

Prominence Scales and Unmarked Word Order in Spanish*

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ABSTRACT. This paper deals with a number of facts related to the word order of Spanish declarative clauses and develops an analysis where the unmarked word order of Spanish clauses with different classes of verbs is not determined by syntactic conditions such as Case or agreement, but rather by structural conditions that are closely related to the thematic role of the different arguments of the verb. The analysis is based on a set of data that point to the conclusion that even though unmarked word order in Spanish is not determined by Case or agreement considerations, it is still mostly regulated by the EPP. However, these same data indicate that (a) the EPP is a requirement operative in some constructions but not in others, and (b) phrases other than the subject DP can satisfy the EPP. This paper develops an Optimality Theoretic account of these facts where the core of the analysis consists of introducing the notion of the Pole of the clause, defined as the highest specifier of the inflectional layer, and developing a set of markedness constraints whose interaction determines when and whether this specifier position is occupied. Central to this analysis are the characterization of the EPP as a violable constraint that requires the Pole specifier to be filled, and the use of Harmonic Alignment to formalize a hierarchy of markedness constraints that target the relative markedness of an argument or adjunct when it occupies the Pole specifier, independently of the grammatical relation it bears.

1. Introduction

The unmarked word order of transitive clauses in Spanish is SVO, as evidenced by the fact that SVO sentences constitute the felicitous answer to the question ‘*what happened?*’

(1) Juan compró el periódico.

S V O

Juan bought the newspaper

‘Juan bought the newspaper.’

Almost every account of word order in Spanish (with the exception of Contreras 1976) and of the word order of Spanish compared to that of other languages (Alexiadou and Anagnostopoulou 1998, Costa 1998, 2001, *inter alia*) is based on the word order properties of transitive clauses like (1). However, it is also well known that Spanish clauses with different classes of verbs display different unmarked word orders. Specifically, in clauses with certain kinds of psych verbs, the indirect object, and not the subject, occupies the preverbal position, as shown in (2), and in clauses with unaccusative verbs, the subject appears in a post-verbal position, as shown in (3) (Contreras 1976, Fant 1984, Masullo 1993, Arnaiz 1998, *inter alia*).^{1,2}

(2) a. A Juan le gustan los chocolates.³ **IO V S**

to Juan DAT-CL *like*.3PL *the chocolates*

‘Juan likes chocolates.’

¹ The word order facts in (1-3) are observed in almost every variety of Spanish that I am aware of (see Contreras 1976, Fant 1984, Arnaiz 1998). Besides the VS order of (3), Zubizarreta (1998) reports an SV order for unaccusative clauses, but, as we will see, there is evidence that these are instances of subject topicalization. It should further be noted that the word order facts in (1-3) are in no way specific to Spanish: Italian shows the same behavior in these verb classes (Belletti and Rizzi 1988, Arnaiz 1998) and preverbal datives with psych verbs are widely attested crosslinguistically.

² In all cases I use a pre-theoretical definition of *subject*, to be understood as the nominative argument that shows agreement with the verb, irrespective of the structural position it may occupy.

³ The abbreviations used in this paper are the following:

ACC	accusative	DAT	dative	INTERR	interrogative	s	singular
Ag	Agent	EX	Experiencer	NOM	nominative	Th	Theme
CL	clitic	exp	expletive	PL	plural		

- b. A Marcos le interesa la danza moderna.

to Marcos DAT-CL *interests* *the dance* *modern*

‘Marcos is interested in modern dance’ (Masullo 1993:304)

- c. A Juan le encantan las películas de David Lynch.

to Juan DAT-CL *charm.3PL* *the films* *of David Lynch*

‘Juan loves movies by David Lynch.’

- (3) a. Llegó tu hermano. **VS**

arrived *your brother*

‘Your brother arrived.’

