of the house.

Rochemont (1978: 21-22 and 26) also shows that sentences allowing for Locative Inversion yield ungrammatical results when the subject is not focused. In particular, pronouns constitute discourse anaphora and, as a consequence, will sound unnatural in Locative Inversion structures. Hence the following contrast:

- (61) a. Into the house ran John.  
b. #Into the house ran he.

Similarly, in (62), *Rose* constitutes old information. Therefore, Locative Inversion, which correlates with focus on the subject, cannot apply in these contexts (Bresnan 1994:85):

- (62) Speaker A: I'm looking for my friend Rose.  
a. Speaker B: #Among the guests of honor was sitting Rose.

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<sup>29</sup> See Bresnan (1994); cf. Soltan (2005) for a recent discussion of Locative Inversion in English and other languages. See Chapter 3, Section 2.1.4, for further discussion of Locative Inversion in Spanish.

- b. Speaker C: Rose was sitting among the guests of honor.<sup>30</sup>

In turn, the following data illustrate the rightmost requirement (Rochemont 1978: 24):

- (63) a. Down the hill rolled the carriage.  
 b. \*Down the hill rolled the carriage in Spain.<sup>31</sup>

Similarly, it has been claimed that in instances of relative clause or PP extraposition the DP to which the shifted XP is linked necessarily constitutes new information (cf. Guéron 1980 and Huck and Na 1990, quoted in Frascarelli 2000: 130). Guéron (1980) argues that this new information requirement is naturally met in presentational contexts:

- (64) A man came in with blue eyes.

When an element that stresses some aspect of the sentence other than the simple appearance on the scene of the subject NP is included, the new information requirement is not met and the sentence is rendered infelicitous. According to Guéron and to Rochemont (1978), the introduction of progressive ‘be’ has this effect:

- (65) \*A man was coming in with blue eyes.

For present purposes, extraposition structures are relevant in that the shifted XP ends up in the rightmost position.<sup>32</sup> More evidence for the correlation between extraposition and focus can be seen in that a sentence like *I bought a book on Tuesday*

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<sup>30</sup> There is significant evidence that the locative has subject-properties in Locative Inversion constructions (cf. Soltan 2005 and references therein). It could be the case that the locative moves to Spec,TP and, subsequently, the (postverbal) DP subject moves to FP. Under this view, the subject DP comes to be last as the result of remnant movement.

<sup>31</sup> As Rochemont notes, the rightmost requirement is generally found in Locative Inversion structures. Still, he points out that under poorly understood circumstances, there are some exceptions to the rightmost requirement:

i. Up drove my father in a new car.

This issue is left for future research.

<sup>32</sup> In spite of the fact that the whole phrase ‘a man with blue eyes’ is focused, only the PP surfaces at the right edge, contrary to what a remnant movement derivation would predict. This may suggest that scattered deletion applies in these cases:

i. [TopP [TP [a man ~~with blue eyes~~]<sub>i</sub> [has arrived]]<sub>n</sub> [FP [~~a man~~ with blue eyes]<sub>i</sub> t<sub>n</sub>]]

*about Chomsky* is a proper sentence of English when the object DP constitutes new information, but not when it is not. As a consequence (66) is deviant (though my informants report some variability in the judgments):

(66) When did you buy a book about Chomsky?

#I bought a book on Tuesday about Chomsky. (Frascarelli 2000: 130)

In turn, Heycock and Kroch (2002:148-149) discuss some related facts from the syntax of small clauses. Even though these researchers note that the information structure of specificational or identificational sentences is fixed (cf. (67) and (68)), they also note that (specificational) inverse copular constructions only allow the postcopular DP to be the focus (cf. (69) and (70)):

(67) A: Who was the culprit? (John or Bill?)

B: JOHN was the culprit.

(68) A: What was John? (Was John the culprit or the victim?)

B: John was THE CULPRIT.

(69) A: Who was the culprit? (John or Bill?)

B: The culprit was JOHN.

(70) A: What was John? (Was John the culprit or the victim?)

B: \*THE CULPRIT was John.

All these cases are particularly interesting in that they show that the rightmost requirement is real, but this requirement only surfaces under very specific (and, as far as I am concerned, cryptic) conditions. I leave a fully developed analysis of these facts for future research just noting their hypothetical relevance for the present discussion.

In spite of the fact that the remnant movement approach to English focus looks quite promising, something needs to be said about all the cases where the rightmost requirement on new information focus is not met. Should one reanalyze the cases in (54)-(55) as involving remnant movement, too?

With regard to focused objects, Kayne provides a way of dealing with them even in those cases where they do not appear sentence finally. In particular, Kayne assumes the following focus movement for *only* (Kayne 1998: 146-147):

- (71) John pointed out only one book.  
... pointed only one book out -> (*only*-phrase preposing)  
... only one book<sub>i</sub> pointed t<sub>i</sub> out -> (VP preposing)  
... [pointed t<sub>i</sub> out]<sub>j</sub> only one book<sub>i</sub> t<sub>j</sub>

In order for this approach to be able to derive (72), an additional operation takes place, namely, particle preposing:

- (72) John pointed only one book out.  
... pointed only one book out -> (particle preposing)  
... out<sub>k</sub> pointed only one book t<sub>k</sub> -> (*only*-phrase preposing)  
... only one book<sub>i</sub> out<sub>k</sub> pointed t<sub>i</sub> t<sub>k</sub> -> (VP preposing)  
... [pointed t<sub>i</sub> t<sub>k</sub>]<sub>j</sub> only one book<sub>i</sub> out<sub>k</sub> t<sub>j</sub>

Still, it is not clear what happens with focused subjects. Kayne (1998: 164-165 n. 87) mentions the possibility that the movement of the remnant past the focused phrase hosted in the CP layer does not apply in the case of focus on the subject. It is not clear a priori why this would be the case. In the present context, it looks like the Extended Projection Principle, EPP, which is, informally speaking, a requirement that

TP has a Spec (cf. Chomsky 1955 and 2000, see Chapters 3 and 4 for further discussion of the EPP in Spanish and English, respectively), draws the line between subject focus and focus on the other elements of the sentence. In particular, this constraint forces sentences to conform to the SV pattern. If this view is on the right track, it follows that the grammar of focus in English is determined by a number of constraints interacting with one another.

Under this view, remnant movement only applies if the canonical SV pattern of the language is respected. The literature provides a number of analyses which are close in spirit to this idea. For instance, Mueller (2000) investigates the differences between remnant movement in German and Kayne-style remnant movement in English. Remnant movement has been argued to take place in the following kinds of structure in German (data from Mueller 2000):

(73) [VP<sub>2</sub> t<sub>1</sub> gelesen] hat das Buch<sub>1</sub> keiner t<sub>2</sub>

According to Mueller, all the steps of remnant movement are independently attested in the syntax of German, in contrast to what one finds in the syntax of English. As a consequence, only the former operations are independently motivated. In the case of focus constructions in English, XP-movement to FP is independently attested and can be motivated, but movement of TP past the FP is not. Because of this peculiarity of English, Mueller puts forward a shape conservation constraint (cf. Williams 1999; cf. also Fox and Pesetsky 2005) whose purpose is to ‘go back’ to canonical word order after focus movement takes place *by means of remnant movement*. The movement operations involved in ‘going back’ to the canonical word order would be caused by this constraint without any feature checking operation. The

present treatment agrees with the spirit of Mueller's proposal, but, instead of having a constraint drive movement, the relevant constraint *prevents* movement when the shape of the sentence will be significantly altered in its 'EPP properties' (cf. Chapter 4, Section 1.1.2, for related discussion on canonical word order and the EPP). This view predicts that remnant movement applies to focused objects though not to focused subjects.

A more important challenge for the remnant movement approach is that XPs that have moved to the left-periphery overtly license parasitic gaps (see (74)),<sup>33</sup> in contrast to *wh*-in situ elements or focused elements which appear to be in situ (see (75)):

- (74) a. What did you throw away without reading?  
b. DON QUIXOTE you throw away without reading.
- (75) a. \*?You threw away what without reading?  
b. \*?You threw away DON QUIXOTE without reading.

These facts pose a challenge for Kayne's view, because he hypothesizes that in (75)b the focused object has moved overtly though this movement has been masked (cf. (72)). As a consequence, it seems that a covert movement approach to focus in English is presently more promising than the overt movement approach, even though, as we have seen there are some interesting constructions where the rightmost

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<sup>33</sup> Note that parasitic gaps are not licensed by in-situ operators (e.g., Chomsky 1982). See Section 2.1.5 of this chapter for related discussion.

requirement of the remnant movement approach seems to be at work in the same fashion.<sup>34</sup>

To conclude, Kayne (1998) argues that focus correlates with remnant movement in this language. This section has reviewed Kayne's approach showing a number of constructions worth exploring in this light, e.g., Locative Inversion or extraposition. At the same time, a couple of challenges have been discussed, e.g., the interaction between the focus approach to remnant movement and the syntax of subjects, or the fact that movement into FP as part of the remnant movement derivation does not license parasitic gaps. These facts have led me to adopt a covert movement approach, contra Kayne (1998).

### **3. Conclusion**

This chapter dealt with the interface between phonology / phonetics, pragmatics, semantics and syntax. I argued for a view where the word order variation corresponds to syntactic variation, which conspires with the semantic component. It was argued that Herburger's (2000) Neo-Davidsonian approach to the semantics of focus, as syntactically implemented by Uriagereka (2005a and 2008b), allows for a unified treatment of not only new information focus, but also contrastive focus (focus movement to the left periphery and in situ focus). Under the assumption that these are not different kinds of focus, but only one kind of focus (cf. Rooth 1985, Herburger 2000, Brunetti 2003 and Casielles-Suárez 2004, a.o.), it has been shown that their

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<sup>34</sup> See Krifka (2007) for discussion on covert movement and whether this approach, or an approach in terms of Alternative Semantics, is adequate for this language. According to Krifka, both frameworks are needed to capture fully the properties of focus in English.

diverse positions in the sentence are determined by contextual anchoring mechanisms, as discussed in Raposo and Uriagereka (1995). Finally, following Kayne (1998), a tentative discussion of how this approach might apply to focalization processes in English was also included. It was argued that remnant movement takes place covertly.

After having investigated the way syntax, phonology / phonetics, semantics and pragmatics interface with one another, in the next two chapters, I focus on the mapping of IM, or syntactic movement, onto semantics from a more general point of view. In particular, I evaluate the hypothesis that IM has an effect on meaning through the study case of preverbal subjects in Spanish (Chapter 3) and English (Chapter 4). It is argued that in both languages preverbal subjects are the result of movement to Spec,TP and that this movement has an effect on semantics.

## Chapter 3: On preverbal subjects in Spanish

There is a growing consensus in the literature that Internal Merge (IM) or syntactic movement adds expressive power to language (e.g., see Chomsky 2001 and subsequent work). A strong interpretation of this view is that all cases of IM have an effect on meaning. Whereas Chapter 2 showed that movement as related to focalization processes actually fits this view, the syntax of preverbal subjects in Spanish remains somewhat mysterious. Preverbal subjects have been argued to correlate with surface semantics (e.g., Alexiadou and Anagnostopoulou 1998, Uriagereka 2002 and Rizzi 2005), but it is not clear where these subjects are in the structure. Two competing analysis are evaluated, namely, a base-generation analysis (Alexiadou and Anagnostopoulou 1998) and a movement analysis where subjects move from  $vP$  to Spec,TP (cf. the VP-Internal Subject Hypothesis, Koopman and Sportiche 1991, a.o.). According to the latter view, the surface semantics arise as a consequence of IM, which is hypothesized to have an effect on meaning. Below, evidence is provided in favor of the latter view.

The chapter is structured as follows: in Section 1, the background on the Duality of Semantics and its relationship to IM and EM as put forward in Chomsky (2000) and subsequent work is introduced. In Section 2, I focus on the syntax of preverbal subjects in Spanish arguing (i.) that these subjects are the result of movement into Spec,TP (Goodall 2001 and Ortega-Santos 2005), and (ii.) that they show surface semantic effects (Uriagereka 2002).

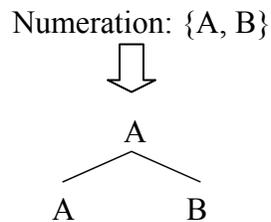
## 1. On Internal Merge and semantics

For Chomsky, *Merge* is a crucial component of language and, indeed, of the evolution of language:

‘An elementary fact about the language faculty is that it is a system of discrete infinity. Any such system is based on a primitive operation that takes  $n$  objects already constructed, and constructs from them a new object: in the simplest case, the set of these  $n$  objects. Call that operation Merge. Either Merge or some equivalent is a minimal requirement. With Merge available, we instantly have an unbounded system of hierarchically structured expressions. The simplest account of the “Great Leap Forward” in the evolution of humans would be that the brain was rewired, perhaps by some slight mutation, to provide the operation Merge.’ (Chomsky 2005b: 11-12)

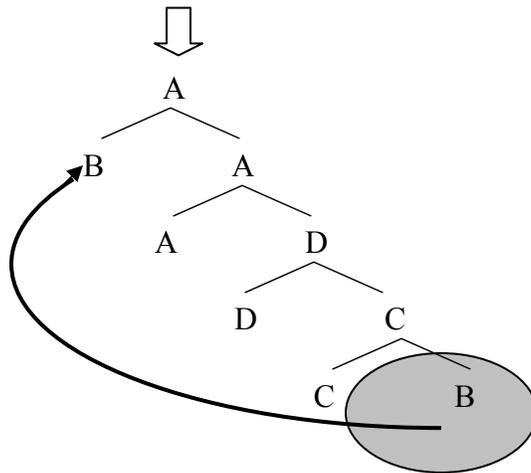
As discussed in Chapter 1, within Chomsky’s system, there are two kinds of Merge, External Merge (EM) and IM, illustrated in (1)a and (1)b, respectively:

(1) a. *External Merge (EM)*



b. *Internal Merge (IM)*

Numeration: {A,B, C, D}



In (2), *what* is externally merged as the complement of the verb, but it is internally merged in the C-layer of the sentence:

(2) [CP What did I see ~~what~~]?  


EM has traditionally been taken to come for free, whereas the case of IM is more controversial in that it is not clear why this operation exists. Recently, Chomsky has argued that the existence of IM in natural language does not have to be justified:

‘Unless some stipulation is added, there are two subcases of the operation Merge. Given A, we can merge B to it from outside A or from within A; these are external and internal Merge, the latter the operation called “Move,” which therefore also “comes free,” yielding the familiar displacement property of language. That property had long been regarded, by me in particular, as an “imperfection” of language that has to be somehow explained, but in fact it is a virtual conceptual necessity.’ Chomsky (2005b: 12)

This state of affairs results in a Duality of Merge. Furthermore, we have a rationale as to why IM exist. Still, one would also like to know how IM is put to a use in natural language. Chomsky posits that IM is used to express certain kinds of meanings or semantics. In particular, Chomsky argues that there is a Duality of Semantics, too, and that the mapping between the Duality of Semantics and the Duality of Merge is systematic. In the words of Chomsky (2005a: 7): ‘To a large extent, EM yields generalized argument structure (theta roles, the “cartographic” hierarchies,<sup>35</sup> and similar properties); and IM yields discourse-related properties such as old information and specificity, along with scopal effects.’

Still, Chomsky (2006: 8) notes that the correlation is not perfect, and elsewhere he acknowledges that the correlation is not a logical necessity (Chomsky 2004:11). In fact, given that in Chomsky’s terms EM and IM are not two separate operations but one and the same, it is not clear why there should be any connection at all. Moreover, it is not clear that elements such as *why* or *whether* correlate with theta-roles in the case of EM (N. Hornstein, p.c.). Furthermore, Hornstein (2001) provides arguments for the checking of theta-roles not only under EM but also under IM. Be that as it may, one could challenge the exact details of Chomsky’s proposal, and still there is a growing consensus in the literature that IM does add expressive power to language. IM does correlate with something *more*, whatever the *more* is (i.e., surface semantics and scope for Chomsky or, in addition to this, theta-roles for Hornstein).

Uriagereka (2008a) provides a rationale for this kind of view arguing for the idea that *mapping a more or less entangled syntax specifically to a semantics of*

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<sup>35</sup> See Cinque (1999); Cinque, ed. (2002); Belletti, ed. (2004); Rizzi, ed. (2004).

*comparable complexity* is realistic, both from a developmental (learnability) and, ultimately, an evolutionary (minimalistic) perspective. For instance, the interpretation of (3)b, where *John* has been internally merged in the C-domain of the clause, is intuitively more complex than the interpretation of (3)a.

- (3) a. I saw John.  
b. JOHN, I saw, (not Mary).

Uriagereka's hypothesis is particularly relevant in that it attempts to bridge the gap between evolutionary perspective on the existence of IM and language acquisition.

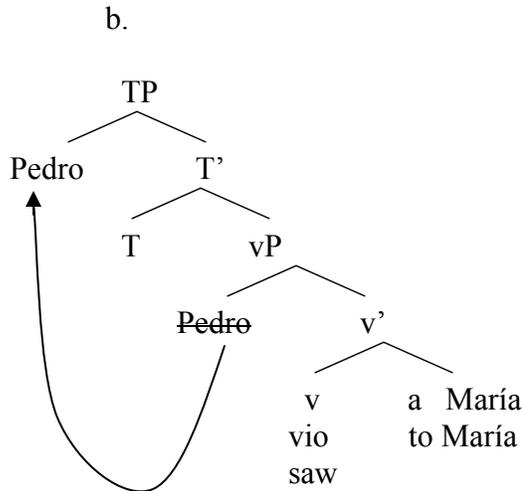
## 2. What is *aboutness* about?

Under the standardly assumed VP-Internal Subject Hypothesis (Koopman and Sportiche 1991 a.o.), subjects move from *vP* to TP. For instance *Pedro* in (4)a undergoes the movement illustrated in (4)b:<sup>36</sup>

- (4) a. Pedro vio a María.  
Pedro saw to María  
'Pedro saw María.'

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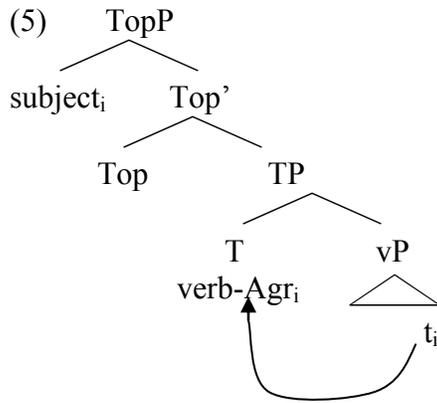
<sup>36</sup> I abstract away from verb movement, which will be discussed below in n. 45 and Sections 2.1.2 and 2.1.3 of this chapter.



In Spanish and other Romance NSLs, preverbal subjects have been argued to share a number of characteristics with topics (defined variously as presupposed information and / or what the sentence is about) in that they correlate with a [+aboutness] property (e.g., Alexiadou and Anagnostopoulou 1998, Uriagereka 2002 and Rizzi 2005, a.o.). This view would be compatible with the idea that complex syntax (subject movement into Spec,TP) maps onto complex semantics. Nonetheless, some controversy exists as to where these preverbal subjects are in the structure.

In particular, a line of research argues that these preverbal subjects are base-generated topics in the C-domain of the clause. For instance, Alexiadou and Anagnostopoulou (1998; A&A henceforth) argue that in the case of null subject languages, such as Spanish, the Extended Projection Principle, EPP, the requirement that a nominal feature be checked in TP (cf. Chomsky 1995), is satisfied by movement of the verb –in particular its rich (pro)nominal agreement (see Section 2.1.2 below for detailed presentation of this proposal; see Section 2.1.3 for a review).

Under this analysis, preverbal subjects are base-generated topics and Spec,TP is not projected:



Still another line of research (e.g., Goodall 2001 and Ortega-Santos 2005) argues that preverbal subjects move into Spec,TP, just like in English (see Chapter 2, Section 2.3, and Chapter 4 for discussion of preverbal subjects in English). Evidence will be provided in favor of the latter view. This analysis accords well with the view that complex syntax maps onto complex semantics in that this movement is predicted to have consequences for the semantics of the sentence (cf. Uriagereka's 2002 categorical judgments corresponding to preverbal subjects, cf. also Gallego 2006). Such semantic consequences, therefore, do not constitute evidence that preverbal subjects necessarily are in the C-domain.

The evidence for the view that preverbal subjects are not in the C-domain of the clause (e.g., Goodall 2001 and Ortega-Santos 2005, a.o.) is supported with a number of arguments, among them the fact that SVO is the canonical word order in this language (Section 2.1.3). In particular, canonical word order shows that preverbal subjects are distinct from elements hosted in the C-domain. In the case of apparent counterexamples, namely, presentational unaccusatives, psych verbs and clausal

subjects (Contreras 1976) where the canonical order is VS as opposed to SV, it is argued that such recalcitrant instances are explained by independent factors (Section 2.1.4). In particular, elements other than the subject occupy Spec,TP for independent reasons, among them null expletives, for whose existence new evidence is provided.