- b. Empezó la resistencia.

began *the resistance*

‘The resistance began.’ (Contreras 1976:5)

- c. Estallaron dos bombas en la universidad de Navarra.

exploded.3PL *two bombs* *in the university* *of Navarra*

‘Two bombs exploded at the University of Navarra’ (Fant 1984:105)

As will be discussed in detail, the VS order of unaccusative clauses is particularly puzzling, since it is equally observed in varieties of Spanish where verb-initial transitive clauses (VSO or VOS) are ungrammatical or strongly deviant. While the alternative SV order is also attested in Spanish unaccusative clauses, there is evidence that it does not correspond to the unmarked option. Rather, in SV unaccusative clauses the subject has the pragmatic properties of a sentence topic. Accordingly, as discussed in section 2.2, it must be fronted into a clause-initial position, just like any other sentence topic in Spanish.

In Section 2 I discuss previous accounts of Spanish word order and argue that they make incorrect predictions with respect to the unmarked orders in psych verb and unaccusative clauses. In Section 3 I discuss the variable role of the EPP in determining unmarked word order in Spanish, and I develop an OT account in section 4. Section 5 extends this account to an additional class of psych verbs; section 6 concludes with some typological predictions of my approach.

2. Previous accounts

Although data like (1-3) have not received much attention in the literature on word order in Spanish, I consider them fundamental for understanding word order phenomena in this language, since they raise a number of important questions for previous accounts of the SVO order of transitive clauses. First, these data indicate that the word order of (1) is not the result of the subject moving to the preverbal position because of Case and/or agreement requirements, since the subject does not occupy the preverbal position in (2) and (3). In other words, Case/agreement analyses wrongly predict that the subjects of psych and unaccusative verbs should surface in the same position as transitive subjects. It is important to note that optimality theoretic analyses that derive word order through violable constraints related to Case or the subject grammatical relation have this same problem. In Costa (1998, 2001), the SVO order of Portuguese, Spanish and other languages is accounted for as the result of the SUBJCASE constraint in (4) outranking the STAY constraint of Grimshaw (1997), which penalizes movement.

(4) SUBJCASE

Subjects are Case-licensed in [Spec, I].

(5) STAY

Trace is not allowed.

In languages where SUBJCASE outranks STAY it is better to have the subject DP in [Spec, T]⁴ with a trace in the representation than to leave the subject in its VP-internal position. This is exemplified for English in the tableau in (6).

(6) ENGLISH

John will buy the newspaper.

	SUBJCASE	STAY
☞ a.[_{TP} John _i will [_{VP} t _i buy the newspaper]].		*
b.[_{TP} will [_{VP} John buy the newspaper]]	*!	

This analysis gives the right result for Spanish transitive clauses. However, as with transformational analyses, it incorrectly predicts that in the examples in (2) the subject, and not the indirect object, should surface in [Spec, T]. This is because the IO-V-S candidate violates SUBJCASE, as shown in tableau (7), which corresponds to example (2a). In this tableau, ✕ signals the candidate incorrectly selected as the winner.^{5,6}

⁴ [Spec, I] in Costa's analysis.

⁵ The candidate incorrectly selected as the winner does correspond to a grammatical sentence in Spanish, but it does not correspond to the unmarked word order for this class of psych predicates. Specifically, it corresponds to an instance of subject topicalization, akin to the topicalization of unaccusative subjects discussed in Section 2.2. See Gutiérrez-Bravo (2002a) for details.

⁶ In this tableau and all the tableaux to follow, violations of STAY that result from V-to-T movement are omitted for clarity, since they are not relevant for the point under discussion.

(7) UNMARKED WORD ORDER: SPANISH PSYCH VERBS

	SUBJCASE	STAY
☞ a. [a Juan _i le gustan [VP t _i los chocolates]]. IO-V-S	*!	*
✗ b. [los chocolates _i le gustan [VP a Juan t _i]]. S-V-IO		*

An analysis based on SUBJCASE also gives an incorrect result for clauses with unaccusative verbs like (3). As shown in (8), the subject DP would surface in [Spec, T] in the unmarked case, contrary to fact.⁷

(8) UNMARKED WORD ORDER: SPANISH UNACCUSATIVE VERBS

	SUBJCASE	STAY
☞ a. [TP llegó [VP tu hermano]] VS	*!	
✗ b. [TP tu hermano _i llegó [VP t _i]] SV		*

Similar problems arise if instead we try to derive word order in Spanish with the SUBJECT constraint of Grimshaw (1997). Grimshaw provides the following definitions of this constraint:

(9) SUBJECT

Clauses have subjects.