## **2.1. When *subjects* are the subject and *topics* are the topic**

Within Minimalism, the notions of *subject* and *preverbal subject* are not primitives: There are licensing configurations (e.g., for Case checking, valuation, etc.) and there is DP or NP movement, etc., but there are no *subjects* as such. Consequently, it is difficult to define what a *preverbal subject* is, but we can define the notion in terms of other primitives:

### **(6) *Tentative definition of a preverbal subject***

A preverbal subject is a syntactic unit sitting in Spec,TP, (i.e. [DP,T]), either as a result of movement or as a result of in situ generation (e.g., in the case of expletives; cf. Boskovic 2002, Chomsky 2004:114 and Chomsky 2005b:14 for relevant discussion).

This definition, fairly removed from the definitions in traditional grammars, is intended to draw the line between subjects and other preverbal elements, e.g., topicalized elements which will be discussed below with an emphasis on topicalized subjects. Within this framework, topics are generally taken to be hosted in the C layer, (i.e., [XP, Top], cf. Rizzi 1997) and are taken to have specific discourse-properties (e.g., they constitute presupposed information), in contrast to the above definition of subjecthood.

Casielles-Suárez (2004), in closely related research, examines topic and subject phrases in English and Spanish to determine how these types of grammatical objects behave and what their nature is. Casielles-Suárez argues in favor of giving up the traditional view of topic and distinguishing two topical elements. The preverbal subject, as defined in (6), can be equated with *Sentence-Topic* proper, which has the following characteristics:

(7) *Sentence Topic*

- a. it is restricted to a unique element
- b. it correlates with a sentence-initial position (often a preverbal subject)
- c. it seems to be restricted to discourse referents
- d. it is not necessarily discourse-old
- e. it is not necessarily unaccented.

The other topical element, which Casielles-Suárez refers to as the *Background*, shows exactly the opposite features:

(8) *Background*

- a. it is not restricted to a unique element
- b. it does not correlate with a particular sentence position
- c. it is not restricted to discourse referents<sup>37</sup>
- d. it is necessarily discourse-old
- e. it is necessarily unaccented.

These concepts can be illustrated with the following sentences:

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<sup>37</sup> This is illustrated in (i.):

i. *Que fumas* lo sabemos todos. (Casielles-Suárez 2003: 91)  
that smoke-2sg it know-1pl all  
'With regard to the fact that you smoke, we are all aware of it'

(9) Pedro es inteligente. *Sentence Topic*

Pedro is intelligent

‘Pedro is intelligent.’

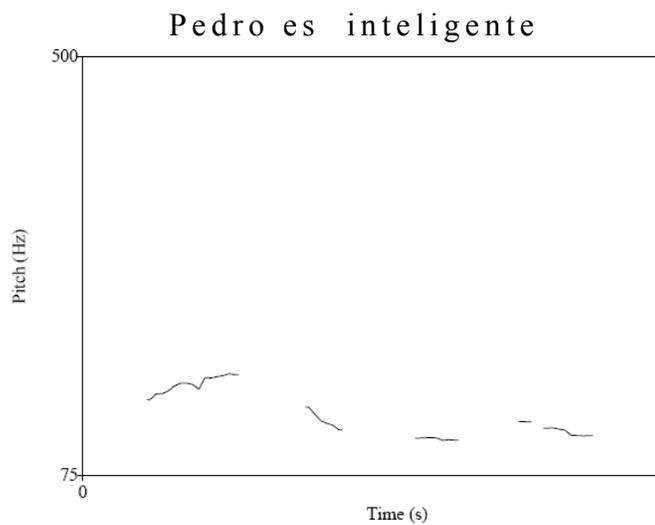
(10) (En cuanto a) Pedro, (creo que sabes que) es inteligente. *Background*

(As for) Pedro, (I-think that you-know that) is intelligent.

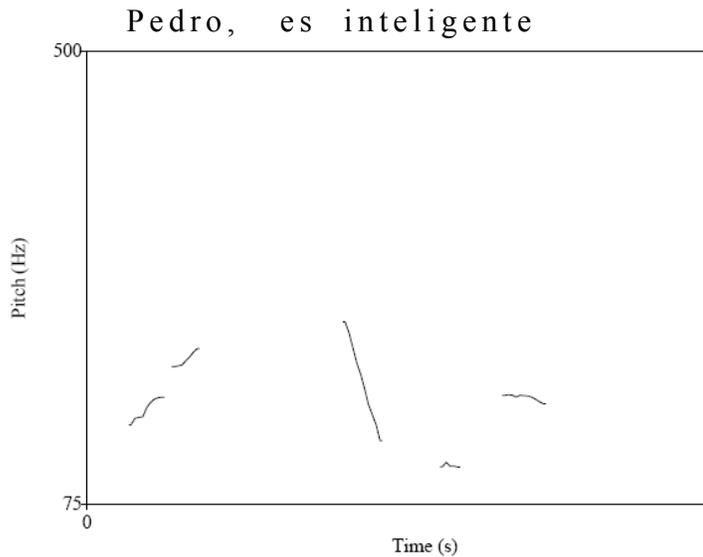
‘(As for) Pedro, (I think you know that) he is intelligent’

(9) and (10) differ in the intonation contour as follows:

(11) Intonation contour of (9)



(12) Intonation contour of (10)



If Casielles-Suárez is correct, subjects and background topics function differently, in keeping with the definition in (6).

Still, a number of researchers argue that said difference does not exist in NSLs. In particular, it has been claimed that all preverbal subjects are topics in the C-domain (cf. A&A, a.o.). For one thing, in Romance NSLs, both preverbal subjects and (background) topics in the C-domain appear in the preverbal position in the sentence. Most importantly, the parallel does not stop there. Uriagereka (2002) adopts the *thetic / categorial* distinction from Kuroda (1972) and shows how this interacts with the syntax of subjects in Spanish (see also Chapter 2, Section 2.2.1). *Categorial* predication introduces the standing characteristic of a category (which in semantic models allowing for a variety of ontological complexities for lexical notions is taken as an ‘individual-level’ predicate), whereas the *thetic* predication introduces a non-standing characteristic of a standard subject argument (‘stage-level’ predication, in the models just alluded to) (see Raposo and Uriagereka (1995) on the differences

between these approaches). The crucial point is, that in languages like Spanish and many others, this distinction actually correlates with different word orders. Uriagereka (2002) shows that (13)a is a categorical judgment about a given individual, whereas (13)b is athetic judgment expressing a mere event:

- (13) a. El rey ha muerto.  
           the king has died  
           ‘The king has died.’
- b. Ha muerto el rey.  
           has died the king<sup>38</sup>

Both (13)a, where the preverbal subject is not a topic in the sense that it does not constitute old / given information (in spite of being a definite description) and there is no intonational break between the subject and the sentence, and (14), where the preverbal subject is in topic position (judging by its interpretation and the intonational break), constitute categorical judgments:

- (14) El rey, (creo que) ha muerto.  
       The king, (I think that) has died  
       ‘As for the king, (I believe) he has died.’

Rizzi (2005: 9) discusses the overlap in the interpretation of preverbal subjects, which, a priori, seem to be sentence topics, and (background) topics

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<sup>38</sup> In Uriagereka’s examples, the thetic interpretation involves also focus on the postverbal subject. Still, one can have a thetic interpretation without focus on the subject, e.g., in the syntax of certain unaccusative verbs to be discussed below. E.g., (i) includes one such unaccusative verb:

- i. Qué ocurre?  
     ‘What’s going on?’
- a. Ha llegado Pedro.  
       has arrived Pedro  
       ‘Peter has arrived.’
- b. (#)Pedro ha llegado.  
       Pedro has arrived

explicitly, noting that ‘a subject shares with a topic the prominence related to the fact that the described event is presented as being about that argument (“aboutness”); it differs from a topic (at least a topic of CLLD kind) in that it does not require the discourse-related property [namely, D-linking]’. In Rizzi’s view, topics are [+aboutness] and [+ D-linking]. On the other hand, preverbal subjects are [+aboutness].<sup>39</sup>

As a consequence of all these properties shared by subjects and topics, it is legitimate to wonder to what extent languages actually differentiate between preverbal subjects and topics. Section 2.1.1 below discusses the syntax of preverbal subjects in Spanish. First, proposals that preverbal subjects are presupposed information hosted in the C-domain of the clause (e.g., A&A) are presented (Section 2.1.2). Afterwards, these proposals are critically reviewed, providing evidence that preverbal subjects are hosted in Spec,TP and not in the C-domain (Section 2.1.3). In the course of the argumentation, the canonical word order of Spanish will be introduced, together with a number of nuances from the syntax of unaccusative verbs and clausal subjects (Section 2.1.4.). Additionally, evidence is provided for the existence of null expletives in Spanish (Section 2.1.4.3.1).

### **2.1.1. The debate on the syntax of preverbal subjects**

Research on Romance NSLs has paid a lot of attention to the syntax of preverbal subjects and their relation to topics hosted in the C-domain. This is the case because both preverbal subjects and topics appear in the preverbal position in the

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<sup>39</sup> Cf. also Strawson (1964) and Reinhart (1981) for related discussion.

sentence, while overlapping to a significant extent in their interpretation - both kinds of elements share an ‘aboutness’ or categorical interpretation. In this sense, such languages offer an ideal ground for research into the differences between both elements. The picture that will emerge below is that subjects and topics are distinct from one another (Goodall 2001 and Ortega-Santos 2005, a.o.). This discussion will allow us to sharpen our understanding of both notions.

Furthermore, ever since A&A’s illustration of their parametric EPP proposal with Spanish, this language has become the textbook case of a language where the subject-oriented EPP is not active as far as subject movement to the preverbal slot is concerned.<sup>40</sup> Therefore, understanding how Spanish works is an essential preliminary step towards understanding the syntax of subjecthood across languages. Below, I show evidence that the EPP is active in this language in certain well defined contexts, against the conclusion in A&A.<sup>41</sup>

Last but not least, this research shows that subject movement into Spec,TP in Spanish correlates with surface semantics (Uriagereka 2002), as expected under the *view that complex syntax maps onto complex semantics*.

In what follows, first, I introduce A&A’s proposal concerning the syntax of preverbal subjects in NSLs. Then, I show evidence against it.

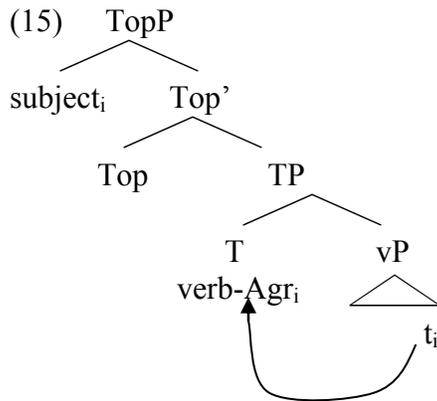
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<sup>40</sup> Throughout this discussion I use the term EPP as relevant for the syntax of preverbal subjects, in clear opposition to the recent redefinition of the EPP as the driving force of phrasal movement in general (Chomsky 2000, etc.).

<sup>41</sup> Strictly speaking, A&A and the closely related research of Ordóñez and Treviño (1999), do not argue for an inactive EPP, but rather for a way of satisfying the EPP *where preverbal subjects play no role*. I will, nonetheless, use the term ‘inactive EPP’ to refer to these analyses, as opposed to analyses where preverbal subjects satisfy the EPP, a scenario I will refer to as ‘active EPP’.

### 2.1.2. On the (inactive) EPP: Alexiadou and Anagnostopoulou (1998)

From a cross-linguistic point of view, A&A argue that the EPP can be satisfied by Move or Merge of a phrase *or a head*. In the case of null subject languages like Spanish, the EPP would be satisfied by movement of the verb, in particular its rich (pro)nominal agreement without Spec,TP being projected. This analysis is illustrated in (5), repeated here for the sake of exposition:<sup>42</sup>



Similar analyses, e.g., Olarrea (1996), vary as to the position of the preverbal subject (e.g., according to Olarrea, the preverbal subject is a base-generated adjunct adjoined to Spec,TP), but the guiding intuition is that the subject does not move to the ‘regular’ Spec,TP. Support for these approaches comes from the fact that subjects in this kind of language are licensed (or can be licensed) in situ. As a consequence, it is not clear why they should move to Spec,TP.<sup>43</sup> The evidence these researchers provide in the case of Spanish is the following: first, preverbal subjects have A-bar properties, as shown by word order and scope facts. Given that these properties are traditionally

<sup>42</sup> A&A note that an approach to NSLs where verbal agreement receives theta-roles raises a number of issues, e.g. such an approach is radically incompatible with any configurational theory of theta-roles. For this reason, they remain neutral as to whether referential pro exists (A&A 1998: 533).

<sup>43</sup> At the same time, once LDA is adopted (cf. Chomsky 2000 and subsequent work) this very observation extends to English as well. Nonetheless, it is commonly assumed that Spec,TP is obligatorily projected in this language.

associated with the C-domain (cf. Rizzi 1997), in contrast to TP, this constitutes evidence that preverbal subjects are hosted in CP.

In particular, it is standardly assumed that the verb raises to T in Spanish.<sup>44</sup> If the preverbal subject were in Spec,TP, this would mean that the subject and the verb have to be adjacent. Still, preverbal subjects compete with the adverb *nunca* for the preverbal slot:

- (16) a. Pedro nunca viene.  
Peter never comes  
'Peter never comes.'
- b. \*Nunca Pedro viene.  
\*Never Peter comes

Moreover, the competition between *nunca* and the subject suggest that they are the same kind of element at some level of abstraction. Given that *nunca* is an adjunct, it seems that the syntax of Spanish treats the preverbal subject like an adjunct. Furthermore, negation in general is also allowed to intervene between preverbal subjects and the verb, a fact that also supports A&A's view (cf. Bosque 1994), though these researchers do not discuss this issue.

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<sup>44</sup> It is standardly assumed that V moves out of vP / VP in Romance. Assuming that adverbs as *often* / *souvent* and *completely* / *complètement* are adjoined to vP / VP, we can test whether the verb has left this projection or not.

- i. a. John often kisses Mary.  
b. Jean embrasse souvent Marie.  
c. Juan abraza a menudo a María. (my data)
- ii. a. John completely lost his mind.  
b. Jean perdit complètement la tête. (Chomsky 1995:134)  
c. Juan ha perdido completamente la cabeza. (my data)

As in English the adverbs precede the verb, it is coherent to assume that the verb has not left vP. In contrast, in the French and Spanish counterparts, the verbs precede the adverb. Therefore, we can conclude, following the ideas of Emonds (1978) and Pollock (1989), that main verbs raise in French and Spanish but not in English. See Chapter 4, Sections 1.1.1 and 1.1.2, for further discussion of V-raising in English.

(17) Pedro no viene.

Peter not comes

‘Pedro is not coming.’

Second, the lack of Definiteness Effects (DE), a requirement that postverbal subjects be indefinite, is used as an argument that Spec,TP is not projected in Spanish. A&A assume that there is a connection between the presence of expletives and DE, as suggested by (18)a and (18)b.

(18) a. There arrived a man / \*the man / \*every man. *English*

b. Il est arrivé un homme / \*l’homme. *French* (A&A 1998:512)

c. Vino un niño / el niño / Pedro. *Spanish*

arrived a kid / the kid / Peter

In keeping with this view, the lack of DE in Spanish in (18)c is taken to mean that there is no null expletive present in the structure. If that is true, there would be no element in Spec,TP and the EPP would be violated. This apparent problem goes away in A&A’s analysis: Spec,TP is not projected in Spanish and, in contrast to what happens in languages like French or English, mere nominal agreement satisfies the EPP.

Following Olarrea (1996), Ordóñez and Treviño (1999) provide support for the pronominal nature of agreement in Spanish. These researchers argue that the fact that binding is crucially determined by subject agreement and not by the subject phrase (*the students*) in (19) and (20) supports the idea that agreement is pronominal in Spanish (cf. Taraldsen 1992):

(19) Los estudiantes<sub>x</sub> vimos<sub>i</sub> dibujos de nosotros mismos<sub>i</sub> / \*sí mismos<sub>x</sub>.

The students<sub>x</sub> saw.1.p.pl.<sub>i</sub> pictures of ourselves<sub>i</sub> / \*themselves.

‘We students saw some pictures of ourselves.’

(20) [Los estudiantes]<sub>x</sub> salimos<sub>i</sub> de la reunión después de que nos<sub>i</sub> / \*los<sub>x</sub> acusaran.

The students<sub>x</sub> left-1p.pl.<sub>i</sub> the meeting after they accused us<sub>i</sub> / \*them<sub>x</sub>

‘We students left the meeting after they accused us’

Additionally, the relative scope between subject quantifiers and extracted wh-objects in Spanish provides another potential argument for A&A’s view, though these researchers do not discuss these cases. In particular, in Spanish, preverbal subject quantifiers in an embedded clause cannot take wide scope over an extracted wh-object. In contrast, postverbal subject quantifiers in an embedded clause can have both wide and narrow scope over the extracted wh-object (Uribe-Etxebarria 1992: 467; her data).

(21) A quién<sub>x</sub> dices que amaba cada senador t<sub>x</sub>? *ambiguous*

who say (you) that loved each senator

‘Who do you say that each senator loved?’

(22) A quién<sub>x</sub> dices que cada senador<sub>i</sub> amaba t<sub>i</sub> t<sub>x</sub>? *unambiguous*

who say (you) that each senator loved

In English, preverbal subject quantifiers in embedded clauses allow wide scope over the extracted wh-object. According to Uribe-Etxebarria (1992: 468), (23) is ambiguous in spite of being structurally identical to (22):

(23) Who do you think everyone saw at the rally?

Uribe-Etxebarria notes the parallel between the behavior of preverbal subjects in Spanish, seen in (22), and (24)a, taken from Lasnik and Uriagereka (1988: 156).

- (24) a. Someone thinks that every problem, Mary solved. *unambiguous*  
b. Someone thinks that Mary solved every problem. *ambiguous*

Under the assumption that quantifiers in A'-positions are frozen (cf. the contrast in (24)), one could argue that preverbal subjects in Spanish are in the C-domain, that is to say, in an A'-position.

In the next subsection, I critically review the proposals in A&A and Ordóñez and Treviño (1999), and provide evidence that Spec,TP is an active position in Spanish.

### 2.1.3. Evidence for the somewhat active EPP<sup>45</sup>

With regard to A&A, the following points are worth making: The fact that an adverb may appear between the subject and the verb (e.g., (16)) does not constitute evidence for their analysis. Under the assumption that adverbs enter the structure as Specs (e.g., Kayne 1994 vs. Cinque 1999), a preverbal subject could be sitting in a Spec,TP which happens to have multiple Specs. Furthermore, it is well-known that for a number of purposes adverbs behave as if they were not really part of the structure (so much so that they might even come to separate a clitic and a verb in French, cf. Boeckx 2000: 68 n. 18). So it is difficult to evaluate what the adverb placement facts really mean.

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<sup>45</sup> In addition, see Fernández Soriano (1999) for arguments that the EPP holds in the syntax of impersonal V<sub>s</sub> and psych-verbs, respectively. See Ortega-Santos (2005) for a more extensive discussion of A&A's analysis of NSLs as applied to Spanish.

The fact that negation in general may appear between the (non-topicalized) preverbal subject and the verb merits some further comments. As stated above, the verb raises to T in Spanish (see Emonds 1978 and Pollock 1989). This predicts that negation cannot intervene between the preverbal subject in Spec,TP and the verb in T, contrary to fact. This state of affairs has been occasionally taken as an argument against the view that preverbal subjects are hosted in Spec,TP (e.g., Bosque 1994 or more recently Kim 2006).

(25) Qué has pasado?

‘What happened?’

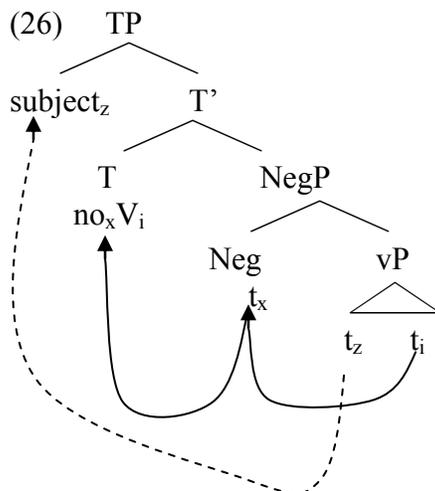
a. Modesto no vio a Felisa.

Modesto not saw Felisa.

‘Modesto did not see Felisa.’

b. #No vio Modesto a Felisa.

Under the present view, NegP enters the structure between  $\nu$ P / VP and TP and the data in (25) follow from the fact that negation is a clitic, so that V-movement takes whatever material NegP hosts along with it (cf. Belletti 1990 for related claims for Italian, cf. also Zanuttini 1997).



There is some evidence in favor of this approach. First, only other clitics may intervene between negation and the verb. For instance, (27)a can be paraphrased as (27)b, but not as (27)c:

- (27) a. No veo a Juan.  
           Not see-I to Juan  
           ‘I don’t see Juan’
- b. No le veo.  
           Not cl-see-I.  
           ‘I don’t see him.’
- c. \*No a Juan veo.  
           \*Not to Juan see-I

In infinitival clauses headed by a preposition, almost no material may intervene between the verb and the preposition. Not even subjects (cf. (28) and (29)):

- (28) a. De venir tu abuelo / Pedro,....  
           Of to-come your grandfather / Pedro,....  
           ‘If your grandfather / Pedro comes,...’
- b. \*De tu abuelo / Pedro venir,....  
           Of your grandfather / Pedro to-come,....
- (29) a. Al venir tu abuelo / Pedro,....  
           To-the come your grandfather / Pedro,....  
           ‘When / Because your grandfather / Pedro came,...’
- b. \*Al tu abuelo / Pedro venir,....  
           To-the your grandfather / Pedro come,....