Grimshaw (1997: 374)

- a. The highest A-specifier in an extended projection must be filled.
- b. The specifier of the highest I-related head must be filled, where

⁷ Observe that a potential analysis of these unaccusative constructions where VS order is the result of the presence of a null expletive in [Spec, T] would be at odds with the evidence presented in Alexiadou and Anagnostopoulou (1998) that Spanish and other *pro*-drop languages lack null expletives altogether.

I-related includes V, T, Agr, Neg, etc.

Grimshaw (1997: 390)

The SUBJECT constraint is not inherently linked to Case assignment (at least in its definition in (9b)). Consequently, it presumably allows for constituents other than the nominative argument of a verb to satisfy it when they occupy [Spec, T]. This, however, still does not give us the correct result for the psych clauses in (3). As shown in tableau (10), even if the indirect object in [Spec, T], can satisfy SUBJECT, so can the nominative subject. Accordingly, the unmarked IO-V-S order cannot be derived by SUBJECT and STAY alone.⁸

(10) UNMARKED WORD ORDER: SPANISH PSYCH VERBS

	SUBJECT	STAY
a. [TP a Juan _i le gustan [VP t _i los chocolates]]. IO-V-S		*
b. [TP los chocolates _i le gustan [VP a Juan t _i]]. S-V-IO		*

Furthermore, the analysis in Grimshaw (1997) does consider a constraint that regulates Case assignment, the CASE constraint reproduced in (11).

⁸ A reviewer points out that it may be possible to derive the correct result with SUBJECT and STAY alone by using the definition of STAY in Ackema and Neeleman (1998). This is because their definition of STAY is gradient, violated more severely by longer movement operations (hence it functions as a Shortest Move requirement that minimizes path length). In principle it may be possible to develop such an analysis: one would only need a theory like the one in Belletti and Rizzi (1988) or Grimshaw (1990) where arguments are ordered in the VP according to their semantic role, in a way such that the oblique *experiencer*, and not the nominative subject, would be the argument closest to [Spec, T]. However, in comparison with the analysis I develop in what follows, this would simply introduce an unnecessary complication, as the resulting analysis would still incorrectly predict that the unmarked word order of unaccusative clauses should be SV.

(11) CASE

DPs must be Case marked.

Grimshaw (1997: 374)

Subjects satisfy this constraint in the specifier of the highest I-related head, which would correspond to [Spec, T] in the Spanish examples considered here. The point is that as soon as the CASE constraint is considered in the analysis, it incorrectly selects the S-V-IO candidate as the winner, irrespective of its relative ranking with respect to SUBJECT and STAY. This is shown in tableau (12), where the IO-V-S candidate loses because of its violation of CASE.

(12) UNMARKED WORD ORDER: SPANISH PSYCH VERBS

	SUBJECT	STAY	CASE
☞ a. [_{TP} a Juan _i le gustan [_{VP} t _i los chocolates]]. IO-V-S		*	*!
✗ b. [_{TP} los chocolates _i le gustan [_{VP} a Juan t _i]]. S-V-IO		*	

Finally, either definition of SUBJECT gives an incorrect result in the case of Spanish unaccusative clauses, irrespective of whether we consider the CASE constraint as part of the analysis or not. This is because the ranking SUBJECT » STAY minimally requires [Spec, T] to be filled, and in the unaccusative clauses in (3) the subject is the only element that can do so. This is shown in (13).