Interestingly, *no* can intervene without problems between the preposition and the infinitive (cf. (30)) and negative elements like ‘never’, though marked, sound slightly better than subjects in that very position (cf. the contrast between the data in (31), on the one hand, and (28)b and (29)b, on the other).

- (30) a. De no venir tu abuelo / Pedro,...
- Of not to-come your grandfather / Pedro,...
- ‘If your grandfather / Pedro does not come,...’
- b. Al no venir tu abuelo / Pedro,...
- To-the not come your grandfather / Pedro,...
- ‘When / Because your grandfather / Pedro did not come,...’
- (31) a. (?De jamás / nunca venir tu abuelo / Pedro,...
- Of never to-come your grandfather / Pedro,...
- ‘If your grandfather / Pedro does not ever come,...’
- b. ?Al jamás / nunca venir tu abuelo / Pedro,...
- To-the never come your grandfather / Pedro,...
- ‘Because your grandfather / Pedro never came,...’<sup>46, 47, 48</sup>

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<sup>46</sup> See Ortega-Santos (2002 and 2003) and references therein for further discussion of (prepositional) infinitival clauses and overt subjects in Spanish.

<sup>47</sup> When two IPs are coordinated and the first one includes *no*, negation takes scope only over the first conjunct:

- i. No viene Pedro y viene María.  
 not come Pedro and come María  
 ‘Pedro will not come, but María will come.’

I take these facts to provide support for the fact that negation originates/is interpreted low in Spanish, in spite of what word order may suggest.

<sup>48</sup> The phenomenon of Neg-raising provides yet another argument in that it strongly resembles clitic raising. Both phenomena are illustrated below:

- i. a. No quiero que vengas. *Neg-raising*  
 not want-I that come-you  
 ‘I don’t want you to come.’
- b. Quiero que no vengas.  
 want-I that not come-you

Furthermore, the idea that negation is a clitic is not new (see Belletti 1990 and Zanuttini 1997). For instance, Pollock (1989), in his seminal work on negation in French, already argued that *ne* is a clitic in this closely-related language:

(32) Jean n'aime pas Marie.

Jean ne love NEG Marie.

'Jean does not love Marie.'

Even though Spanish lacks the *pas* particle, the parallel between the present argument and Pollock's view is fairly relevant. Additionally, as J. Uriagereka (p.c.) notes, negation in Galician also seems to have clitic-like properties in that the negative particle [noŋ],<sup>49</sup> leans on object clitics, a process that results in the loss of the velar property of the final nasal and even in apocoptation (cf. (33)-(34)):

(33) Non-o dixo      *Formal spelling / Formal pronunciation (with a develarized final nasal)*

Not it say

'He / She did not say that'

(34) N'o dixo      *Colloquial pronunciation*

Not it say

- 
- |     |    |   |                        |
|-----|----|---|------------------------|
| ii. | a. | 'I don't want you to come.'                               | <i>Clitic climbing</i> |
|     |    | Lo quiero ver.<br>it-want-I to-see<br>'I want to see it.' |                        |
|     | b. | Quiero verlo.<br>want-I to-see-it<br>'I want to see it.'  |                        |

(i)a and (i)b, on the one hand, and (ii)a and (ii)b, on the other mean the same thing, with some elusive pragmatic differences. I leave this issue for future research.

<sup>49</sup> Nasals at word final position are velarized in Galician.

These facts in Galician, another closely-related language, provide further support for the view that negation is a clitic in Spanish and other Romance languages and that preverbal subjects in these languages are not necessarily left-dislocated topics.<sup>50</sup>

As far as the lack of DE in Spanish is concerned, it is worth mentioning that the link between expletives and DE is not totally clear. For instance, English allows well-known cases of the following sort (Norbert Hornstein p.c.; see Ward and Birner 1995 for relevant discussion):

(35) There entered the room every man that I knew.

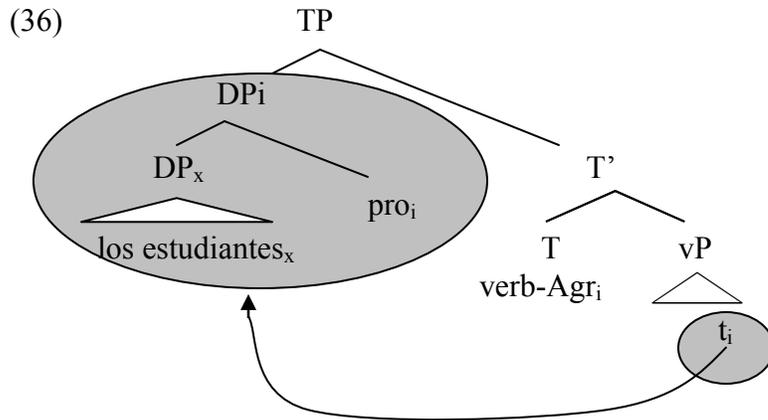
In fact, Section 2.1.4.3.1 below will provide evidence that null expletives exist in the syntax of Null Subject Languages in clear opposition to A&A's view. Therefore, I conclude that the evidence of A&A for the last remaining argument against a standard EPP treatment is not compelling.<sup>51</sup>

With regard to the evidence provided by Ordóñez and Treviño (1999) for the pronominal nature of agreement in (19), note first that this turns out to be a rather minor point if the A&A analysis collapses independently. The presence of a *pro* doubled by the overt subject would also explain the peculiar agreement pattern found in such constructions. This is the resulting structure, where I abstract away from such irrelevant details as verb movement:

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<sup>50</sup> Under the view that preverbal subjects are not necessarily dislocated topics, there is at least another way of explaining the behavior of negation. It could be that NegP enters the structure between *vP* / *VP* and *TP*, and in sentences involving negation, the verb stays lower than in the affirmative counterparts. Indeed, Zubizarreta (1994) argues for this kind of view to capture the adverb placement which we discussed in this section.

<sup>51</sup> Aside from the breach of the expletive-DE in some instances, Uriagereka (2005b) suggests an alternative explanation for the lack of DE in these contexts in languages like Spanish. In this sort of language, a hypothetical pleonastic is null, unlike in English or French. Then, the issue is what happens to the expletive-associate pair in the LF component in each sort of language. Uriagereka suggests that one possibility for the entirely null formative is that it is literally replaced by the associate, unlike the slightly more contentful overt counterpart –which is customarily assumed to be adjoined to by the associate (Chomsky 1995). In effect, then, the substitution process renders the reasons for the DE vacuous.



Any evidence that preverbal subjects have A-bar properties is a priori compatible with having Spec,TP be projected if TP is an A-bar position in Spanish (e.g., Masullo 1992, Uribe-Etxebarria 1992 or Zubizarreta 1998). This entails that, for instance, the [+aboutness] feature of preverbal subjects and Uribe-Etxebarria's (1992) scope facts in (21)-(22) are readily accommodated if preverbal subjects are in Spec,TP (see Uribe-Etxebarria 1992 for this kind of approach to her scope facts). Still, in current terms the elusive A vs. A'-bar contrast is not adopted: The traditional association of the C-domain and A'-bar status with pragmatics and surface semantics effects is not necessary, *given the mapping of IM onto precisely these aspects of interpretation*. Such data, in fact, supports the view that subject movement correlates with surface semantics.

Most importantly, it has been argued in the literature (see Goodall 2001 a.o.) that preverbal subjects in Spanish are not 'full' topics or background topics, contra A&A, as seen by the fact that sentences including preverbal subjects are grammatical as answers to out-of-the-blue questions (Goodall 2001 among others):

(37) Qué ocurre?

'What's going on?'

- a. Pedro le dio un libro a María.  
Pedro gave a book to María  
'Pedro gave a book to María.'
- b. #A María le dio un libro (Pedro).
- c. #Un libro le dio a María (Pedro).
- d. #Pedro, le dio un libro a María.

The facts, though, are slightly more complicated. Note that for many speakers the most natural answer to an out-of-the-blue question includes a complementizer at the beginning of the sentence (J. Uriagereka p.c.):

- (38) Qué ha pasado?  
'What's going on?'  
(Pues) que Pedro no me ha llamado.  
that Pedro not me has called  
'Pedro has not called me.'

This ought to be related to Erteschik-Shir's (1997) view that this kind of event-reporting sentence includes a stage topic, understood as the 'here-and-now' of the discourse. In Spanish, it seems that what appears to be a main clause is an embedded clause predicated of the covert stage topic.

- (39) [ $\emptyset$ <sub>topic</sub> *Ha pasado que*] Pedro no me ha llamado.  
[ $\emptyset$ <sub>topic</sub> *Has happened that*] Pedro not me has called  
'What has happened is that Pedro has not called me.'

Interestingly, once one makes such a main clause explicit, the embedded clause is structured according to the way the speaker conceptualizes the event, meaning the

SVO order is not uniformly enforced, but rather the VSO or VOS order might be used with various pragmatic consequences (e.g., the VOS order correlates with focus on the subject). As a consequence, (40), where the subject appears postverbally, is also a valid answer to a *what happened* question:

(40) (Pues ha pasado) que no me ha llamado Pedro.

has happened that not me has called Pedro.

This, of course, does not mean that the previous claims about the canonical order of Spanish as an answer to out-of-the-blue questions are not valid. The unmarked nature of preverbal subjects is found elsewhere in the language, e.g., in (41). In the following example, *María* is introduced as the discourse topic in the question; even though *María* is the topic, a non-topic, *un comerciante* ‘a dealer’, is found in the preverbal subject position:

(41) Y que es de María?

‘What’s up with María?’

a. A María, un comerciante le ha prometido un coche.

To María, a dealer cl-has promised a car

‘A dealer has promised María a car.’

b. #A María, le ha prometido un coche un comerciante.

c. #A María, un coche le ha prometido un comerciante.

It seems, then, that the intuitions about the canonical order in Spanish are strong, as are the intuitions teasing apart regular subjects from background topics in C, (e.g., topicalized subjects or objects contra A&A). In this sense, the data in (37),

which illustrate the standard out-of-the-blue question test, are indeed representative of Spanish.<sup>52,53</sup>

Moreover, A&A's view is incompatible with the behavior of bare quantifiers and bare NPs. In particular, Goodall (2001) argues convincingly that negative bare quantifiers cannot be dislocated, even though they are grammatical as preverbal subjects. The same point can be made with regard to the bare quantifier *alguien* 'somebody'.<sup>54</sup>

- (42) a. Nadie / Alguien me dijo que Alonso ganaría.  
 Nobody / Somebody me said that Alonso would-win.  
 'Nobody / Somebody told me that Alonso would win'
- b. #Nadie / Alguien, Alonso, me dijo que ganaría.  
 #Nobody / Somebody, Alonso, me said that would-win
- c. Alonso, nadie / alguien me dijo que ganaría.  
 Alonso, nobody / somebody me said that would-win

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<sup>52</sup> Still another context where canonical or unmarked word order can be found is within adverbial clauses, where 'discourse factors motivating marked orders are weak' (Belletti and Rizzi 1988: 337). As expected, the same facts obtain in adverbial clauses regarding the unmarkedness of SVO order in Spanish. A more thorough discussion on unmarked word order is included in Section 2.1.4 of this chapter, where the syntax of psych verbs and other unaccusatives is discussed.

<sup>53</sup> In what follows I make use of the out-of-the-blue question and answer test for the sake of exposition. The generalizations introduced this way are valid, even though the facts are slightly more complicated.

<sup>54</sup> The behavior of *nadie* is probably related to the clitic-properties of negation in Spanish illustrated above. Still, this cannot be the sole factor responsible for the behavior of *nadie*, given the distribution of *alguien* 'somebody'. Interestingly, other bare quantifiers, like *todos* 'everybody', can be dislocated.

i. Todos, no creo que vengan.  
 everybody, no think-I that come-3.pl  
 'I don't think everybody is coming.'

Still, it does not look like this is a counterexample to the generalization illustrated above in that the dislocation of *todos* is only possible in the subjunctive mood, in (i.), but not in the indicative mood, in (ii.):

ii. ??Todos, creo que vienen.  
 everybody, think-I that come-3.pl

See Lasnik and Uriagereka (2006) for discussion of extraction out of subjunctive clauses as opposed to indicative clauses. I leave the behavior of *todos* for future research, noting that at least a subclass of bare quantifiers are problematic for A&A's view.

(42)a illustrates a preverbal subject bare quantifier, whereas (42)b illustrates that this bare quantifier cannot be dislocated. (42)c, in turn, shows that the ungrammaticality of (42)b is not due to constraints on the position of the object *Alonso*, but on the position of the bare quantifier. These facts are unexpected under A&A's view, given that the preverbal subject bare QP in (42)a is expected to pattern with the one in (42)b.

Furthermore, Casielles-Suárez (2004) points out that in Spanish, while postverbal subject bare NPs and preverbal bare NPs functioning as unambiguous topics are grammatical (see (43) and (44), respectively), bare NPs sitting in Spec,TP are ungrammatical, ((45)) (see Chapter 2, Section 2.1.5 for further discussion of the properties of bare NPs). Such data are problematic for A&A's proposal, since this suggests that background topics hosted in C and preverbal subjects occupy different positions (see Raposo 1999 on this general idea). If that is the case, it would be consistent with the facts to conclude that preverbal subjects occupy Spec,TP in this language.

(43) En la calle jugaban niños.

played-3.pl children in the street

'Children were playing in the street'

(44) Niños, (creo que) jugaban en la calle.

*hanging topic*

Children, (believe-I that) played-3.pl in the street

'As for children, (I believe that) they were playing in the street'

(45) \*Niños jugaban en la calle.

*regular subject*

Another point is worth raising with regard to the distribution of subject bare NPs: Some postverbal bare NPs necessarily correlate with an overt phrase, typically an adverbial *in preverbal position* (cf. Torrego 1989 and Benedicto 1997, a.o.). This need not be the case when such an expression, typically a locative, is recoverable from the semantics of the verb, but it is otherwise a condition *sine qua non* for the presence of postverbal subject bare NPs. The appearance of the locative in the structure seems to be conditioned by semantics, but not its preverbal position. It is coherent to claim that EPP causes the locative to appear preverbally. The fact can be witnessed in the contrasts between the unaccusative *llegar* ‘to arrive’ –which encodes a path-of-motion related to the locative in point– and both a verb like *madurar* ‘to mature, to grow up’ and any other unergative variant (see Torrego 1989 for related discussion):

(46) *unaccusative Verbs*

- a. (Aquí) llegan estudiantes.  
arrive-3pl students  
‘Some students are arriving’
- b. \*(Aquí) maduran estudiantes  
here grow up-3pl students  
‘Students grow up here’

(47) *unergative verbs*

- a. \*(Aquí) anidan palomas. (Torrego 1989)  
here nest pigeons  
‘Pidgeons nest here.’

b. \*(Aquí) corren chicos.

here run boys

‘Boys run here’

That said, it is important to observe that, crucially for the purposes of this research, when the subjects are *full preverbal DPs*, the locative *never* needs to be present:

(48) (Aquí) los chicos corren.

here the boys run

‘The boys usually run (here)’

This, I believe, can be taken as evidence that the EPP is active in Spanish. In particular, such data seem to suggest that:

- i. bare NPs cannot appear in TP due to some semantic / information structure constraint (e.g., see Casielles-Suárez 2004 and Bleam 2005 for related claims)<sup>55</sup>
- ii. still, Spec,TP has to be filled

This results in the relevant locatives and similar elements doing the job, in the spirit of the Last Resort Condition (recalling issues arising in languages with so-called Locative Inversion, see Ortega-Santos 2005). Following Soltan (2005), one can assume that such locatives do not trigger agreement on T because they do not move to Spec,TP for Case reasons, but rather to check the EPP-feature on T. Alternatively, they might move for Case reasons, but their lack of agreement features would explain the agreement pattern in such constructions (H. Lasnik p.c.).

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<sup>55</sup> As the reader may remember, Spec,TP seems to be a locus of certain information structure / semantic effects in Spanish, which can be argued to underlie this ban on the position of bare NPs (e.g., Casielles-Suárez 2004 and Bleam 2005). See Chapter 2, Section 2.1.5 for further discussion of the properties of bare NPs.

Interestingly, the relevant preverbal adverbial elements are compatible, in the instances that occupy us now, with neutral information structure, just as preverbal subjects are. This compatibility contrasts with what one can witness in structures with preverbal locatives where the subject is not a bare NP (cf. the contrast between (49) and (50)):

(49) Qué ocurre?

‘What’s going on?’

\*(Aquí) anidan palomas. (Torrego 1989)

(50) ¿Qué ocurre?

‘What’s going on?’

a. Juan me regaló aquí el anillo.

Juan me gave here the ring

‘Juan gave me the ring here’

b. (#)Aquí me regaló (Juan) el anillo.

Once again, these facts can be interpreted as evidence that the preverbal adverbials under consideration are fulfilling the same role as preverbal subjects –i.e., they are in Spec,TP. This seems like a coherent conclusion to draw, because elements in the left-periphery of the clause are incompatible with out-of-the-blue questions. This conclusion, in turn, reinforces the view that the EPP is active in the language under consideration.

If the logic developed so far is on the right track, one can conclude that there is a whole set of elements which appear preverbally without having any of the features of dislocated or topicalized elements. Furthermore, the evidence that A&A

give in favor of the analysis of preverbal subjects as background topics hosted in C is not robust. Therefore, it seems coherent to argue that (non-topicalized) preverbal subjects move to Spec,TP and that they are distinct from *background topics* (see (8)).

That said, throughout this argumentation the notion of canonical or unmarked word order played a crucial role. I have assumed that SVO is the canonical word order in Spanish. Next, I will look at some hypothetical exceptions to the SVO canonical word order, showing how they fit into the general picture outlined above, where Spec,TP is available for subject movement in Spanish. In particular, the syntax of presentational unaccusatives, psych verb and clausal subjects will be discussed. In these cases, the canonical order is VS, as opposed to SV. It will be argued that these cases constitute no counterexample to the active Spec,TP analysis and that elements other than the subject occupy Spec,TP for independent reasons.

#### **2.1.4. On Locative Inversion, quirky subjects and clausal subjects**

The previous section discussed the canonical word order of Spanish, concluding that in the unmarked case, subjects appear in the preverbal position. The purpose of this section is to refine this view by discussing the behavior of psych verbs, (other) unaccusatives, and clausal subjects. Specifically, in these cases the (agreeing) subject appears postverbally in the unmarked case. In contrast, when these agreeing subjects or clauses appear preverbally, they are interpreted as background topics (cf. Contreras' (1976: 27 and 53) seminal work). Below, it is shown that these apparent counterexamples to the SV(O) canonical word order can be explained by the

fact that elements other than the subject occupy Spec,TP, causing the subject to remain in situ.

#### **2.1.4.1. Canonical word order and presentational unaccusatives**

Certain unaccusative verbs show VS canonical or informationally neutral order, whereas in the SV order the subject functions as a background topic:

(51) Qué ocurre?

‘What’s going on?’

a. Viene Ceferino.

comes Ceferino

‘Ceferino is coming.’

b. #Ceferino viene.

Ceferino comes

(52) Qué sabes de Ceferino?

‘What is going on with Ceferino?’

a. Ceferino (ya) viene.

Ceferino (already) viene.

‘As to Ceferino, he is coming.’

b. # (Ya) viene Ceferino.

# (Already) comes Ceferino.

(53) Qué ocurre?

‘What’s going on?’

a. Ha empezado la resistencia.

has started the resistance

‘The resistance has started.’

b. #La resistencia ha empezado. (Contreras 1976)

the resistance has started

(54) Qué sabes de la resistencia?

‘What is going on with the resistance?’

a. #Ha empezado la resistencia.

has started the resistance

‘The resistance has started.’

b. La resistencia ha empezado. (Contreras 1976)

the resistance has started

The question is what is behind this behavior. I claim that the VS structures are instances of Locative Inversion structures.

Within Soltan’s (2005) minimalist treatment of Locative Inversion, this construction is restricted to unaccusatives including a locative in their lexical entry, due to the fact that Minimality<sup>56</sup> is not violated when the adverb moves to Spec,TP. In contrast, in the case of transitive and unergative constructions including a locative in

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<sup>56</sup> According to Relativized Minimality, a movement operation cannot involve X and Y over a Z which is relevantly identical to Y in the configuration ...[X...[Z...[Y...]....]... if Z c-commands Y (Hornstein 2006; see Rizzi 1990). Case-marked DPs would be ‘relevantly identical’ in this context. See Ortega-Santos (2007) for further discussion.

their lexical entry, Minimality is violated because of the presence of an external argument in  $vP$ .