(13) UNMARKED WORD ORDER: SPANISH UNACCUSATIVE VERBS

	SUBJECT	STAY
☞ a. [_{TP} llegó [_{VP} tu hermano]] VS	*!	
✗ b. [_{TP} tu hermano _i llegó [_{VP} t _i]]] SV		*

The data in (2) and (3) also present a problem for analyses which analyze the SVO order of Spanish as the result of topicalization of the subject from an underlying verb-initial order (e.g. Bordelois 1974, Contreras 1991, and Alexiadou and Anagnostopoulou 1998, 1999). These analyses have in common that they propose that Spanish lacks a structural requirement requiring [Spec, T] to be filled by an XP. Alexiadou and Anagnostopoulou (1998) identify this requirement with the EPP and propose that languages differ in how it is satisfied. In languages like English it is satisfied by XP-movement into [Spec, T]. However, in Spanish and other *pro*-drop languages it is satisfied via verb raising. In this latter case, the rich verbal agreement morphology of *pro*-drop languages has the categorial status of a pronominal element (a proposal originally formulated in Contreras 1991). Under this analysis, Alexiadou and Anagnostopoulou (1998) need not resort to a null expletive analysis of verb-initial constructions in *pro*-drop languages (in contrast with Rizzi 1982, among many others). In both Contreras (1991) and Alexiadou and Anagnostopoulou (1998) Spanish is consequently analyzed as a language that displays a SVO/VSO alternation, akin to the SVO/VSO alternation of Greek in (14).

(14) GREEK

a. O Petros pandrefitke tin Ilektra. **SVO**

Peter married Ilektra

b. pandrefitke o Petros tin Ilektra. **VSO**

married Peter Ilektra

(Alexiadou and Anagnostopoulou 1998:492)

Since no null expletive is involved, the SVO versus VSO orders in (14) appear to depend on pragmatic considerations. Although not explicitly discussed in Contreras (1991) nor Alexiadou and Anagnostopoulou (1998), the prevalence of the SVO over VSO order in Spanish can then be

interpreted as the result of the subject being a default topic (cf. Ordóñez and Treviño 1999). However, two different observations can be made about the default topic analysis. First, there is evidence that the EPP is an active requirement in Spanish, *contra* Contreras (1991) and Alexiadou and Anagnostopoulou (1998). Specifically, although some varieties of Spanish do allow a SVO/VSO alternation, others do not. In Mexican Spanish, for instance, VSO declaratives run from strongly deviant in perfective aspects to close to ungrammatical in non-perfective aspects.⁹

(15) MEXICAN SPANISH

a. ??Compró Juan el periódico. **V S O**

bought Juan the newspaper

(‘Juan bought the newspaper.’)

b. ?*Come Pedro pan.

eats Pedro bread

(‘Pedro eats bread.’)

⁹ The observation that some varieties of Spanish do not allow VSO clauses is not a new one. To the best of my knowledge, it was first reported for matrix clauses in the variety of Spanish analyzed in Contreras (1991). For recent discussion of this issue, see Zagona (2002). Luis Casillas (p.c.) reports similar judgments for Puerto Rican Spanish. Even for Madrid Spanish, Manuel Leonetti (p.c.) reports that VSO declaratives are slightly deviant when compared to SVO declaratives. Finally, Goodall (2001), who also argues against the analysis of Alexiadou and Anagnostopoulou (1998), provides further evidence from Northern Mexican Spanish that the EPP is active in this variety.

Secondly, preverbal subjects in Spanish do not behave like fronted topics. Goodall (2001) observes that fronted topics in Spanish create islands for extraction but preverbal subjects do not, as shown in (16) (see also Rochemont 1989, Müller and Sternefeld 1993).

(16) a. *A quién crees [que el premio se lo dieron]?
 to whom you-think that the prize DAT-CL ACC-CL they-gave
 (Lit. ‘Who do you think that the prize they gave to?’)

b. A quién crees [que Juan le dio el premio]?
 to whom you-think that Juan DAT-CL gave the prize
 ‘Who do you think that Juan gave the prize to?’ (Goodall 2001)