Under Soltan's assumptions, verbs undergoing Locative Inversion select for a prepositional small clause complement including the locatum (a DP, e.g. *la resistencia* 'the resistance' in (53)) and the location (the locative) (Soltan 2005: 43):

(55)  $[_{p^*P} \text{Locatum-DP } [_{p^*} p^* [_{PP} P \text{Location-DP}]]]$

Given that the T Probe can only target the closest Goal in its c-command domain (cf. Chapter 1, Section 2), everything else being equal, the Locatum is closer to T than the Location. Within Soltan's system, this prepositional small clause constitutes a phase, so that it may be assigned an EPP feature that attracts the Location to its Spec (Soltan 2005: 44):

(56)  $[_{TP} T [_{VP} V [_{p^*P} [_{PP} P \text{Location-DP}]_i \text{Locatum-DP } [_{p^*} p^* [_{PP} t_i]]]]]$

As a consequence, the Location now is closer to T than the Locatum and it may, therefore, move to Spec,TP (Soltan (2005: 44):

(57)  $[_{TP} [_{PP} P \text{Location-DP}]_i T [_{VP} V [_{p^*P} t_i \text{Locatum-DP } [_{p^*} p^* [_{PP} t_i]]]]]$

In turn, unergatives and transitive verbs are incompatible with Locative Inversion structures because these include an External Argument (EA) closer to T than any Goal within the prepositional projection (Soltan 2005:51):

(58)  $[_{TP} T [_{v^*P} EA v^* [_{VP} V [_{p^*P} \text{Locatum-DP } [_{p^*} p^* [_{PP} P \text{Location-DP}]]]]]]^{57}$

Soltan's view is particularly appealing in this context because unaccusatives showing the peculiar behavior in (51)-(54) have been claimed to include a (covert)

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<sup>57</sup> See Soltan (2005) for details on how to prevent the locative from moving to the edge of  $vP$  and, subsequently, to TP.

spatio-temporal adverb in their lexical entry (cf. Goodall 2001 and Bleam 2005). Unaccusative verbs, which do not seem to have a covert spatio-temporal adverb in their semantics, show the opposite pattern, cf. (59)-(60), in spite of their being also unaccusative:

(59) Qué ocurre?

‘What’s going on?’

a. La resistencia ha fracasado.

The resistance has failed

‘The resistance has failed.’

b. #Ha fracasado la resistencia. (Contreras 1976)

has failed the resistance

(60) Qué ocurre?

‘What’s going on?’

a. Justi ha madurado.

Justi has grown-up

‘Justi has grown up.’

b. #Ha madurado Justi.

#Has grown-up Justi<sup>58</sup>

Arguably, this state of affairs is explained as follows: In the case of presentational unaccusatives including a locative in their semantics, due to their presentational character, the locative is the subject of the predication. This is reflected

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<sup>58</sup> The presence / absence of a covert locative in the syntax of unaccusative verbs also seems to correlate with whether the verb can license subject bare NPs, as illustrated in the previous section. Furthermore, there has been some discussion in the literature on whether the bare NP facts constitute a diagnosis of unaccusativity (cf. Torrego 1989 and Benedicto 1998). In this sense, these structures are similar to expletive constructions, which also show a strong relationship with unaccusativity.

in the syntax by having the locative surface at Spec,TP, which entails [+aboutness] semantics. Note that the appearance of locatives in the syntax of unaccusatives is determined semantically. Still, *the preverbal position of the locative is a function of semantics* (cf. the [+aboutness] feature] *and syntax*. In this sense, the previous discussion provides evidence that the EPP is active in this language, though it is a semantically driven EPP.<sup>59</sup>

The cases of VS canonical word order corresponding to presentational unaccusatives / Locative Inversion have the following structure, illustrated with (51), repeated here for the sake of exposition:

(61) Qué ocurre?

‘What’s going on?’

a. Viene Ceferino.

comes Ceferino

a’. [TP [PP P Location]<sub>i</sub> viene<sub>k</sub> [VP t<sub>k</sub> [<sub>p\*</sub>P t<sub>i</sub> Ceferino [<sub>p\*</sub>p\* [PP t<sub>i</sub>]]]]]

Evidence for this derivation comes from the fact that even when the preverbal locatives are overt, they are compatible with neutral information structure. This suggests that these locatives are in Spec,TP (cf. Ortega-Santos 2006c).

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<sup>59</sup> Similar facts are found in Italian: According to Zubizarreta (1998: 118-119), Pinto (1994) suggests that cases of VS with focus-neutral interpretation in Italian must be analyzed as covert locative constructions. When the locative is covert, it is understood deictically with respect to the speaker’s location. The following is a presentational construction:

i. Sono arrivati molti ragazzi.

Have arrived many girls.

‘Many girls have arrived.’

All these Locative Inversion facts seem to follow more general dynamics in language that tend to introduce the informative part of the clause after the less informative part, e.g., old information comes before new information across languages, etc. See Chapter 2, Section 2.2.1, for discussion of context-anchoring.

In turn, in the case of SV order with exactly those predicates that show Locative Inversion, Spec,TP is occupied by the locative. As a consequence, the subject moves past Spec,TP and lands in the C domain, with the usual surface semantics effects that this entails (e.g. they are interpreted as background topics), cf. (52), repeated here for the sake of exposition. The structure is as follows:

(62) Qué sabes de Ceferino?

‘What is going on with Ceferino?’

a. Ceferino (ya) viene.

Ceferino (already) viene.

‘Ceferino is coming.’

a’. [CP Ceferino<sub>j</sub> [TP [PP P Location]<sub>i</sub> viene<sub>k</sub> [VP t<sub>k</sub> [p\*P t<sub>i</sub> t<sub>j</sub> [p\*<sup>\*</sup> p\* [PP t<sub>i</sub>]]]]]]

On the other hand, unaccusatives which do not include a locative in their semantics do not have this kind of derivation available. In particular, they lack a locative selected by the predicate capable of moving into Spec,TP. As a consequence, that subclass of unaccusative verbs shows SV canonical word order. Finally, Minimality prevents transitive and unergative verbs with a locative in their lexical entry from undergoing Locative Inversion.

#### 2.1.4.2. Canonical word order and psych verbs

Psych verbs also make for an interesting study case, in that the (agreeing) subject appears postverbally in the informationally neutral case.<sup>60</sup>

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<sup>60</sup> In this section, I abstract away from a number of nuances, restricting myself to a general picture of this verb class. See Belletti and Rizzi (1988) and Gutierrez-Bravo (2006) for a more in-depth presentation and discussion of canonical word order in psych verb constructions in Italian and Spanish, respectively.

(63) Qué ocurre?

‘What’s going on?’

- a. A Faustino le gusta el tomate.  
to Faustino cl-please the tomato  
‘Faustino likes tomatoes’
- b. #El tomate le gusta a Faustino.  
the tomato cl-pleases to Faustino

(64) Qué sabes del tomate?

‘What is going on with the tomato?’

- a. El tomate le gusta Faustino.  
the tomato cl-pleases to Faustino  
‘Faustino likes tomatoes.’
- b. #A Faustino le gusta el tomate.  
to Faustino cl-pleases the tomato

Under standard assumptions that link the structure of psych verbs to the structure of unaccusatives, the same Minimality considerations apply, predicting that psych verbs can show canonical word order with a postverbal agreeing subject, basically the same pattern as unaccusatives including an overt locative (cf. McGinnis 1997 for an alternative proposal). Indeed, this is what one finds.<sup>61, 62</sup>

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<sup>61</sup> Underlying objects in passive constructions surface canonically in SV order, in contrast to the syntax of psych verbs and presentational unaccusatives, a fact that calls for an explanation if Minimality allows for the peculiar behavior of psych verbs and presentational unaccusatives as argued above. As Collins (2005) shows, the underlying subject enters the structure in exactly the same position as its active counterpart, in spite of what a naïve look might suggest. This could draw the line between passives, on the one hand, and unaccusatives and psych verbs, on the other. I leave this issue for future research.

<sup>62</sup> With regard to psych verbs, a third factor might be at work, namely, the animacy hierarchy. It is known that animate DPs tend to appear earlier in the sentence than inanimate DPs due to the fact that

Given this analysis, the data from presentational unaccusatives and psych verbs do not constitute a counterexample to the claim that SVO is the canonical word order in Spanish; rather these apparent counterexamples follow from a number of interfering factors, namely, this state of affairs is allowed by Minimality, in contrast to unergative and transitive structures. Upon close examination, the data can be interpreted as providing further support to the claim that under certain circumstances Spec,TP can be projected in Spanish.

#### 2.1.4.3. Canonical word order and clausal subjects

Still another apparent exception to the SVO canonical word order of Spanish comes from the distribution of embedded clauses functioning as subjects.

(65) Qué ocurre?

‘What’s going on?’

a. Es increíble que amanezca.

Is incredible that the-day-comes.

‘It is incredible that the new day is coming.’

b. #Que amanezca es increíble.

That the-day-comes is incredible

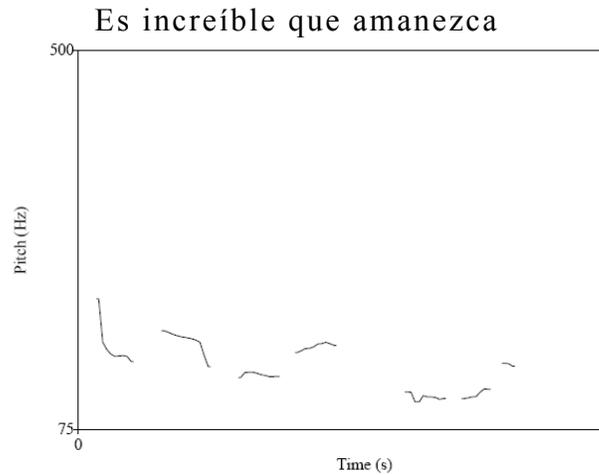
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they are more easily accessible than the latter, (cf Branigan et al. 2007). This could be at work in the psych verb cases where the quirky subject is animate as opposed to the agreeing subject which may or may not be animate. This processing factor might have made its way into the grammar of Spanish and other languages.

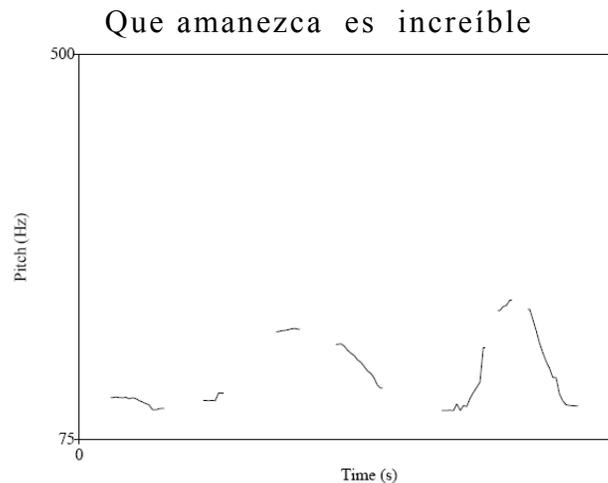
In the case of unaccusative presentational verbs there is an interfering factor, namely, tendencies in contextual anchoring (cf. Chapter 2, Section 2.2.1), that would justify the fact that the agreeing subject, which is an animate DP in most cases, does appear *late* in the structure. See n. 59 for relevant discussion.

These sentences are felicitous in different contexts and their intonation contour is also distinct:

(66) Intonation contour of (65)a



(67) Intonation contour of (65)b



The behavior in (65) is particularly interesting given that the distribution of clauses in Spanish is determined by syntactic Case, as is the distribution of DPs (Plann 1984 and Picallo 2002). Arguably, it is not a coincidence that English uses expletives in canonical word order in this very context:

(68) It is incredible that the new day is coming.

The puzzle that (65) posits for the active Spec,TP hypothesis in Spanish is explained if the syntax of Spanish includes null expletives. Whatever it is that explains the English data would also explain the Spanish data.<sup>63</sup> Indeed, I argue in the next section that there are null expletives in NSLs.

If this view is correct, it means that, even though the syntax of presentational unaccusatives, psych verbs and clauses functioning as subjects seems to pose a challenge for the proposal developed so far concerning the syntax of subjects, a closer examination reveals that the facts follow from independent factors.

#### **2.1.4.3.1. Evidence in favor of null expletives in Spanish**

The existence of null expletives in Null Subject Languages a subject of great controversy (cf. Campos 1997 and Sheehan 2007: Chapter 5, a.o., for arguments in favor of their existence; cf. in turn, Picallo 1998 and Rosselló 2000, a.o., for a more critical perspective on the existence of these elements). In this section, new data from Spanish suggests that null expletives indeed exist. In Section 2.1.4.3.2 below, I follow Lasnik (1989a, 1989b) in arguing that the ‘nullness’ of null expletives is a consequence of the Avoid Pronoun Principle (Chomsky 1981), known to be active in Spanish and other NSLs.

One of the most frequently studied aspects regarding the EPP is whether it is reducible to other principles of grammar, Case being the most popular candidate (e.g. Fukui and Speas 1986, Castillo, Drury and Grohmann 1999, Epstein and Seely 1999, Martin 1999 or Boskovic 2002, a.o.). This has given rise to a wealth of research in

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<sup>63</sup> See Chapter 4, Section 1.2 for further discussion of clausal subjects in English.

English that can inform the study of NSLs. For example, Lasnik (2003) following Boskovic (1997) argues that (69), provides an argument for the EPP:

(69) \*the belief [ to seem Peter is ill]

All the syntactic requirements are fulfilled in this phrase, e.g., the theta-criterion and the Case filter. Hence, it is predicted to be grammatical, contrary to fact. A plausible way of ruling it out is to argue that EPP is not fulfilled.<sup>64</sup> Thus, such data provide an argument for the EPP. Interestingly, similar facts obtain in Spanish:

- (70) a. la idea de que parece que ha llovido en Marte  
the idea of that seems that has rained on Mars  
'the idea that it seems like it has rained on Mars'
- b. ??la idea de parecer que ha llovido en Marte  
the idea of to-seem that has rained in Mars

The relative ungrammaticality of (70)b in this language could be due to two factors: i. There is nothing in the Spec of the infinitival TP and the EPP is not fulfilled; ii. there is a null expletive in said position and that expletive needs to have Case, causing a violation of the Case filter. There is some evidence for the latter point of view in this language; it is well-known that constructions consisting of *hecho de + infinitive* 'the fact of + infinitive' allow for the assignment of (nominative) Case to the subject of their infinitival complements.

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<sup>64</sup> This structure does not become grammatical if we insert an expletive to satisfy the EPP:

i. \*the belief [ it to seem (that) Peter is ill].

Under the assumption that expletives need Case, there is no source of Case for the expletive in the structure. Consequently, this independent factor explains why inserting an expletive does not result in a grammatical output.

(71) el hecho de venir Pedro<sup>65</sup>

the fact of to-come Pedro

‘the fact that Peter will come’

In such a context, the Lasnik / Boskovic kind of test gives one a fully grammatical outcome. This outcome suggests that a subject exists in need of Case in the infinitival TP:

(72) a. el hecho de parecer que ha llovido en Marte

the fact of to-seem that has rained in Mars

‘the fact that it looks like it has rained on Mars’

b. el hecho de [  $pro_{\text{expletive}}$  parecer que ha llovido en Marte]

the fact of  $pro_{\text{expletive}}$  to-seem that has rained in Mars

A null expletive of the ‘it’ kind seems to be the best candidate. If this logic is correct, it means that one has an argument for the existence of null expletives in Spanish. At the same time, one has an argument for the existence of the EPP, though in this particular case it would be reducible to the Inverse Case Filter.

The behavior of *hecho de + infinitive* ‘the fact of + infinitive’ is fairly interesting, in that it allows one to construct minimal pairs with nominals lacking a Case source for the subject of their infinitival complements. Still, this Case assigning property of nouns is not widespread crosslinguistically. Consequently, the argument would be stronger if other contexts, where overt subjects of infinitivals are licensed, yielded grammatical results. I provide evidence that this is indeed the case.

In particular, (non-argumental) prepositions taking an infinitival clause as complement provide still another context where there is a Case-source for the subject

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<sup>65</sup> I thank A. Olarrea for bringing the behavior of ‘hecho’ to my attention.

of an infinitival (see Ortega-Santos 2002 and 2003 and references therein for discussion). This can be seen in the fact that overt subjects (in italics) are licensed in such environments.

(73) *Al faltar Ceferino*, vamos a tener que cancelar la obra.

To-the miss Ceferino, we-will have that to-cancel the play

‘We will have to cancel the play, because Ceferino did not come’

Given that there is a Case source for the hypothesized null expletive, the following sentences are predicted to be grammatical:

(74) *Al parecer que ha llovido*, vamos a tener que cancelar la función.

To-the to-seem that has rained, we-will have that to-cancel the play

‘Since it looks like it has rained, we will have to cancel the play’<sup>66</sup>

The prediction is indeed fulfilled.

Further Spanish data from Exceptional Case Marking verbs, (that is to say, from verbs able to Case mark the subject of their infinitival complement), show that this analysis is plausible: Either they yield a grammatical outcome when our construction including a hypothesized null expletive in need of Case is inserted, or else there are well-known interfering factors that explain the hypothetical counterexamples. For instance, J. Uriagereka notes (p.c.) that causative ECM

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<sup>66</sup> Infinitival clauses functioning as a subject also license overt subjects.

i. El haber venido Ceferino me parece estupendo para la función.

The has arrived Ceferino, to-me seems great for the play

‘The fact that Ceferino has arrived is seems to me to be great for the play’

These structures behave as predicted.

ii. El parecer que ha llovido me parece estupendo para la función.

The to-seem that has rained to-me seems great for the play

‘The fact that it seems that it has rained seems to me to be great for the play’

It is well-known that, in this context, overt subjects are more likely to appear if the infinitival subject clause is headed by an article (or coordinated with another clause), hence the presence of the article in (ii). Still, as the translations suggest, it might be that in the case of this kind of structures we have another case of *hecho de + infinitive* ‘the fact of + infinitive’, which is not overtly expressed. See Hernanz (1999) and Mondoñedo (2006) for relevant discussion.

constructions are well-behaved. (75) shows that there is a Case source for the subject of the infinitival clause, whereas (76) provides evidence for the hypothesis that there is null expletive in the structure:

(75) Le hice correr a Pedro.

I made run to Pedro

‘I made Pedro run’

(76) Hice parecer que había llovido.

I made seem that had rained.

‘I made it look like it had rained’

In contrast, perceptual ECM verbs in Spanish exemplify the interfering factors to which I referred. As in causative ECM constructions, perceptual ECM verbs in Spanish Case-mark the subject of its infinitival complement with accusative Case:

(77) Veo venir a Pedro.

I-see come to Pedro

‘I see Pedro coming.’

In such ECM constructions, the perceptual verb takes the clause as its object, restructuring takes place and the perceptual verb Case-marks the subject of the embedded clause (cf. Hernanz 1999: 2243-2246).<sup>67</sup> A prediction of the present analysis is that if phrases like [ *pro*<sub>expletive</sub> parecer que ha llovido en Marte] (*pro*<sub>expletive</sub> *to-seem that has rained in Mars*) are embedded under a perceptual ECM verb, the

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<sup>67</sup> Even if one was to assume that clauses need to be Case-marked in Spanish (e.g. Plann 1984), one may argue that restructuring allows the infinitival clause to appear in the structure without receiving Case so that accusative Case is available for the subject of the infinitival clause (see Uriagereka 2008: Chapter 4 for related facts in other languages).

resulting sentence should be grammatical given that both the EPP requirement on *parecer* and the Case-requirement on the expletive are fulfilled, contrary to the fact:

(78) \*Veo parecer que Pedro está enfermo.

I see to seem that Peter is ill.

‘I see it seems that Peter is ill.’

There is evidence that such a sentence is ruled out for independent reasons: Perceptual verbs cannot appear in ECM constructions when used in their epistemic sense, that is to say, when they are related to inferences as in (78). Instead, perceptual verbs may appear in such constructions only when used as direct perception verbs (Hernanz 1999: 2243). Hence, the following contrast is found (Hernanz’s data):

(79) a. Vimos que Julia tenía mucho trabajo.

saw-we that Julia had much work

‘We understood that Julia had a lot of work.’

b. \*Vimos a Julia tener mucho trabajo.

saw-we to Julia to-have much work

Because of this state of affairs, one can conclude that the behavior of perceptual ECM constructions does not weaken the argument in favor of the existence of null expletives presented so far.

To sum up the discussion up to this point, structures such as [parecer que ha llovido en Marte] (*to-seem that has rained in Mars*) are grammatical only embedded under those constructions where there is a Case source to license overt subjects of infinitivals, (e.g., *hecho de + infinitive* ‘the fact of + infinitive’ construction, Causatives or adjunct infinitival clauses headed by an infinitive). This fact provides

evidence for the presence of an element in need of Case in said structure. A null expletive is the best candidate.

This analysis provides evidence for EPP effects, though reducible to Case requirements which can be satisfied via LDA. As a consequence, the relevance of this discussion for the debate on Spec,TP in Spanish might seem to be slightly limited. Nonetheless, as the reader might remember, the discussion on canonical word order highlighted the presence of null spatio-temporal elements in the syntax of Spanish, possibly not a coincidence.<sup>68</sup> Furthermore, it was noted that clauses functioning as subjects appear in the postverbal position in the canonical word order (cf. (65) renumbered here for the sake of exposition).