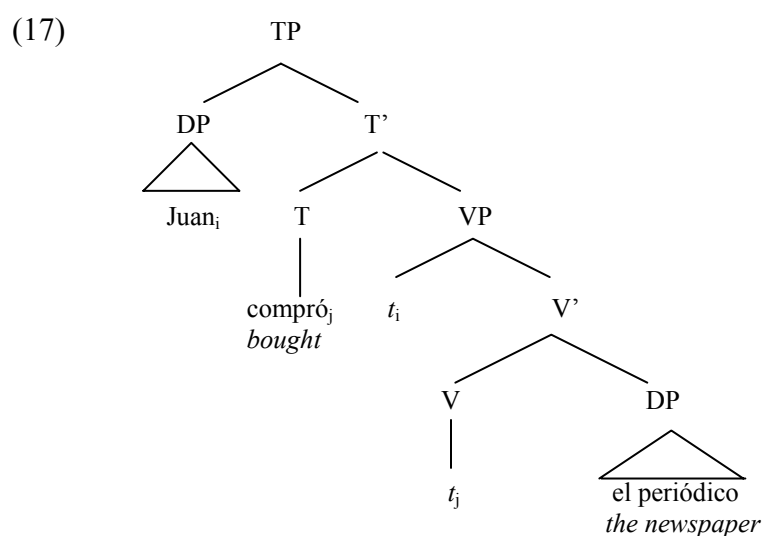
Furthermore, the default topic analysis runs into some of the same problems as the Case-based analyses. If the subject is the default topic in the transitive clause (1), then it is unclear why the subjects in (2) and (3) are not default topics as well, in which case we also expect them to appear in the preverbal position. Other than stipulating that clauses with different classes of verbs have different default topics (subjects for transitive clauses, IOs for psych clauses, and no default topic for unaccusative clauses) it is far from clear how an analysis based on the notion of default topic could derive the word order facts observed in (2) and (3).

The alternative proposal I develop in this paper instead claims that Spanish clauses with different kinds of constituents in the preverbal position have varying degrees of markedness (as understood in Optimality Theory: Prince and Smolensky 2004). I argue that the degree of markedness depends on the semantic role of the preverbal constituent. In what follows I develop an analysis where this relative degree of markedness, in conjunction with the EPP, determines when and whether the preverbal position is occupied in the unmarked case in this language.

3. The EPP and unmarked word order

3.1 EPP effects

First I lay out my assumptions regarding the structure of SVO sentences in Spanish, which are fairly standard. Following Suñer (1994), I assume verb movement from V to T and DP movement from [Spec, V] to [Spec, T]; these movements result in an SVO word order, as illustrated in (17):



I also assume, following Suñer (1988), Moore (1996), Franco (1993), and Parodi (2003), that clitics in Spanish are instances of morphological agreement. Hence I assume it is not possible for these elements to satisfy the EPP. Lastly, my analysis is based on data from Mexican Spanish, a variety of Spanish where the evidence for an active EPP is strong. Costa (2001) and Gutiérrez-Bravo (2002a,b) discuss analyses of other varieties of Spanish that display a more robust SVO/VSO alternation.

The discussion in the previous section argued that any analysis of subject movement in (17) must also allow for an account of the unmarked word orders in psych-verb and unaccusative

clauses. An observation that is crucial in providing such an account is that unacceptable VSO sentences can be rescued when a topic or a *wh*-operator occupies the same position as a transitive subject.¹⁰ This is shown in the examples in (18), where the preverbal position is occupied by the fronted temporal adverbial *ayer* ‘yesterday’ functioning as a topic, and by a reason *wh*-operator, respectively.

(18) a. *Ayer compró Juan el periódico.* **Adv V S O**

yesterday bought Juan the newspaper

‘Yesterday Juan bought the newspaper.’

b. *Por qué compró Juan el periódico?* **Wh V S O**

why bought Juan the newspaper

‘Why did Juan buy the newspaper?’

I propose that an active EPP is responsible both for the SVO order in (1) and the ability of topics and *wh*-operators to rescue otherwise ungrammatical VSO sentences in Mexican Spanish.¹¹ In

¹⁰ In this respect, Mexican Spanish displays a behavior similar to the verb-second behavior of Yiddish, as described in Diesing (1990) and Santorini (1992); see also Zubizarreta (1998).