(80) Qué ocurre?

‘What’s going on?’

a. Es increíble que amanezca.

Is incredible that the-day-comes.

b. #Que amanezca es increíble.

That the-day-comes is incredible

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<sup>68</sup> I have presented evidence for a null expletive of the ‘it’-kind. With regard to the ‘there’-kind of expletive, it is worth noting that, exceptionally, Spanish existentials with *haber* constructions show DE:

- i. Hay un chico / \*el chico.  
is a boy / the boy  
‘There is a boy / \*the boy’

This is probably an instance of partitive Case assignment specified in the lexical entry of the verb, given that, as discussed before, it is not clear what the link between expletives and DE is. Among the lexicalized characteristics of this verb is the lack of agreement in a number of dialects (e.g. Castilian Spanish) and the fact that, when pronominalized, the subject is replaced by what looks like an object pronoun, possibly a partitive clitic:

- ii. Lo hay.  
cl-is  
‘It is there’

See Sheehan (2007: Chapter 5) for further discussion of DE in Romance NSLs.

This behavior was said to be unexplained, unless null expletives were available in the syntax of Spanish, in which case one could draw a parallel between the behavior of English and this language, as both languages would make use of expletives in this context (cf. (68), repeated here as (81)).

(81) It is incredible that the new day is coming.

#### **2.1.4.3.2. On the *nullness* of null expletives**

If the syntax of a language like Spanish includes null expletives, one would like to know why it is that they are null. If a principled explanation can be given for this nullness, the existence of such elements would gain further support. Lasnik (1989a, 1989b) provides one such explanation based on the Avoid Pronoun Principle (Chomsky 1981): Assuming overt pronouns require surface semantics / emphasis in pro-drop languages (cf. Lagunilla and Rebollo 1995: 235 and Zagona 2001: 25), and that such surface semantics are generally impossibly associated to a pleonastic element, the impossibility of an overt subject pleonasm in a pro-drop language follows.

In keeping with this view, it turns out to be the case that Dominican Spanish, which is a variety where pronouns do not have such an emphatic component to them, allows for the presence of overt expletives (Toribio 2000). (82) shows the use of expletive pronouns in contexts where Iberian Spanish and other standard varieties do not allow the presence of any pronoun. (83) exemplifies the over-use of overt subject pronouns, where other varieties allow only for null pronouns (or pronouns with a contrastive interpretation):

- (82) a. *Ello* llegan guaguas hasta allá.  
*it* arrive buses till there  
 ‘There arrive buses there.’
- b. *Ello* había mucha gente en lay-a-way.  
*it* was lots people on stand-by  
 ‘There were a lot of people on stand-by.’ Toribio (2000: 321)
- (83) *Yo* no lo vi, *él* estaba en Massachussetts, acababa de llegar, pero muy  
*I* not him-saw, *he* was in Massachussetts, had-just arrived, but most  
 probablemente para el domingo pasado, que fue Día de las Madres allá,  
 likely for the sunday last, that was Day of the Mothers there,  
*él* estaba en Nueva York ... *Él* estaba donde Eugenia, y *yo* creo que *él* se  
*he* was in New York ... *He* was at Eugenia’s, and *I* believe that *he*  
 va a quedar allá ...  
 will stay there ...  
 ‘I didn’t see him, he was in Massachussetts, he had just arrived, but quite  
 probably by last Sunday, which was Mother’s Day there, he was in New York  
 ... He was at Eugenia’s, and I think that he is going to stay there ...’ Toribio  
 (2000: 319)

Speakers of Dominican Spanish may switch back and forth between a variety that uses overt expletives and shows the over-use of subject pronouns, to one without overt expletives which also does not show the over-use of these pronouns. According to Toribio (2000: 316), speakers of Dominican Spanish have available an I-language

that is variable between parameter settings (...); on this view, speakers are bi-lingual in their native language, a state of affairs that typifies linguistic change in progress.’

These data show evidence for the link between pragmatic effects on the distribution of pronouns and the unavailability of overt expletives. Varieties where pronouns are overt only when used emphatically do not show any overt expletives. In contrast, Dominican Spanish, where overt pronouns are not used emphatically, allows for overt expletives. Inasmuch as the nullness of null expletives does not have to be stipulated, rather it follows from the properties of the dialect, the existence of null expletives gains further support.

In the next section, I discuss the relevance of these Spanish facts in regards to the debate on whether the subject-oriented EPP is active in Spanish.

### **2.1.5. Final remarks on preverbal subjects in Spanish and Romance NSLs**

Positing the existence of a uniform EPP requirement in NSLs is a risky step unless this requirement can be derived from independent properties.<sup>69</sup> Moreover, I have only presented evidence for the EPP in canonical sentences. The following table summarizes the resulting picture for canonical word order:

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<sup>69</sup> See Chapter 4, Section 1.1.1, for discussion of Bever’s (2006, 2008) approach where EPP effects in English are claimed to follow from general cognitive constraints.

(84) Table 1. On canonical word order in Spanish

| Verb Construction   | Unmarked word order                                   |
|---|---|
| Transitives   | SVO   |
| Unergatives   | SV  |
| Unaccusatives without a spatio-temporal adverb in their semantics | SV  |
| Unaccusatives with any spatio-temporal adverb in their semantics  | locative VS / $\emptyset_{locative}$ VS <sup>70</sup> |
| Unaccusative psych verbs (cf. quirky subjects)                    | O <sub>dative</sub> VS                                |
| Verbs with clausal subjects                                       | pro <sub>expletive</sub> VS                           |

What happens in the case of marked word order? One possibility is to interpret the facts discussed above by assuming that Spec,TP is projected in neutral information structure contexts, against A&A, though not necessarily so in other contexts in Spanish. Why should this be the case? Contreras (1991) provides an answer: Assuming economy principles can also apply to syntactic projections, Spec,TP in Spanish would only be projected *when necessary*, e.g., in cases of neutral information structure as shown in Section 2.1.2 of this chapter.<sup>71</sup> The question is

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<sup>70</sup> As discussed above, this same structure is found in the case of bare NPs functioning as subjects of unergative verbs.

<sup>71</sup> In Chapter 2, I have argued for a treatment of VOS order in terms of remnant movement approach, where the postverbal subject passes through Spec,TP in the course of the derivation. As a consequence, one can conclude that even in these cases of noncanonical word order an active EPP correlated with surface semantics (be it focus or [+aboutness]) can be maintained. See Ortega-Santos (2006c) for discussion of other noncanonical word order like wh-questions.

One related issue not addressed so far is the existence of VSO structures in Spanish. In such sentences, the subjects is not focused. It is therefore legitimate to wonder whether Spec,TP happens to

how one defines *necessary*. Uriagereka's observation that preverbal subjects constitute categorical judgments or Rizzi's aboutness criterion constitute a plausible answer. Just as speakers may impose focalization processes on syntax as a way of expressing what relationship a particular syntactic derivation bears to a specific context, so may speakers impose the categorical or aboutness criterion (cf. Rizzi 2005 and Gallego 2006). In what follows, I will present Rizzi's proposal for concreteness.

As Rizzi notes, the existence of Locative Inversion, quirky subjects, and inverse copular constructions (or even the existence of the LDA operation) casts some doubt on the idea that subjects move to Spec,TP to satisfy Case or Agreement requirements. Why would subjects move? To answer this question, Rizzi puts forward the existence of a Subject Criterion, akin to the Focus or Topic Criteria.<sup>72</sup>

A priori, it is not clear how this view relates to the existence of expletives. In Rizzi's terms, the preverbal subject is hosted in a Subj(ect) projection above the head carrying Phi features and responsible for the Case-Agreement system. This Subj projection is a projection at the junction of CP and IP and, therefore, it shares properties with both CP and IP: it qualifies as surface semantics and, nonetheless, its presence in the structure is obligatory. Expletives, whether overt or null, are a way of satisfying these conflicting requirements. In the words of Rizzi (2005: 11): 'When

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be projected or not (cf. Contreras' 1991 view, see Gallego 2006 for related discussion). Given the evidence that Spec,TP is an active position in this language, it seems coherent to consider that in those cases a null expletive is present in Spec,TP. Inasmuch as this element is available in the language, this is a legitimate option, which would mean that Spanish has Transitive Expletive Constructions (TECs) similar to the Icelandic ones. I leave this issue for further research. As far as null subjects are concerned, the current literature entertains the idea that these are deleted pronouns (cf. Duguine 2006), a view that is compatible with an active EPP in Spanish.

<sup>72</sup> This would explain why in the course of the acquisition of Spanish, preverbal subjects begin to be used at the same time as *wh*-questions and fronted objects (Grinstead 2000 and 2004). A priori, this could be interpreted as an argument in favor of A&A's view. Nonetheless, Rizzi's view is also consistent with the facts, while not being committed to an analysis of preverbal subjects as necessarily left-dislocated.

communicative intentions, discourse conditions and the thematic properties of the predicate require a non-predicational sentence, an expletive formally complies with the requirements of Subj, thus conveying the interpretation that the event is not presented as being about a particular argument.<sup>73</sup>

I agree in the spirit of Rizzi's view, but Raposo and Uriagereka's (1995) framework of context-anchoring achieves the same result without recourse to a specialized Subj projection (see Chapter 2, Section 2.2.1). According to Raposo and Uriagereka, contexts are set within other contexts, much as quantifiers have scope inside one another. In the SV order, the subject anchors the predicate, whereas in the VS order the predicate anchors the subject. This results in categorial and thetic judgments respectively.

Under this view, Spec,TP is available for subject movement in Spanish. Most importantly, this movement correlates with surface semantics, a fact that provides support for the view that complex syntax maps onto complex semantics (Uriagereka 2008).

### **3. Conclusion**

This chapter has shown evidence that preverbal subjects move to Spec,TP in Spanish (Goodall 2001 and Ortega-Santos 2005, a.o.). Claims that preverbal subjects correlate with surface semantics (Uriagereka 2002 and Rizzi 2005, a.o.) accord well with the view that complex syntax maps onto complex semantics (Uriagereka 2008).

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<sup>73</sup> Cf. Uriagereka (2005).

The evidence for the view that preverbal subjects are not in the C-domain of the clause was supported with a number of arguments, among them the fact that SVO is the canonical word order in this language. A number of apparent counterexamples to the SV(O) canonical word order (e.g., presentational unaccusatives, psych verbs and clausal subjects) were argued to be the result of independent factors. In particular, elements other than the subject occupy Spec,TP for independent reasons, among them null expletives, for whose existence new evidence is provided.

In the next chapter, I discuss an apparent counterexample to the systematic mapping between IM and surface semantics. I focus on subject movement to Spec,TP in English. I argue that a careful look at this language also reveals that IM has a semantic effect.

## Chapter 4: The English benchmark for the mapping between IM and semantics

As stated in Chapter 3, there is a growing consensus in the literature that Internal Merge (IM) or syntactic movement adds expressive power to language (e.g., see Chomsky 2001 and subsequent work). Chomsky argues that the mapping between the Duality of Semantics and the Duality of Merge is systematic. In the words of Chomsky (2005a: 7): ‘To a large extent, EM yields generalized argument structure (theta roles, the “cartographic” hierarchies,<sup>74</sup> and similar properties); and IM yields discourse-related properties such as old information and specificity, along with scopal effects’ (see Chapter 3 for further discussion). Uriagereka (2008a) provides a rationale for this kind of view arguing for the idea that *mapping a more or less entangled syntax specifically to a semantics of comparable complexity* is realistic, both from a developmental (learnability) and, ultimately, an evolutionary (minimalistic) perspective.

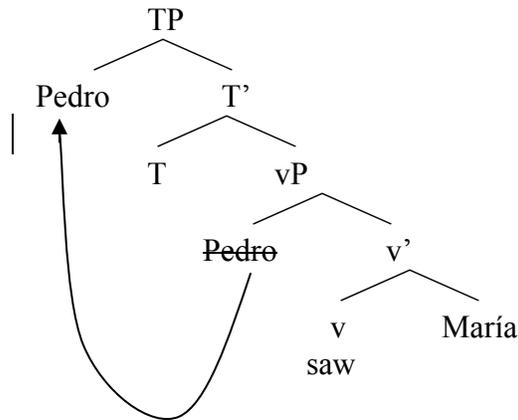
Some challenges to this view exist, in that movement of the subject into the preverbal slot in English, (that is to say, complex syntax), does not result in any kind of *complex* semantics. Under the standardly assumed VP-Internal Subject Hypothesis (Koopman and Sportiche 1991 a.o.), subjects move from *vP* to *TP*. *Pedro* in (4)a undergoes the movement illustrated in (4)b:

- (1) a. Pedro saw María.

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<sup>74</sup> See Cinque (1999); Cinque, ed. (2002); Belletti, ed. (2004); Rizzi, ed. (2004).

b.



In Chapter 3, I argued that this movement correlates with surface semantics in Spanish and Romance NSLs (cf. Uriagereka 2002, Rizzi 2005 and Gallego 2006). However, it is not clear what complex semantics this kind of movement entails in English. The purpose of this chapter is to look into this issue by testing two competing hypotheses, namely, a weak *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* and a stronger *Strict Internal Merge / Surface Semantics Mapping Hypothesis*. According to the former hypothesis, a number of factors might conspire to allow for IM without any expressive enrichment in pragmatic or semantic terms, usually referred to as *surface semantics* or *peripheral features*. Thus, apparent counterexamples to said mapping can be explained by looking for those conspiring factors. In turn, the latter hypothesis denies that there can be IM without adding expressive power to language, and posits that in cases of apparent counterexamples, there really is a semantic / pragmatic difference, that is subtle and difficult to detect.

In keeping with the *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis*, I explore the idea that in English independent factors explain the lack of surface semantic effects in subject movement to Spec,TP, namely, the fact that this movement is obligatory. Bever's (2006, 2008) view that the EPP does not have to be stipulated, but rather follows from general cognitive constraints, is evaluated, in an attempt to avoid circularity in the argumentation. Still, a detailed look at the syntax of English shows that the *Strict Internal Merge / Surface Semantics Mapping Hypothesis* is indeed tenable, irrespective of the obligatoriness of subject movement into Spec,TP. In particular, some surface semantic effects are shown to correlate with said movement.

It will be argued, in particular, that a Multiple Spell-Out (MSO) system (Uriagereka 1999 and 2008a) allows us to capture the parametric differences in surface semantic effects found in Spanish and English.

The chapter is structured as follows: In Section 1, I focus on subject movement into Spec,TP in English, to evaluate the *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* and the *Strict Internal Merge / Surface Semantics Mapping Hypothesis*. It will be argued that surface semantic effects can be found in this language, a fact that supports the *Strict Internal Merge / Surface Semantics Mapping Hypothesis*. In Section 2, some notes on the parameterization of surface semantic effects are included, showing that a MSO system allows us to capture the differences between Spanish and English (Uriagereka 1999 and 2008a).

## 1. Subject movement to Spec,TP in English

A cursory look at the literature on Romance NSLs and English / French reveals the following crosslinguistic differences concerning subject movement into the preverbal slot:

- i. *English / French*: Preverbal subjects (allegedly) correlate with no discourse-related properties
- ii. *Null Subject Languages*: Preverbal subjects correlate with discourse-related properties (cf. Uriagereka's 2002 categorical judgments or Rizzi's 2005 [+aboutness] feature; see Chapter 3 for discussion)

The pattern in (i) seems to constitute a counterexample to the strict Mapping between type of Merge and Semantics, (cf. Chomsky's work or Uriagereka's view that complex syntax maps onto complex semantics).<sup>75</sup> This scenario allows us to test the two hypotheses introduced at the beginning of the chapter, namely, the weak *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* and the stronger *Strict Internal Merge / Surface Semantics Mapping Hypothesis*.

I first discuss the *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* in Section 1.1. I explore the idea that, in English, independent factors explain the lack of surface semantic effects in subject movement to Spec,TP, namely, the fact that this movement is obligatory. This reasoning is not circular, in that the EPP does not have to be stipulated. In particular, I review and adopt Bever's (2008) idea that the EPP follows from general cognitive constraints. Still, in Section 1.2, a detailed look at the syntax of English reveals that there is evidence for the *Strict*

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<sup>75</sup> Scrambling is another interesting case study. There is debate on whether scrambling is optional. Cf. Saito (1989, 1992), Ishii (1997), Miyagawa (1997) and V. S. Ferreira and Yoshita (2003) for an overview.

*Internal Merge / Surface Semantics Mapping Hypothesis*, regardless of the obligatoriness of subject movement into Spec,TP. In particular, some surface semantic effects are shown to correlate with this movement.

### **1.1. The *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis***

Within Chomsky's system, the head H of a phase Ph may be assigned an EPP-feature, a peripheral feature to drive movement to the Spec of the phase head. (Chomsky 2000: 109). Furthermore, (such) an optional rule can apply only when necessary to yield a new outcome (Chomsky 2001:34, in the sense of Fox 1995, 2000 and Reinhart 1997). In the case of movement into Spec,TP, the phase head that would be assigned an EPP property is not T but rather C. T, in turn, would inherit this property from C. Can this explain the contrast between Spanish and English / French? A plausible explanation goes as follows:

- i. In NSL's, movement of subjects into Spec,TP is *optional*, hence the surface semantics effects.<sup>76</sup>
- ii. In English / French, subject movement into Spec,TP is *obligatory* and, therefore, does not necessarily correlate with peripheral effects.

This is compatible with the idea that IM maps onto surface semantic or peripheral properties. Whenever one does not see such a mapping there is an extra factor involved, namely, lack of optionality, meaning IM is necessary, though not sufficient to trigger surface semantics (cf. Albiou 2003 for a similar view). This is in essence the *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis*, a hypothesis

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<sup>76</sup> See n. 71 for detailed discussion of the hypothetical optionality of the EPP in Spanish.

put forth to deal with some apparent exceptions to the Duality of Semantics proposed by Chomsky (2000) and related work. If this view is on the right track, it explains the crosslinguistic data under consideration, namely, the presence / absence of peripheral effects of subject movement into Spec,TP across ‘flexible’ word order languages, such as (Romance) NSLs, and ‘rigid’ word order languages, like English or French.

### **1.1.1. On the EPP in English**

Within Generative Grammar, much effort has been devoted to understanding the EPP, a proposed linguistic universal that entered the theory in Chomsky’s (1981) *Lectures on Government and Binding* and which still is the object of intense research.<sup>77</sup> The EPP requires clauses to have subjects. Over time, the EPP has been defined in at least the following ways:

- i. T requires a(n overtly filled) Spec (Chomsky 1982)
- ii. the EPP is a requirement that a strong nominal feature be checked in T (Chomsky 1995)
- iii. certain functional heads require a Spec (Chomsky 2000)

Definitions (i.) and (ii.) are intended to apply to the syntax of subjects, whereas the definition in (iii.) is intended to apply to displacement in natural language in general, subject movement being one such case.

There have been many attempts to eliminate the EPP from the grammar, due to its (partial) redundancy with Case Theory, Theta Theory or Agreement (e.g., Fukui and Speas 1986, Castillo, Drury, and Grohmann 1999, Boskovic 2002 or Epstein and

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<sup>77</sup> Though strictly, the EPP started in Chomsky (1955), with the sigma axiom that declared that derivations start at S, and S -> NP VP (J. Uriagereka, p.c.).

Seely 2006). Still, as shown by Lasnik (2003), the fact remains that the EPP is not completely redundant with such components of the grammar. Specifically, as seen above, in the following context in (2) there is no Case or Theta requirement on the Spec of the embedded TP. Nouns, such as *belief* do not assign Case, and *seem* does not assign any theta role to its subject. Therefore, these factors cannot play a role in this structure (see Chapter 3, Section 2.1.4.3.1, for discussion of this structure in Spanish).

(2) \*the belief [ to seem (that) Peter is ill].<sup>78</sup>

Nonetheless, the sentence is ungrammatical. According to Lasnik, the only grammatical principle being violated in such a sentence is the EPP. There is nothing satisfying the EPP on the embedded TP in (2).

If Lasnik (2003) is right, it follows that the EPP is real and it cannot be eliminated. In what follows, I will assume this to be true (though, see Boeckx 2000, Boskovic 2002, Epstein and Seely 2006 for further relevant discussion of the paradigm above).

With regard to the issue of how the EPP should be defined, Lasnik (1999a) makes the following argument: under the assumption that movement entails feature movement + pied-piping of the overt material relevant to a particular checking relation, linguistic units have the option of being pied-pied or else undergoing deletion (Ochi 1999). This can be seen in (3)a, a case of pseudo-gapping. Under the

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<sup>78</sup> I assume that derived nominals have the same selection properties as the corresponding verbs. As a consequence, 'belief' can take an infinitival complement. Note that the structure does not become grammatical if we insert an expletive to satisfy the EPP:

i. \*the belief [ it to seem (that) Peter is ill].

Under the assumption that expletives need Case, there is no source of Case for the expletive in the structure. Consequently, this independent factor explains the fact that inserting an expletive does not result in a grammatical output.

assumption that English has overt object shift and some limited verb movement, the verb in this sentence remains in situ and is elided under *vP* ellipsis, in contrast to V-raising in other contexts (cf. Koizumi 1993, 1995). Still, such an elision operation without movement is not available to the subject, cf. (3)b and (3)c:

- (3) a. Peter read a book and Mary<sub>j</sub> did a magazine<sub>x</sub> [<sub>VP</sub> t<sub>j</sub> read t<sub>x</sub>]  
b. \*Mary said she won't sleep, although will [<sub>VP</sub> she sleep]  
c. Mary said she won't sleep, although she<sub>j</sub> will [<sub>VP</sub> t<sub>j</sub> sleep]

As Lasnik notes, this fact supports the definition of the EPP as the requirement that certain heads have overt Specs.<sup>79</sup>

Still, even if we accept that the EPP exists as a valid description of the syntax of English, one would like to know why it is that the EPP exists or else the *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* runs the risk of merely restating the facts. In the next section, I discuss an approach in terms of general cognitive constraints developed by Bever (2006, 2008).

### 1.1.2 The EPP as a general cognitive constraint (Bever 2006, 2008)

Chomsky (2008) explicitly discusses the fact that the EPP has received a great deal of attention and has been put forward as a universal principle, due to the historical accident that English was the first language to be studied in depth. In keeping with this view, Chomsky notes that it is not clear that this principle is valid for a number of languages, ranging from Irish (cf. McCloskey 2001) to Spanish. In this context, it is worth noting that one factor that had a tremendous influence on the

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<sup>79</sup> Cf. Holmberg (2000) and Landau (2007) for related discussion.

definition of the EPP was the distribution of expletives in English. According to Chomsky (2008), Bever (2008) provides an explanation of such distribution, a fact that would explain the existence of EPP effects in English and in other languages. Specifically, Bever (2008) posits the need for ‘canonicity’ as a general cognitive principle relevant to the acquisition process.

The framework of Bever’s approach is Townsend and Bever (2001)’s Analysis-by-synthesis proposal. According to these researchers, humans basically understand everything *twice*, once on the basis of perceptual templates which assign likely interpretations to sentences by using a pattern completion system, and once by the assignment of syntactic derivations.<sup>80</sup> The implications for the task of acquisition are the following: children are expected to alternate between formulating statistical generalizations about the language and assembling derivational operations that account for those generalizations. For the child to be able to compile the relevant generalizations, there have to be statistical regularities in the language s/he is exposed to. Such a need would underlie the EPP behavior of English and, say, French.<sup>81</sup>

Nonetheless, there seems to be something missing from the argument. Lasnik’s research on the EPP in English highlights the fact that the subject-oriented EPP in this language is fundamentally different from object oriented EPP (for example, in ECM clauses). Specifically, Lasnik (1995a, or Lasnik 2003) has established the optionality of the EPP for object movement to AgrO (vP).

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<sup>80</sup> Within Townsend and Bever’s view, garden path effects, local syntactic ambiguities that lead to processing difficulty, provide evidence for perceptual templates. E.g., *The horse raced past the barn fell* (Bever 1970) constitutes a case of reduced relatives with a potentially intransitive verb. Here, perceptual templates yield the garden path, whereas at the level of the grammar the sentence can be recognized as perfect under the interpretation *The horse which was raced past the barn fell*.

<sup>81</sup> Note that Bever’s view does not enforce a universal English-kind of EPP. Rather, the input that a child might receive from, say, Spanish, will differ in its properties, so that the canonicity requirement imposed on said input will differ from the canonicity requirement imposed on English.

- (4) Mary made John out to be a fool.
- (5) Mary made out John to be a fool. (Lasnik 2002: 11)

Here, the particle *out*, which forms part of the main clause, shows whether *John* has moved to AgrO in the main clause (see (4)) or whether it has remained in Spec,TP of the embedded clause (see (5)). That is to say, object EPP is not uniformly enforced.

Bever's view explains the subject oriented EPP in English, but there is no explicit reason as to why subject and object EPP should differ, that is to say, why subject EPP is obligatory in contrast to object EPP which is optional. Part of the answer may lie in the special status of edges in language (e.g., word edges, sentence edges, etc.; cf. Carstairs-McCarthy 1999: 161-162). E.g., the task of acquisition naturally imposes a higher 'canonicity load' at the edge of a sentence than at other positions of the sentence (for instance, an object in ECM constructions). In that sense, it would seem natural to expect canonicity restrictions to be more likely to be enforced at the beginning of the sentence than at other sites (notwithstanding the fact that in certain contexts, like questions, the subject may not appear at the beginning). If this view is correct, Bever's approach would gain strength when coupled with the discussion above as it would be able to provide a rationale not only for the behavior of subject-oriented EPP in English, but also for the fact that subject and object-oriented EPP differ from one another.<sup>82</sup>

On a more technical level, even though Bever's approach does explain the presence of expletives in the structure, some aspects of the proposal remain to be

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<sup>82</sup> Another factor that might be at play is Gil's (1987) idea that cognition in general shows a preference for smaller items to precede larger ones, expletives being generally smaller than (most) syntactic phrases. Still, see Bever (2008) for some relevant discussion concerning the crosslinguistic variation in Heavy NP-shift.

made explicit. Specifically, is this canonicity requirement active at PF, in the course of the syntactic derivation or both? In what follows, evidence is provided for the fact that the canonicity requirement is found *both* at PF and in the syntax.

The following two assumptions are standard in the current syntactic framework:

- i. subject-oriented EPP is associated to TP, not to vP or VP.
- ii. syntactic operations feed PF but are not affected by it (e.g., syntax does not care about linearization, etc.)

Note that irrespective of whether movement to TP takes place in a transitive sentence, this does not affect surface word order.<sup>83</sup> Both (6) and (7) have the same surface word order, due to the fact that English shows no overt V-to-T/C movement.<sup>84</sup>

(6) [TP subject<sub>x</sub> [vP t<sub>x</sub>... *movement of the subject to Spec,TP, no verb movement*

(7) [TP [vP subject... *no (overt) element in Spec,TP / neither the subject nor the verb moves*

A priori, it is not clear that PF would care about the contrast above: Both derivations result in canonical word order, so it is not clear why subject-oriented EPP should be related to Spec,TP. This means that, whereas the PF canonicity requirement needs to be there or, otherwise, elements such as null expletives would be required in English, still, PF alone cannot do all the work. Because of this, I argue that the canonicity requirement has to be found *both in syntax and in PF*. The question is what kind of evidence does the child get from the syntax to be able to impose a canonicity

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<sup>83</sup> I thank A. Ince (p.c.) for bringing this fact to my attention.

<sup>84</sup> Actually, if Koizumi (1993,1995) and Lasnik (1999a) are right, English shows some limited V-movement. Depending on how rich the clausal structure of English is (e.g., if there is AgrS and TP in this language as opposed to 'only' TP) the point being made would still go through in spite of the existence of such limited head movements. See n. 44 for further discussion of verb movement in English.

requirement on elements *in Spec,TP*. One possible answer is the following: the child gets evidence that subjects are in *Spec,TP* from clauses which show verbal elements in T (e.g., auxiliaries, verb 'be', etc) and generalizes this movement of the subject to *TP* to all clauses, even those without V-to-T movement.<sup>85</sup> The association between *TP* and the EPP then, follows from canonicity constraints imposed not only at PF, but also in the syntactic derivation.<sup>86</sup>

If this view is on the right track, the distribution of the expletives in English and the syntactic behavior of preverbal subjects in this language do not have to be stipulated, but rather they can be derived from the interaction between the properties of this language and a general canonicity requirement put forward in Bever (2008).

Returning to the Duality of Semantics put forward in Chomsky (2001) and related work, this discussion has argued that (i.) *Spec,TP* must be obligatorily filled in English (cf. Lasnik 1999a, 2003), and (ii.) this obligatoriness follows from general cognitive properties (cf. Bever 2006, 2008). As a consequence, the *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* gains force: Movement of the subject to *Spec,TP* in English does not trigger surface semantics *because of an*

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<sup>85</sup> Interestingly, most sentences including an expletive involve the verb 'be', which arguably raises to T in this language, as shown by the fact that this verb can precede negation:

i. There isn't any man in the garden.

The acquisition task would be easier if evidence for all aspects of what we traditionally understand as the EPP (the distribution of expletives and subject movement into *Spec,TP*) are available in the same or closely related syntactic environments and (i) shows that, to some limited extent, this is the case. See Lasnik, Depiante et al. (2000) and references therein for discussion on verb movement in English. See also n. 44 and n. 84 above.

<sup>86</sup> If we extend the notion of canonicity to the syntax -as I have done above- arguing that, for learnability considerations, every single *Spec,TP* should be projected in English, this could draw the line between the following two competing analyses at the conceptual level:

i. John<sub>x</sub> seems [TP t<sub>x</sub> to [vP t<sub>x</sub> have a car]]

ii. John<sub>x</sub> seems [TP to [vP t<sub>x</sub> have a car]]

In particular, (i.) would be favored by syntactic canonicity. Still this would only be a *conceptual point*. See Epstein and Seely (1999), Boskovic (2002) and Lasnik (2002) for discussion on the relationship between the EPP and successive cyclicity. I leave this issue for further research just noting the possible implications of Bever's approach.

*independent factor*, the obligatoriness of this operation. However, this weakens the link between the complex semantics and complex syntax (IM).

For this reason, I believe that it is worth pushing for the stronger alternative, namely, the *Strict Internal Merge / Surface Semantics Mapping Hypothesis*. According to this hypothesis, the valuable insight of Bever (2006, 2008) can be kept, while arguing that subject movement into Spec,TP in English does indeed correlate with peripheral effects. A careful look at the literature reveals that evidence exists in favor of this view.

## **1.2. The *Strict Internal Merge / Surface Semantics Mapping Hypothesis***

As stated before, there is a growing consensus in the field that IM or syntactic movement should enrich the expressive possibilities of language. The purpose of this section is to show how movement of the subject into Spec,TP in English indeed affects scope relations, control, binding, and pragmatics: If so, this movement qualifies as a *new outcome* in the sense above.

The relevant pieces of data in terms of scope, control and binding are included in (8)-(10), where the (a) versions show overt movement of the subject as opposed to (b) versions:

- (8) *Scope* (Lasnik 1992: 332 following Lori Davis' initial insight, p.c.)
- a. Someone is likely to be here. *someone can have both wide and narrow scope*
  - b. There is likely to be someone here. *someone can have only narrow scope*

- (9) *Control* (Lasnik 1999a: 188-187)
- a. Someone seems to be available without PRO seeming to be eager to get the job.
  - b. \*There seems to be someone available without PRO seeming to be eager to get the job.
  - a'. ?There arrived three men (last night) without [PRO] identifying themselves.
  - b'. Three men arrived (last night) without PRO identifying themselves.
- (10) *Binding* (Lasnik 1999a: 183)
- a. Some linguists seem to each other [t to have been given good job offers].
  - b. \*There seem to each other [t to have been some linguists given good job offers].<sup>87</sup>

These facts are well-known from the literature, and they accord well with the idea that IM adds expressive power. What is perhaps more interesting is that English subjects also show some bizarre or cryptic behaviors not unlike those found in Spanish and NSLs. For instance, even though the movement of the subject to Spec,TP in English (or its lack) does not correlate with topichood or focus, it arguably correlates with some notion of existence (Chomsky 2007), hence the contrast between (11) and (12), on the one hand, and (13) and (14), on the other:

- (11) a. There is a fly garden.

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<sup>87</sup> The data seem to be robust, though in the case of control there is still some debate on this issue. See Lasnik (1999a) for details. With regard to control, for instance, N. Hornstein (p.c.) notes that both (i.) and (ii.) are grammatical for him:

- i. Someone was entering before being signaled to go.
- ii. There was someone entering before being signaled to go.

- b. A fly is in the garden.
- (12) a. There is a flaw in the paper.
- b. #A flaw is in the paper.
- (13) I believe a fly to be in the garden.
- (14) #I believe a flaw to be in the paper.

In a similar vein, Fiengo (1974: 51) claimed that in (15)a *a unicorn* is an intentional object which does not presuppose the existence of unicorns. In (15)b, however, the existence of unicorns is presupposed:

- (15) a. Merlin is looking for a unicorn.
- b. A unicorn is being looked for by Merlin.<sup>88, 89</sup>

One could entertain a view of the English facts which blames these effects not on the presence / absence of movement of the subject to Spec,TP, but the *presence / absence of the expletive*, which might somehow have an influence on the semantics of the sentence. Perhaps one could blame the syntax of unaccusatives: after all, expletives are restricted to the unaccusative class. Still, in cases of object EPP, where the presence / absence of movement is not directly related to the unaccusative verb but rather to the main verb, one also finds closely related facts, as shown by Lasnik (2002: 22). (4)-(5) are repeated here (with new numbers) for the sake of exposition:

- (16) Mary made John out to be a fool.

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<sup>88</sup> In the case of subjects which are part of idioms, these seem to constitute an apparent counterexample to the existentiality surface semantics of preverbal subjects, e.g.:

- i. The cat is out of the bag.

Still, Fiengo argues that in these expressions *the cat* and other subjects which are part of idioms are used metaphorically: '*The cat in the cat is out of the bag* does appear to have an intended referent. A rough paraphrase of this metaphorical idiom might be *the story is known*, and *the cat*, through the medium of metaphor, may be said to have a referent similar to the story' (Fiengo 1974: 56).

<sup>89</sup> Cf. Sifaki (2003) for related discussion. According to Sifaki, movement of the subject into Spec,TP tends to correlate with specificity, though this is only a tendency.

(17) Mary made out John to be a fool. (Lasnik 2002: 11)

Crucially, this optional movement affects binding relations. Under the assumption that Principle A of binding theory includes some sort of clause-mate requirement on anaphors (in addition to the requirement that the antecedent c-command the anaphor), the following contrast shows that in (18)a the phrase *the defendants* has left the infinitival clause in contrast to (18)b. Hence the difference in grammaticality (Lasnik 2002: 22):

- (18) a. The DA made the defendants out to be guilty during each other's trials.  
b. ?\*The DA made out the defendants to be guilty during each other's trials.

The fact that languages allowing for Transitive Expletive Constructions also show surface semantic effects under subject movement (cf. Vagness 2000 and 2002 for discussion of Icelandic data) provides support for the view that surface semantics effects are not exclusively related to unaccusative constructions.

Consequently, one can conclude that subject movement allows for a new outcome. Additionally, the data in (11)-(15) argue that there is a subtle surface semantics difference between the derivation involving movement of the (regular) subject to Spec,TP, and the derivation including an expletive –an element which is needed for independent reasons, if Bever is correct.

Furthermore, not all elements that are licensed in Spec, $\nu$ P / Spec,VP are licensed in Spec,TP. This can be taken to indicate that the movement from Spec, $\nu$ P / Spec,VP to Spec,TP is not vacuous. Just as certain positions only host quantifiers or focalized phrases or definites, it seems like Spec,TP only hosts DPs, locatives, etc,

but not *sentential subjects*, a fact that seems to find a parallel in Spanish, as seen above in Chapter 3, Section 2.1.4.3. This has a *surface semantics* flavor, irrespective of what the right analysis of preverbal sentential subjects is. In particular, there is some controversy as to whether preverbal sentential subjects are the result of movement or base-generation, but the fact remains that preverbal subjects are not hosted in Spec,TP. Koster (1978) and Alrenga (2005) argue that preverbal sentential subjects are base-generated topics. The evidence comes from the fact that preverbal sentential subjects are banned in exactly the same structures where topics are banned (cf. (19)b and (19)c, on the one hand, and (20)b (20)c, on the other), in contrast to DPs (see the (19)a and (20)a, respectively):

(19) *Sentential Subjects as Topic Phrases* (Koster 1978, Alrenga 2005)

- a. Although the house's emptiness depresses you, it pleases me. *DP*
- b. ?\*Although that the house is empty depresses you, it pleases me. *clause*
- c. ?\*Although Mary, this may depress, it pleases me. *topic*

- (20) a. Mary is unhappy because her trip to Tahiti is no longer necessary. *DP*
- b. ?\*Mary is unhappy because for her to travel to Tahiti is no longer necessary. *clause*
- c. \*Mary is unhappy because her trip to Tahiti, I've had to cancel. *topic*

Be that as it may, I take this data as evidence that movement to Spec,TP correlates with specific properties, which clauses do not have, a fact that supports the surface semantics / IM mapping.

One may wonder what surface semantics effects are linked to subject movement into Spec,TP in transitive sentences as the following:

(21) Peter saw Mary.

Arguably there are surface semantics effects here. To begin with a DP has been allowed / selected to move (as opposed to a clause). Still, it is hard to tell whether there is any other effect, given that the minimal pair *Saw Peter Mary* is not grammatical.<sup>90</sup> Pending further research, I conclude that the *Strict Internal Merge / Surface Semantics Mapping Hypothesis* actually holds, with the caveat that in sentences like *Peter saw Mary* we cannot test the hypothesis.

In summary, given that movement to subject position in English has consequences for a number of domains, it seems that this operation actually correlates with Chomsky's surface semantics, exactly as expected under his proposal in keeping with the *Strict Internal Merge / Surface Semantics Mapping Hypothesis*, the strongest interpretation of the mapping between the Duality of Merge and the Duality of Semantics. This movement is treated as optional under the assumption that expletives are inserted in situ (cf. Boskovic 2002, Chomsky 2004:114 and Chomsky 2005b:14), even though the EPP is not. English, then, would only be an apparent counterexample to Chomsky's claim that IM or Movement gives raise to a new output, understood as some scopal or pragmatic property.

## **2. Some notes on learnability and parameterization of surface semantics**

In the previous discussion on subject movement to Spec,TP in English, it has been argued that this movement correlates with the 'something more' requirement on

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<sup>90</sup> A close look at quotative inversion might shed some light on this issue. I leave this issue for future research. Unfortunately, passive structures only can constitute near minimal pairs with SV transitive structures, so they can only provide very limited insights into this issue. See also Sifaki (2003) for some discussion of the relationship between subjects and specificity.

IM / optional operations. These surface semantics effects are different from the scope freezing facts attested in Spanish (cf. the discussion in Chapter 3, Sections 1.2 and 1.3) or thethetic / categorical distinction. Still, Chomsky's broad assumption is only that IM correlates with 'something more', but there is no implication here that all languages should cut the pie of this 'more' in the same way. E.g., one possibility is to interpret the English facts as evidence that IM in that case correlates with a somewhat different interface, namely, one about our beliefs (e.g., as to whether flaws actually exist in the world) as opposed to discourse-related semantics. The problem with this view is that it is not obvious what kind of evidence the child gets to arrive at the right grammar.

In the best case scenario, language acquisition would go hand in hand with Uriagereka's (2008a) idea that *mapping a more or less entangled syntax specifically to a semantics of comparable complexity* is realistic, both from a developmental (learnability) and, ultimately, an evolutionary (minimalistic) perspective. Assuming that this explains the English facts (a non-trivial assumption), one would hope that similar facts obtain in Spanish. At least for the interface with the world of beliefs, this seems to be the case:

- (22) a. Existe un problema en la organización.  
exists a problem in the organization  
'There is a problem in the organization.'
- b. ? Un problema existe en la organización.  
a problem exists in the organization

With regard to the scope freezing facts or the thematic / categorical distinction attested only in Spanish, one possible source for this crosslinguistic difference might lie in the different Spell-Out procedure that Spanish and English undergo.<sup>91</sup> Uriagereka (1999) follows the traditional observation that rich agreement languages show a somewhat variable word order and that word order variations correlate with surface semantics. The contrast in morphological agreement is illustrated in (23):

|      |                                  |                                  |
|------|----------------------------------|----------------------------------|
| (23) | <i>Verb agreement in English</i> | <i>Verb agreement in Spanish</i> |
|      | I look                           | yo miro                          |
|      | you look                         | tú miras                         |
|      | he looks                         | él mira                          |
|      | we look                          | nosotros miramos                 |
|      | you look                         | vosotros mirais                  |
|      | they look                        | ellos miran                      |

Spanish allows for SVO and VOS order (see Chapters 2 and 3 for discussion; examples are taken from Chapter 2):<sup>92</sup>

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<sup>91</sup> Cf. also Uribe-Etxebarria (1992) and Goodall (2001) for an explanation of the crosslinguistic difference concerning scope facts.

<sup>92</sup> In addition, Spanish allows for VSO order:

i. A María le ha dado Pedro un libro.  
 To María has given Pedro a book

See n. 73 for discussion.

(24) *SVO order*

Qué ocurre?

‘What’s going on?’

Pedro le dio un libro a MARIA. *Neutral word order & default stress*

Pedro gave a book to MARIA

‘Pedro gave a book to María.’

(25) *VOS order*

Quién le dio un libro a María?

‘Who gave a book to María?’

Le dio un libro a María PEDRO. *Subject: new information + sentence stress*

Gave a book to María PEDRO

In contrast, the English counterparts of these sentences are both SVO:

(26) *SVO order*

What’s going on?

Pedro gave a book to María.

(27) *SVO order*

Who gave a book to María?

Pedro gave a book to María.

Uriagereka relates these crosslinguistic differences to the Spell-Out procedure, arguing that rich agreement languages undergo Radical Spell-Out (Specs are flattened and sent to performance), meaning the derivational history gets lost in this kind of

languages. As a consequence, mixing surface semantics and ‘deep’ semantics in trivial chains would be problematic.