¹¹ A reviewer asks how we can reconcile the fact that Spanish has an active EPP with the fact that this language still shows characteristics typical of the null-subject parameter of Rizzi (1982), such as null subjects, the possibility of subject inversion, etc. It seems to me that this does not present a problem for my analysis. In the Principles and Parameters framework, it was assumed that syntactic properties systematically cluster according to the positive or negative value of a parameter. For instance, it was assumed that a negative setting of the null-subject parameter resulted in a cluster of properties including overt expletives, *that*-trace effects, and the absence of free subject inversion. However, comparative research provides evidence that make it reasonable to question whether syntactic properties actually do cluster in this way. Hence there are non-*pro* drop languages without *that*-trace effects, such as

this I follow the contemporary proposals developed both in transformational analyses and in Optimality-theoretic syntax which claim that the EPP is a purely structural condition that requires some specifier position to be filled, independently of the category or grammatical relation of the constituent that fills it (Branigan 1992, Jonas and Bobaljik 1993, Babyonyshev 1996, Collins 1997, Grimshaw 1997, Zubizarreta 1998, Fernández-Soriano 1999, Chomsky 2000, Holmberg 2000, McCloskey 2001, Holmberg and Nikanne 2002; see also McCloskey 1997 on the decomposition of subject properties in contemporary transformational syntax). The similar behavior of (17) and (18), in contrast with the strongly deviant VSO examples in (15), is thus explained under the assumption that fronted topics and *wh*-operators in Spanish also have [Spec, T] as their landing site, which corresponds in essence to the Generalized TP analysis of Zubizarreta (1998).¹²

Icelandic, Dutch (Maling and Zaenen 1978) and some varieties of English (Sobin 1987), *pro*-drop languages with *that*-trace effects, such as Hungarian (Haiman 1974), and *pro*-drop languages with overt expletives and strong EPP effects, such as Dominican Spanish (Toribio 1994, 2000) and Finnish (Holmberg and Nikanne 2002, Holmberg 2005). Considering this evidence, it is not surprising that the concept of Parameter has been eliminated in most contemporary syntactic frameworks, such as Minimalism and OT-syntax. See Section 5 for further discussion of these issues.

¹² Both Zubizarreta's analysis and the proposal I develop here stem in turn from the analysis in Groos and Bok-Bennema (1986), which is (to the best of my knowledge) the first analysis where it was proposed that preverbal subjects and *wh*-operators compete for the same position in Spanish (see also Goodall 1991). However, there are two important differences that distinguish the analysis in Groos and Bok-Bennema (1986) from both the Generalized TP analysis of Zubizarreta (1998) and the proposal developed here. First, given the specific formalization of their analysis, Groos and Bok-Bennema conclude that Spanish is a verb initial (VOS) language; this runs counter to most contemporary evidence that Spanish is an SVO language with an active EPP. Secondly, under Groos and

Observe now that the same pattern is observed with psych clauses, as shown in (19). This suggests that the indirect object in (19) satisfies the EPP in [Spec, T] in the same way that the subject does in (17) (see also Masullo 1993):

(19) a. A Juan le gustan los chocolates. **IO V S**

to Juan CL-DAT *like.3PL* *the chocolates*

‘Juan likes chocolates.’

b. ??Le gustan a Juan los chocolates. **V IO S**

CL-DAT *like.3PL* *to Juan* *the chocolates*

Thus, subjects, the IOs of psych verbs, topics, and fronted *wh*-operators all appear to share at least one property: their capacity to satisfy the EPP. It follows that any grammatical constraints, including the EPP, that are defined in relation with this myriad of different XPs must be dissociated from any specific grammatical relation. Otherwise, we face the problems of the subject-based analyses discussed in the previous section. For this purpose, I propose that the constituent that functions as the specifier of the highest inflectional projection be referred to as the POLE of the clause, where the set of inflectional projections I consider may include TP, NegP (or a polarity phrase, e.g., the Σ -Phrase of Laka 1990), and AgrSP. The Pole is thus a notion that is defined relationally. When TP is the highest inflectional projection, the Pole corresponds to [Spec, T], as in (19-21). When another inflectional projection such as NegP dominates TP, however, the Pole of the clause corresponds to [Spec, Neg]. In this respect, the relational

Bok-Bennema’s account, fronted topics do not compete for the same position as preverbal subjects and *wh*-operators, whereas crucially they do both here and in Zubizarreta (1998).