In turn, poor agreement languages like English undergo Conservative Spell-Out (Specs are flattened but remain in place) and, consequently, the derivational history is not lost. Because of this, such languages freely allow the mixing of surface semantics and deep semantics in trivial chains without this being problematic. This is not to say that under no circumstances does complex syntax correlate in such languages with surface semantics; rather, there is no pressure to exploit such a possibility consistently, in the way radical spell-out languages do. A case in point would be English, where movement correlates with some surface semantics if the previous discussion is correct, though not necessarily with the richer or more radical surface semantics that we find in Spanish. Inasmuch as this system is based on morphological properties, it looks like the child would have at least some evidence readily available for the task of acquisition.

### **3. Conclusion**

The goal of this chapter was to discuss two competing hypotheses concerning the Mapping between the Duality of Merge and the Duality of Semantics: namely, a *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* and a stronger *Strict Internal Merge / Surface Semantics Mapping Hypothesis*. Movement to Spec,TP in so-called ‘strict’ word order languages like English provided the testing ground. It has been argued that English shows surface semantics effects correlating with movement into Spec,TP in keeping with the idea that IM or syntactic movement

has an effect on semantics. At the same time, it has been shown that the surface semantics effects in English are somewhat weaker than the surface semantics effects in Spanish.

So far I have been assuming that IM exists but I have remained silent about mechanics or the technical implementation of this operation within Minimalism. In particular, there is a debate on whether internally merged phrases establish a checking / licensing relation at the landing site. It is argued from both an empirical and conceptual point of view that such licensing relations exist. In doing so, the relationship between morphology and IM will play a major role.

## Chapter 5: On overt agreement, theta-roles, Spec,H relations and Incrementality in the phase-based system

The discussion so far, on Internal Merge (IM) or syntactic movement and word order variations in general, has made implicit use of checking or licensing relations. A proper understanding of licensing relations is crucial since they are an integral part of IM. This chapter accepts this challenge with an emphasis on the relationship between movement and morphology. Specifically, recent developments in syntactic theory posit the existence of an Agree or Long Distance Agreement mechanism (LDA), arguing that there is no such thing as a grammatically significant Spec,H configuration or feature checking under m-command (e.g., Chomsky 2004, 2005a, etc.). This claim is a hallmark of phase-based syntax and, consequently, its evaluation is relevant to our purposes here. The issue is particularly interesting in light of recent arguments in the opposite direction (e.g., Koopman 2003, 2006, Franck, Lassis, Frauenfelder and Rizzi 2006, a.o.). For instance, there is a crosslinguistic tendency for moved elements to trigger agreement, as opposed to in situ ones, a fact that calls for an explanation within this framework (Chomsky 2005a). Furthermore, the issue of how subject Specs check their theta-roles under the assumption that these are features (e.g., Boskovic 1994, Lasnik 1995b, Boskovic and Takahashi 1998 and Hornstein 2003) remains unexplained in a system that dispenses with grammatically significant Spec,H configurations. In view of these and related facts, here it is argued, following Ortega-Santos (2008a), that conceptual arguments

against Spec,H relations (e.g., Chomsky (2005a) can be circumvented and that Spec,H relations exist in the system, though not in the traditional guise. In particular, it is argued that under a Multiple Spell-Out (MSO) system (Uriagereka 1999 and 2008), when combined with the phase-based system, there can be checking relations in the Spec,H configuration, though not probing of the Spec by the head under m-command. This is shown to solve the problems that the phase-based framework faces.

At the same time, even though the resulting framework predicts that some languages may sanction Spec,H relations as the domain of morphological agreement, it is not clear why there appear to be very few cases in natural language where LDA is sanctioned as said domain. It is argued that within the above framework, which adopts grammatically significant Spec,H configurations, performance factors conspire to achieve this result. In particular, the differences in agreement morphology found across languages, depending on whether the Probe Goal relation is established locally (cf. Spec,H relation) or via a LDA, are argued to be related to the workings of so-called Incrementality (cf. Barlow 1992).

The chapter is organized as follows. Section 1 presents the relevant crosslinguistic generalizations concerning agreement paradigms and previous approaches to these generalizations within the phase-based system. Furthermore, the challenge that theta-roles pose is presented as well. Section 2 develops the current proposal concerning Spec,H relations. Section 3 focuses on the role of Incrementality in agreement paradigms across languages.

## 1. On crosslinguistic variation in agreement paradigms

It is often claimed that across languages agreement morphology tends to fit the paradigms in (1) and (2), but not the one in (3) (where this is illustrated in terms of Probes (P) and Goals (G)), the presence of overt agreement is indicated explicitly, whereas lack of any indication means a corresponding lack of agreement):

- (1) G P<sub>overt agreement</sub> vs. P<sub>overt agreement</sub> G √ across languages  
 (2) G P<sub>overt agreement</sub> vs. P G √ across languages  
 (3) G P vs. P<sub>overt agreement</sub> G \* across languages

The crosslinguistic validity of this observation is present in some way or other in Moravcsik (1978), Corbett (1979), Barlow (1992), Manzini and Savoia (1998), Samek-Lodovici (2002), Koopman (2003, 2006), Chomsky (2004), Franck, Lassis, Frauenfelder and Rizzi (2006) and Park (2006), a.o.<sup>93</sup> The following data from the Italian dialect of Ancona and French illustrate the pattern in (2), which will be of particular interest for the present discussion:

- (4) *Italian Dialect of Ancona* (Cardinaletti 1997a: 38-9)
- a. Questo, lo fa / \*fanno sempre i bambini.  
*thisACC itACC does / do always the children*  
 ‘This, children always do it.’
- b. Questo, i bambini lo fanno / \*fa sempre.  
*thisACC the children itACC do / does always*

<sup>93</sup> Note that the existence of language-particular variation in the realization of overt agreement is beyond question. Still, the correlation in (1-3) seems to be robust, a fact that we would like to explain. Therefore, I do not take such crosslinguistic variation to question the relevance of the observation and, consequently, the general approach explored in this chapter.

(5) *French* (Boeckx 2004: 23)

a. Jean a vu / \*vue la fille

*Jean has seen / seen.AGR.FEM the girl*

‘Jean saw the girl.’

b. Quelle fille Jean a(-t-il) vue / \*vu?

*which girl Jean has-he seen.AGR.FEM / seen*

‘Which girl did Jean see?’

c. Cette fille a été vue / \*vu

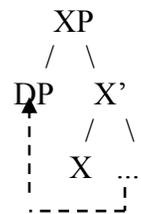
*this girl has been seen.AGR.FEM / seen*

‘The girl was seen.’

A number of (often unrelated) languages follow this pattern, e.g., Arabic, Hungarian, and a variety of African languages (see Samek-Lodovici 2002 for an overview), a fact that provides further evidence for the validity of the above generalization.

Such facts have played a prominent role in syntactic theorizing, because they provide an argument for the role of Spec,H relations (cf. Kayne 1989).

(6) *Spec,H relations*



Within an approach to syntax which assumes grammatically significant Spec,H configurations, the relation between the Probe and the Goal at the point of Spell-out is different in the in situ and the movement counterparts. Hence, it is natural to consider the Spec,H relation the domain of (morphological) agreement

(Kayne 1994), at least in the relevant languages. In keeping with this view, closely-related discussions in the literature converge on the necessity for such grammatically significant Spec,H relations, both in theoretical and experimental research (e.g., Koopman 2003 and 2006 and, Franck, Lassis, Frauenfelder and Rizzi 2006, respectively, among many others).

The picture changes once one assumes LDA (Chomsky 2001a and later work).



Within such a system, there is no distinction between the moved and the in situ version in terms of the relation of the Probe and Goal at the point of Spell-out; things move or do not move, but the agreement relation between the Probe and Goal remains the same. Therefore, such agreement patterns do not follow from the system, in contrast to an approach in terms of grammatically significant Spec,H configurations or checking under m-command. In fact, as Chomsky (2005a:13) states, as the role of Spec,H relations is diminished, this calls for a reconsideration of a number of issues, agreement being the most relevant one.

Theta roles pose a similar puzzle. The literature has provided evidence for the claim that theta roles are features (e.g., Boskovic 1994, Lasnik 1995b, Boskovic and Takahashi 1998 and Hornstein 2003). For instance, Boskovic and Takahashi (1998) provide evidence that scrambled sentences in Japanese involve obligatory LF movement of arguments base-generated in non-theta-positions, to the positions where

they receive theta-roles. Under this view, theta-roles are formal features capable of driving movement (Boskovic and Takahashi 1998: 349-350):

(8) a. *Canonical word order*

John-ga [Mary-ga sono hon-o katta to] omotteiru.

John-NOM Mary-NOM that book-ACC bought that thinks

‘John thinks that Mary bought that book.’

b. *Scrambling*

Sono hon-o John-ga [Mary-ga *t* katta to] omotteiru.

The derivation corresponding to (8)b is the following under this view:

(9) a. *Narrow syntax*

[IP Sono hon-o [IP John-ga [CP[IP Mary-ga [VP[V katta]]] to] omotteiru]]

that book-ACC John-NOM Mary-NOM bought that thinks

b. *PF*

sono hon-o John-ga Mary-ga katta to omotteiru

c. *LF*

[IP John-ga [CP[IP Mary-ga [VP sono hon-o [V katta]]] to] omotteiru]

This analysis is particularly appealing in that it is not only empirically well-supported (see Boskovic and Takahashi 1998 for details), but also it makes scrambling consistent with the Last Resort principle. In the present context, an understanding of theta-roles as features is relevant in that it is not clear how a(n externally-merged) subject Spec may check its theta-role within vP. Similar issues arise for any Spec that is not c-commanded by the head expected to license it (e.g., certain phrases base-generated in A-bar positions, among these, topic phrases or wh-phrases like *whether*).

Recent trends in syntactic theory put forth the idea that a probing relation is involved in EM. For instance, Pesetsky and Torrego (2006) follow this view (see their *Vehicle Requirement on Merge*). Still, it is not clear that this would allow for a licensing / checking relationship between a head and a Spec-to-be (e.g., a Spec about to be externally merged). Pesetsky and Torrego provide claim that (i.) EM does not result in feature valuation / agreement (see Pesetsky and Torrego 2006: 2), and (ii.) the attempt at feature valuation takes place *after* merge has already taken place (see Pesetsky and Torrego 2006: n. 26 and related discussion). Given this, it is not clear how this kind of probing would help a phase-based framework when dealing with licensing relations between Specs and a heads, because the feature valuation process would take place *in a Spec,H configuration* even in the cases where the Spec undergoes external merge.

In what follows, I provide a unified approach to the puzzle posed by morphological agreement, theta roles and externally-merged Specs in A-bar positions. Before doing so, I discuss a number of attempts in the literature to deal with said agreement facts.

### **1.1. Previous approaches to crosslinguistic variation in agreement paradigms**

The literature includes (at least) the following attempts to deal with the above agreement facts in (2) within the LDA-based system:

- i. the data are not a reflex of the Spec,H relation, but of the way this configuration is established: IM as opposed to EM (Chomsky 2004)

- ii. Spec,H configurations entail intermediate steps which allow for more direct licensing / checking relations than LDA, a fact reflected in the morphology. E.g., in the case of subject licensing in English existentials, LDA between T and the subject takes place indirectly via agreement between T and the head of the VP phase which, in turn, has agreed with the subject. This indirect agreement would be forced by the Phase Impenetrability Condition.<sup>94</sup> In contrast, subjects that end up in a Spec,H configuration agree directly with the Probe when escaping the VP phase (Legate 2001)
- iii. rich agreement in the movement counterpart correlates with the presence of an (optional) agreement projection, absent in the case of the in situ counterpart (Boeckx 2004)
- iv. Spec,H configurations entail double-checking the relation between the Probe and the Goal, hence their stricter agreement requirements (Frank, Lassi, Fraudenfelder and Rizzi 2006)<sup>95</sup>

Although these approaches have some limitations. Specifically, (i) seems to be mere coding. In turn, (ii) faces the challenge that such agreement asymmetries do not seem to correlate with the opacity effects caused by the Phase Impenetrability Condition (PIC). For example, in situ subjects of transitive verbs are available for

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<sup>94</sup> According to the *Phase Impenetrability Condition* (PIC), in a phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ , only H and its edge are accessible to such operations; the domain of H is the sister of H, and the edge of H is a hierarchy of one or more Specs (Chomsky 2000:108).

<sup>95</sup> The agreement patterns under discussion are found in contexts other than verbal agreement morphology (e.g., internal to DP's or PP's as shown by Hornstein et al. 2005: 119). As a consequence, an analysis of verbal agreement paradigms contingent on expletive subjects (Cardinaletti 1997b), though relevant, is not general enough to capture the paradigm. Another alternative approach to the agreement paradigms under consideration is to reject LDA and adopt a generalized Spec,H analysis of (all) agreement configurations (Koopman 2003; cf. also Chandra 2007). This entails a radical readjustment / reconsideration of a number of standard structures and derivations. As a consequence, I abstract away from this possibility.

direct agreement according to the PIC and, nonetheless, correlate with poor agreement in certain languages (cf. (4)). (iii) is at odds with the rejection of agreement projections within the minimalist enterprise and seems slightly ad hoc. Lastly, the solution in (iv), even though it would generate the data correctly, does not provide any explanation of how such a Spec,H checking mechanism would work in the context of the conceptual arguments made by Chomsky (2005a, etc.) against this checking configuration (see below for details). The puzzle that agreement paradigms pose for the phase-based system is real. Somewhat ironically, the traditional view that there are checking / licensing relations in the Spec,H configuration would solve the problem. The purpose of the next section is to address this concern, showing that Spec,H configurations can indeed be grammatically significant.

## **2. Phase-based syntax allows for grammatically significant Spec,H relations**

According to Chomsky (2000, etc.), the licensing of in situ Goals takes place via LDA. It is not clear how this approach can be made compatible with crosslinguistic tendencies for moved elements to trigger agreement as opposed to in situ elements, in spite of the fact that the literature includes a number of approaches to solving this issue (cf. the previous section). Furthermore, theta-roles understood as features and phrases base-generated in A-bar positions pose a similar problem. In what follows I develop a unified approach to these issues. Specifically, I argued that there can be checking relations in the Spec,H configuration, though not the regular probing of the Spec by the head under m-command.

The point of departure of this proposal is Chomsky's (2005a: 13) observation that 'for minimal computation, the Probe should search the smallest domain to find the Goal: its c-command domain. *It follows that there should be no m-command, hence no Spec,H relations, except for the special case where the Spec itself can be a Probe*' (my emphasis).<sup>96</sup> The same intuition can be found in Chomsky (2005b:14) and in Chomsky's (2004:114) analysis of externally merged expletives (see Boskovic 2002), where the expletive probes the head of the projection hosting it. Chomsky characterizes Probes in the following way:

- i. Probes are / have uninterpretable features (e.g., Chomsky 2001: 6)
- ii. only heads can be Probes (e.g., Chomsky 2004: 109)
- iii. only phase heads drive operations (e.g., Chomsky 2005a: 11)

Under the assumptions that (a.) arguments bear uninterpretable case features and (b.) arguments are phases (e.g., they have a phase head capable of driving operations), it follows that arguments in Spec positions can be Probes.<sup>97</sup> The only condition missing is that Specs would have to be heads. Uriagereka (1999) provides conceptual reasons in favor of this view.

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<sup>96</sup> Note that there is an alternative way of probing other than c-command or m-command, namely, just probing 'upwards' (e.g., Specifiers etc.). A priori, it is not clear that the c-command domain is a domain smaller than the upward domain. Cf. for instance a sentence like (i.):

i. He saw the extremely talented Japanese musician from Mishima.

One would think that for the *v* Probe, the upward domain is a smaller domain than the c-command domain, hence the necessity to minimize computations would prioritize probing the Spec upward than probing the object 'downwards'. The question, then, is what the c-command condition on probing derives from. One possibility is to argue that the c-command condition on probing is caused by the directionality in structure building (see Rezac 2003). Assuming a bottom-up structure building derivation, the c-command domain would be present in the derivation before the 'upward' domain (or the m-command domain) is. Nonetheless, there are both conceptual and empirical arguments against bottom-up structure building (e.g., Phillips 1996) and the issue is far from settled.

<sup>97</sup> Cf. Chomsky (2001: 14) for evidence that DPs are phases, and cf. Soltan (2003) for evidence concerning PPs. Cf. also Hornstein (1995) for independently motivated arguments that PPs have uninterpretable features (other than those valued by their arguments).

Uriagereka's (1999) MSO proposal addresses some shortcomings of the Linear Correspondence Axiom as originally formulated (Kayne 1994). Kayne's proposal concerning linearization includes a Base step and an Induction step:

(10) *Linearization Procedure for Terminal elements*

- a. Base: If X asymmetrically c-commands Y, X precedes Y.
- b. Induction: If X is dominated by Z, and Z precedes Y, X precedes Y.

According to Uriagereka, the stipulative Induction step is unnecessary. The logic of the MSO proposal is to spell-out ZP prior to connecting it to the structure which is still live in the derivation. As a consequence, the issue that motivates the Induction step does not arise (see Chapter 2, Section 2.1.4, and Chapter 4, Section 2, for further discussion of the MSO framework).

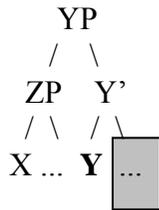
In Uriagereka's proposal, all Specs are akin to heads (cf. also Gelderen 2004 for relevant discussion). For current purposes, this means, if taken at face value, that Specs qualify as Probes (given that they fulfill all the requisites) and, consequently, Spec,H relations may exist in the system.

Chomsky's argument against grammatically significant Spec,H relations is that checking would take place under m-command as opposed to c-command, in opposition to the conceptually desirable need to minimize the computation (cf. Chomsky 2005a:13 quoted above). However, once one adopts Uriagereka's proposal as interpreted here, a Spec can probe the head of the projection hosting *it under c-command*. Crucially, this is consistent with the desire to minimize computations by having probing target the smallest domain, namely, the c-command domain.

## 2.1. Probing possibilities in the resulting framework

The probing possibilities of the phase-based framework and of the framework put forth in this research can be illustrated in the following way, where the probing domain of the head / Probe is indicated in grey and the probing head is indicated in bold:

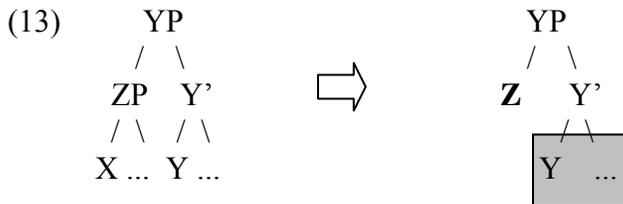
(11) *Probing possibilities within the phase-based system*



(12) *Probing possibilities within the MSO system*



The scenario in (12)b, where a Spec probes the head of the projection hosting it, is made possible by the fact that under the current system ZP is a derived head, which can act as a Probe:



The scenario in (12)b and (13) allows for grammatically significant Spec,H relations.

## 2.2. On derived heads functioning as Probes

It is legitimate to wonder whether the previous discussion assuming that Specs are heads, and that this fact affects syntactic computations, might just be based on a terminological confusion, due to the multiple meanings that the term *head* has in the current linguistic framework. I would like to argue that this is not the case.

Note that in a phase-based system it is labels that probe. In determining what a structure's label is (or whether a syntactic unit is a Probe), minimal search is key: 'The label of an SO must be identifiable with minimal search, by some simple algorithm' (Chomsky 2005a:11). Specifically, when merge takes place, 'for optimal computation, one member of the pair must be available with no search. It must, therefore, be the head H of the construction  $\alpha$  under consideration,  $\alpha = \{H, XP\}$ . Call H a Probe P, which seeks a Goal G within XP; P = H c-commands G, but that is a consequence of minimal search' (Chomsky 2004: 113). Similarly, Chomsky (2006: 16) approaches the issues as follows, noting that the notion "label" only plays *an expository role*:

'In constructions of the form H-XP (H a head), minimal search conditions determine that H is the designated element (label) that enters into further operations; any other choice requires deeper search. At the phase level, H will be the Probe, for the same reasons. Wherever selection enters – possibly only at the CI interface – the same considerations determine that H is the only functioning element, whether selecting or selected.'

To my knowledge, the idea of minimal search is not made explicit anywhere in Chomsky's work. However, these passages and others suggest that for phrases to become Probes one needs to apply some sort of costly 'resolution rules', akin to those found for coordinate structures. When the computational system merges two syntactic units, it needs to take into account *all the elements within said units* to see what their probing features turn out to be, where new phrases can be merged, etc. By contrast, in the case of heads, one has that information readily available. It is then more costly to have a phrase drive computations, rather than a head –a fact that is taken to underlie why probing is restricted to the latter.<sup>98</sup>

This picture changes slightly once an independently motivated MSO framework (Uriagereka 1999) is adopted. While this framework explains why Spec-internal components become inactive (deriving Huang's 1982 Condition on Extraction Domains; cf. Hornstein, Lasnik and Uriagereka 2007 for a treatment of apparent counterexamples), the entire objects as such are available to further operations or their exact place / role within the phrase-marker would be lost. Specs, that is to say, *derived heads*, can be argued to undergo independently motivated feature resolution processes, to determine, for instance, specific agreement specifications in corresponding heads.<sup>99</sup> This allows the system to have relevant

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<sup>98</sup> An approach in terms of Bare Phrase Structure, where both Specs and the unit formed by a head and its complement are heads predicts that both qualify as Probes. For example, Epstein and Seely (2006) claim that the unit formed by a complement and its head probes its Spec, whereas Heinat (2006) claims that phrases / Specs probe. Nonetheless, it is not clear how these approaches relate to minimal search considerations, in contrast to the MSO analysis developed above. Furthermore, there is an ongoing discussion in the literature as to whether the phrase / head distinction should exist in the theory (e.g., see Carnie 2000). The rendition of the present discussion in terms of minimal search makes such ongoing debate orthogonal to the current concerns. As a consequence, I abstract away from it.

<sup>99</sup> Independent evidence for this feature resolution process within phrases can be found in agreement attraction errors, e.g., cases like *a bunch of aristocrats live(s) here*. See Den Dikken (2000) for discussion and references. I thank J. Uriagereka for pointing this out to me.

(featural) syntactic information readily available, in spite of the fact that these are phrases / Specs.

As a consequence of this feature resolution process, the burden of search when merging such Specs is reduced and feature search within a spelled-out Spec is minimized. In the spirit of Chomsky's view that minimization affects labeling / probing, it is then possible to conclude that the label of spelled-out Specs is readily identifiable following the feature resolution mechanism. Due to the fact that operations are driven by labels (which in this system are Probes), Specs can act as Probes –with all the advantages that may bring into the picture (e.g., for the aforementioned crosslinguistic agreement paradigms and theta-roles).

### **2.3. Remaining issues**

One counterargument to this view runs as follows: Chomsky (2006: 16) claims that internally merged Specs cannot act as Probes due to the fact that the moved XP is a “discontinuous element”, whereas the unit that the Spec will combine with is “unmodified and unary”. Still, heads can also be discontinuous under head-movement, just like phrases.<sup>100</sup> Moreover, even if internally merged Specs are discontinuous, they will be minimized under the present view. The validity of this reasoning also depends on how one conceives movement (e.g., an approach to move

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<sup>100</sup> There is ongoing debate as to whether head movement is phonological or syntactic in nature (see Boeckx and Stjepanovic 2001, Den Dikken 2006, Matushansky 2006 and Vicente 2007, a.o.). Under the latter analysis, heads can be discontinuous, too.

in terms of ‘remerge’ a priori would avoid any additional feature resolution costs associated with “discontinuity”).<sup>101</sup>

Note, finally, that a Spec might Probe a head and, nonetheless, that very head would label the resulting structure. I note this not to introduce a new assumption, but rather to follow from independent factors –namely, the subcategorization restrictions imposed by the head that merges with the resulting structure. In fact, such restrictions might in certain cases allow / force the Spec that is probing a head to label the structure (see Chomsky 2005a: 12 or Iatridou et al. 2001 and Donati 2006 for discussion). At the same time, after such restrictions are met (early on) in the course of the derivation, in principle nothing would prevent a Spec from driving a re-labeling process. This is exactly for what Hornstein and Uriagereka (1999) argue, in terms of their independently motivated process of ‘reprojection’.<sup>102</sup>

#### **2.4. Further remarks on the resulting system**

To be explicit about the agreement facts in (1)-(3), one could assume derivations of the pattern in (2), that is to say, derivations including elements triggering agreement under movement to proceed as in Frank, Lassi, Fraudenfelder

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<sup>101</sup> One may wonder what prevents, within the current system, *which boy* from probing the embedded CP in the following configuration:

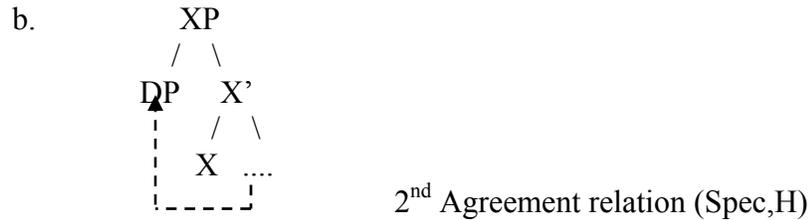
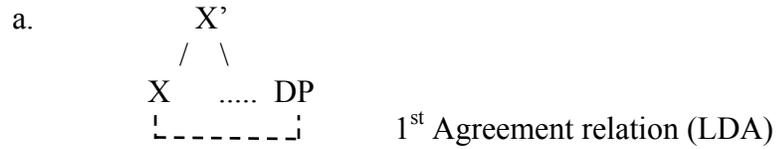
i. [vP *which boy* asked [CP what you eat]

Say this probing relations actually takes place, one possibility is to assume that derivational crashes free up other derivational options and, consequently, the sentence finally converges. Still another option is to assume that at the point *which boy* is introduced in the structure, the embedded CP is already syntactically inactive.

<sup>102</sup> According to Hornstein and Uriagereka (1999), reprojection is a process whereby a phrase marker’s label changes in the course of the derivation. For instance, in their system reprojection allows binary quantifiers to take scope (at LF). See Hornstein and Uriagereka (1999) for details. See Chapter 2, Section 2.1.3 for related discussion on reprojection.

and Rizzi (2006), where it is argued that there is an LDA relationship followed by a Spec,H agreement relationship. This can be illustrated as follows:

(14) *Agreement à la Frank et al. (2006)*



Given that the latter case corresponds in some sense to double-checking the agreement relationship, the presence of agreement would be more pervasive under movement than under lack of movement.<sup>103</sup>

Alternatively, it could be the case that movement and LDA are independent from one another (cf. Lidz and Williams 2002, Bobaljik and Wurmbrand 2005 and Park 2006). Under this view, agreement would take place after movement (cf. Park 2006). For example, imagine that a Probe P matches a Goal G. Subsequently G moves to the Spec position of the P and, afterwards, the P and G agree. If true, the reason why the patterns in (1-3) emerge could be the following: Under the minimalist assumption that the Language Faculty is in some sense optimal, it seems reasonable to expect the grammar to sanction the *local* or optimal Spec,H configuration as the

<sup>103</sup> Within the phase-based system adopted in this research, this double-checking relationship would only be possible under the assumption that the first agreement relation does not result in the valuation of the phi-features on the probe and the case features of the goal (cf. the Activity Condition; see Chapter 1 for discussion).

domain of agreement at least in some languages, as opposed to the *non-local* LDA relationship, which can be assumed to be less optimal; hence the contrast between (2) and (3), while allowing for (1) (cf. the next section for a detailed proposal).

The success of both Frank et al.'s (2006) view and this last approach is contingent on the availability of checking relations under Spec,H configuration. Within the resulting system, externally-merged subject Specs can check their theta-roles and externally merged A-bar phrases can be licensed by the head of the projection hosting them. Furthermore, apparent exceptions to the view that probing is restricted to c-command (cf. Bejar 2003 and Rezac 2003) can also be explained.

In the next section, some remaining issues concerning agreement are addressed. In particular, the logic developed so far provides an argument for the existence of Spec,H relations in natural language. This allows for the Spec,H configuration to be sanctioned as the domain of agreement in certain languages. Still, one would like to derive the fact that the LDA configuration does not seem to be singled out or privileged in the same way. I mentioned briefly above that locality plays a role in this state of affairs. Below, it will be argued that this follows from the computational dynamics of the interfaces or more specifically, from the incremental nature of the parser / production system (Levelt 1989) and its interaction with the syntax (e.g., Bock et al. 1992, Ferreira 1996 and Phillips 1996).

### **3. On the role of Incrementality in agreement paradigms**

Regularities in agreement paradigms across languages have been argued that such data provide evidence for the redefined Spec,H relations proposed above. The

purpose of this section is to further investigate what underlies the fact that ‘poor’ agreement tends to be associated with LDA. It will be argued that this state of affairs follows from the incremental nature of the production system.

Recent research has provided evidence for:

- i. the fact that overt agreement is a morphological phenomenon, not a strictly syntactic one (though it is contingent on the output of syntax, e.g., Sigurðsson 2006)
- ii. the incremental nature of production (e.g., Bock et al. 1992, Ferreira 1996, Phillips 1996)

With regard to (i.), this literature shows that the *realization of overt / morphological* agreement is more peripheral than hard core syntax (though it is contingent on the outcome of the syntactic derivation). This is relevant for the discussion below, in that it is consistent with the view that performance factors may play a role in the realization of agreement. In turn, according to the Principle of Incrementality, ‘different levels of processing can work on different pieces of an utterance at the same time. Thus, the phonological encoder can work on the early part of the clause while the syntactic encoder works on filling out what remains’ (F. Ferreira 2000: 28; see also Levelt 1989, V. Ferreira 1996, Phillips 1996 and Schriefers et al. 1998).<sup>104</sup>

This allows for fast / efficient computation, in the sense that the production system

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<sup>104</sup> E.g. Schriefers et al. showed evidence that the verb is not automatically and obligatorily part of the grammatical advance planning unit for finite clauses. In particular, in their experiments, native speakers of German described pictures of simple scenes, while they were presented with verbs as distractor words which were semantically related or unrelated to the verb of the picture description. For utterances with transitive verbs in initial position, utterance onset latencies were longer for the condition with semantically related distractor verbs than for the condition with unrelated distractor verbs. When the target verb did not occur in utterance initial position, the semantic interference effect was not obtained. This means that, at least at some level, the beginning of the sentence is available to the producer before the rest of the sentence is planned or encoded.

does not have to wait for all elements of the sentence to be available before beginning the utterance. The syntactic framework that captures the incremental nature of production most naturally is Left-to-Right Syntax (Phillips 1996).<sup>105</sup> I will adopt this framework at this point for the sake of exposition, though see below for an alternative compatible with bottom-up syntax.

Within this framework, agreement is computed from left-to-right (e.g., Phillips 1996, Legate 1999) and the top of the tree is assembled / made available earlier than the bottom of the tree. Arguably, this state of affairs conspires to derive the above agreement asymmetries, an idea that goes back to Barlow (1992). In the Probe–Goal order, the production system works on the Probe irrespective of whether the rest of the sentence has been coded, so as to allow for fast(er) production (cf. Phillips 1996). Nevertheless, a Probe showing morphological / rich agreement cannot be uttered until Goal has been coded, because agreement causes the Probe to “wait” for the Goal to become available. Only then can the Probe be spelled-out. Inasmuch as such a “wait” goes against the spirit of incremental production, one option the production system has to avoid it is to drop agreement markers or adopt default agreement.

Below is an example of how the proposal works for the data in (4)a, repeated here for the sake of exposition:

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<sup>105</sup> See Phillips (1996, 2003), Richards (1999, 2002), Guimarães (2004), Murguia (2004), Drury (2005) for syntactic evidence in favor of this framework.

(15) *Italian Dialect of Ancona* (Cardinaletti 1997a: 38-9)

Questo, lo      *fa* / \**fanno* sempre i bambini.

*thisACC itACC does / do*              *always the children*

‘This, children always do it.’

The crucial factor is whether the element triggering the agreement is already available (e.g., whether it has been encoded as part of the advanced planning unit, cf. n. 104) at the point that the element carrying the overt agreement morphology is hit.

(16) *Course of production of (4)a / (15)*

Production stages

1<sup>st</sup> stage              *Questo*

2<sup>nd</sup> stage                      *lo*

3<sup>rd</sup> stage                              *fa(no)* \*

...

\* The production of the verb is contingent on the availability of the subject. As a consequence, there are two options, to wait or to adopt default agreement

In turn, in the Goal–Probe order (that is to say, in the Spec,H configuration), the ‘wait’ for the Goal takes place anyway, because it precedes the Probe. Hence, there is nothing to be gained by dropping agreement markers. This is illustrated for (4)b, repeated here for the sake of exposition:

(17) *Italian Dialect of Ancona* (Cardinaletti 1997a: 38-9)

Questo, i bambini lo      *fanno* / \**fa* sempre.

*thisACC the children itACC do*      /      *does always*



consideration. The choice to follow the most incremental pattern or to ‘defeat’ the strategies of the parser / production system would be a language-particular matter.<sup>106</sup>

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### 3.1. On the relationship between Spec,H relations and Incrementality

Given this state of affairs, one wonders whether Spec,H relations are necessary to capture the puzzle posed by morphological agreement for the phase-based system. Could one blame Incrementality as the sole independent factor underlying the said crosslinguistic variation? This does not seem possible. As discussed, for instance, by Lasnik (1999b), the interpretation of linguistic data that are consistent with properties of the parser / production system is not trivial. In particular, Lasnik points out that the properties of the parser / production system may give rise to some of the properties of the grammar (cf., for instance, the seminal work of Wexler and Culicover 1980 and Berwick and Weinberg 1984).<sup>108</sup> For this reason, one cannot conclude that the link between crosslinguistic variation in morphological agreement and Incrementality excludes the need for checking relations in the Spec,H

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<sup>106</sup> One may wonder whether the pattern in (3) / (21) is attested at all as indeed one would expect given that the strategies of the parser are defeasible. Anti-agreement effects exemplify this pattern. See, nonetheless, Rizzi (1982) and Campos (1997) for syntactic treatments of anti-agreement effects.

<sup>107</sup> With regard to unbalanced coordination, in a number of languages, poor agreement is found in the Goal-Probe order in contrast to the Probe-Goal order (Johannessen 1993). This kind of paradigm is at odds with the current analysis. Furthermore, the contrast between full agreement and first / second conjunct agreement affects interpretation in some languages, (e.g., binding possibilities, see Aoun, Benmamoun and Sportiche 1994 among others), a fact at odds with a treatment of the phenomenon in terms of incrementality considerations.

<sup>108</sup> See Ortega-Santos (2007) for this exact view applied to the emergence of Relativized Minimality. I argue that a so-called cue-based retrieval parser (e.g. Van Dyke and Lewis 2003 or Lewis and Vasisht 2005, a.o.), whose main feature is that the integration of words into the existing interpretation is limited by *interference* and *decay*, can explain a number of features of the RM constraint, as put forward in the theoretical literature. Under this view, RM is grammaticized as a real constraint that is functionally grounded as a response to memory. If this approach is correct, it means that RM effects are not unique to language, but rather are part of the more general set of phenomena involving memory interference effects and time-based decay of items being processed (e.g., Anderson and Neely 1996, Gordon et al. 2001 and Van Dyke and Lewis 2003, a.o.).

configuration. Inasmuch as the need for grammatically significant Spec,H relations goes beyond morphological agreement and includes at least theta roles if understood as features (Boskovic 1994, Lasnik 1995b, Boskovic and Takahashi 1998 and Hornstein 2003) and phrases generated in situ in A-bar positions, it follows that *checking relations in the Spec,H configuration are part of the system.*

#### **4. Conclusion**

The present approach provides an account of how evidence for grammatically significant Spec,H relations can be accommodated within the phase-based LDA framework (Chomsky 2000 and later work). Specifically, the independently motivated proposal of MSO (Uriagereka 1999, 2008a) has been argued to open the door for Specs to establish a Probe Goal relationship with the head of the projection hosting them. This relation would fulfill the minimalist desiderata of restricting probing to c-command domains and complying with minimal search conditions on probing. This allows the present system to circumvent conceptual arguments against Spec,H relations under m-command put forward in Chomsky (2005a) and related work. The resulting system is able to address successfully a number of puzzles for the phase-based system, e.g., the fact that across languages moved elements tend to trigger overt or ‘rich’ agreement as opposed to in situ elements or the issue of how phrases base-generated in A-bar positions are licensed. Furthermore, it has been argued that the differences in agreement morphology found across languages, depending on whether the Probe Goal relation is established locally (cf. Spec,H

relation) or via LDA, are related to optimality considerations as suggested by the Principle of Incrementality (cf. Barlow 1992).

## Chapter 6: Conclusion

This dissertation focused on the relationship between displacement, also known as syntactic movement or more recently Internal Merge (IM), and surface semantics (e.g., categorical interpretations or focalization processes), morphology and checking relations in syntax. Particular attention has been given to the syntax of subjects in both Spanish and English. I first summarize the contribution of this dissertation in general terms to underscore the importance of this research. Then, I include a summary of the dissertation chapter by chapter, providing more technical details.

### **1. General summary of the dissertation**

As a whole this work contributes to the understanding of the syntax of IM at least in the following ways:

Across languages focus frequently has an effect on word order, phonological form and, of course, semantics. One would like to know how this state of affairs obtains, that is to say, how these components of the grammar interact. This research has provided support for the *autonomy of syntax* and for an approach to focus in *Neo-Davidsonian* terms (Herburger 2000) implemented through remnant movement (Uriagereka 2005a and 2008b).

The claim that IM serves to express *complex semantic notions* (e.g., Chomsky 2001 and Uriagereka 2008a) was confronted with the syntax of subjects, which has

traditionally been mysterious: In languages where preverbal subjects seem to express certain complex semantic notions like Null Subject Languages, it is not clear whether those preverbal subject are the result of syntactic movement. In turn, in languages like English where preverbal subjects are standardly assumed to be the result of syntactic movement, no complex semantics are arguably attested. The present work contributed to this debate by providing evidence that both kinds of languages show subject movement to Spec,TP and, *in both kind of languages, this movement correlates with surface semantics.*

Furthermore, the exact implementation of IM is controversial in that the status of Spec,H relations is subject to debate. Empirical arguments from the domain of morphology seem to indicate that there are checking relations in Spec,H configurations, but conceptual arguments mitigate against such relations (cf. Chomsky 2001, etc.). It has been shown that the tension between empirical arguments and conceptual ones can be overcome and that *Spec,H configurations can be made consistent with the conceptual desiderata without losing empirical coverage.*

## **2. Summary of the dissertation by chapter**

Chapter 2 discussed the relationship between IM and focalization processes in both Spanish and English. It was argued that Herburger's (2000) Neo-Davidsonian approach to the semantics of focus as implemented by Uriagereka (2005a and 2008b), allows for a unified treatment of not only new information focus, but also contrastive focus in Spanish. In keeping with the view that new information focus and contrastive focus do not constitute two different kinds of focus (Herburger 2000, a.o.), the

(apparent) syntactic difference between both kinds of focus (where the wording is chosen for the sake of clarity without any theoretical implications) was argued to be the result of the distinct form of contextual anchoring (Raposo and Uriagereka 1995) that each kind of focus naturally correlates with. This approach was shown to allow for an understanding of both the *syntactic* and the *PF properties* of focalization processes in Spanish without having PF drive syntax contra Zubizarreta (1998). In the case of English (new information focus), these processes were argued to take place covertly, contra Kayne (1998).

Chapter 3 and Chapter 4 dealt with the relationship between IM and surface semantics focusing on the syntax of preverbal subjects in Spanish and English, respectively. According to Chomsky (2001, and subsequent work) and Uriagereka (2008a) among others, IM yields (at least) scopal and discourse-related properties. If one assumes the VP-Internal Subject Hypothesis (Koopman and Sportiche 1991 a.o.), it follows that preverbal subjects are either the result of base-generation or syntactic movement. In both cases this entails a complex syntax, which one expects to map onto complex semantics. Chapter 3 showed that preverbal subjects in Spanish show complex semantics (cf. Uriagereka 2002 and Rizzi 2005, a.o.) and that, nonetheless, these preverbal subjects are the result of movement, against Alexiadou and Anagnostopoulou (1998), a.o. These surface semantic effects were claimed to be the result of the systematic mapping of complex syntax onto complex semantics.

Chapter 4 discussed some apparent counterexamples to the view that IM entails complex semantics. In particular, this view was tested by looking at the properties of preverbal subjects in English. Two competing hypotheses were

considered, a weak *Defeasible Internal Merge / Surface Semantics Mapping Hypothesis* and a stronger *Strict Internal Merge / Surface Semantics Mapping Hypothesis*. The former hypothesis claims that whenever IM does not correlate with surface semantics, a number of conspiring factors are at play and the task of the research is to unveil those conspiring factors. In contrast, the latter hypothesis claims that under such exceptional circumstances a more careful look at the data will reveal subtle, though real, differences in surface semantics. The study of the syntax of English provided evidence that indeed the latter hypothesis is on the right track.

Chapter 5 explored the relationship between IM and checking or licensing relations in syntax. A number of challenges for the phase-based system assuming a Long Distance Agreement relationship as opposed to Spec,H relations were explored. It was claimed that under a mixed system adopting both phases and Long Distance Agreement and, crucially, a MSO system (Uriagereka 1999) conceptual arguments against Spec,H relations can be circumvented. As a consequence, Spec,H relations are allowed, though not probing of the Spec by the head under m-command. The resulting system is able to address successfully a number of puzzles for the phase-based system, e.g., the fact that across languages moved elements tend to trigger (rich) agreement as opposed to in situ ones or the issue of how phrases that are base-generated in A-bar positions are licensed.

To sum up, this dissertation added to our knowledge of the syntax of IM (i) by providing evidence for the systematicity of the mapping of IM onto complex semantics, (ii) by contributing to our understanding of the syntax of preverbal subjects in Spanish and English and (iii) by providing an account of how evidence for

grammatically significant Spec,H relations can be accommodated within the phase-based LDA framework (Chomsky 2000 and later work).

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