definition of the Pole is akin to the SUBJECT constraint of Grimshaw (1997) discussed in the previous section.¹³

Most of the evidence to be discussed supporting the relevance of the notion of the Pole for Spanish comes from the word order facts presented in the preceding section. There is, however, evidence from other areas in the syntax of Spanish that support this notion. First, a Spanish negative clause can be constructed in two ways, with a negative head *no*, as in (20), or with a preverbal negative XP, as in (21) (see Bedell-García 1993, Suñer 1995, Sánchez-López 1999, among others). Observe that the preverbal negative XP can correspond to any argument or adjunct of the verb.

(20) No llegaron los muchachos.

not arrived the boys

‘The boys didn’t arrive.’

(21) a. Nadie vio la película.

no-one saw the movie

‘No one saw the movie.’

b. A nadie le ha gustado esa película.

to no-one CL-DAT has liked that movie

‘No one has liked that movie.’

c. Nunca hemos visto nosotros esa película.

¹³ Crucially, I also assume that the Pole never corresponds to the specifier of projections in the C-system, although this assumption is not crucial for the analysis of the data presented in this paper.

never we-have seen we that movie

‘We have never seen that movie.’

Crucially, as noted extensively in the literature on negative concord in Spanish, clauses with a negative XP in the post-verbal field or in a left-peripheral position are ungrammatical. This is shown in (22) and (23).¹⁴

(22) a. *La película la vio nadie.

the movie CL-ACC saw no-one

b. *Esa película le ha gustado a nadie.

that movie CL-DAT has liked to no-one

(23) a. *Nadie la película la vio.

no-one the movie CL-ACC saw

b. ??Nunca nosotros hemos visto esa película.

never we we-have seen that movie

¹⁴ Negative XPs in the post-verbal field are possible in clauses with *no* and in clauses where a negative XP appears in the preverbal position (the negative concord pattern), as is well known. In these cases, it is generally assumed that *no* and the preverbal negative XP license the post-verbal negative XP. See Ladusaw (1992), Suñer (1995), and Gutiérrez-Bravo (2002a) for possible analyses of these cases.

Now, under the assumption that all the negative XPs in (21) occupy [Spec, T],¹⁵ the generalization can be established that in the absence of the head *no*, a negative clause in Spanish is only well formed when the Pole of the clause is a negative XP, a condition that is not met in either (22) nor (23).¹⁶ Further observe that the examples in (21) allow us to argue for the need to distinguish between the notions of Pole and subject. As shown in (21c), any kind of adjunct (in this case a temporal adverb) can function as the Pole of the clause in Spanish, hence the need for a definition of the Pole that makes no reference to the subject grammatical relation.

The relevance of the notion of the Pole in Spanish can also be observed in ellipsis. Spanish has a deletion construction that generally involves a polarity head, or an adverb like *también* ‘too’, preceded by the remnant of the deleted constituent. This remnant can be the subject, the IO of a psych verb, a fronted topic or any kind of *wh*-operator (Brucart 1987, 1999, López 1999, Sánchez-López 1999, López and Winkler 2000). Examples are shown in (24).

(24) a. Luis reprobó a Ernesto, pero [Juan no___].

Luis failed ACC Ernesto but Juan not

‘Luis failed Ernesto, but Juan didn’t.’

¹⁵ Notice that an analysis where the negative XPs occupy the specifier of a NegP with a null head is disconfirmed by the fact that these negative XPs can co-occur in Spanish with an overt negative head, in which case the result is a double-negative construction (see Laka 1990, Suñer 1995, Sánchez-López 1999):

(i) Hasta ahora, a nadie no le ha gustado esa película.

until now to no-one not DAT-CL has liked that movie

‘Up to now, no one hasn’t liked that movie (=everyone liked it).’

b. A Luis le gusta el café, pero [a Juan no ____].

to Luis DAT-CL likes the coffee but to Juan not

‘Luis likes coffee, but Juan doesn’t.’

c. En ese café cobran carísimo, pero [en el otro no ____].

in that coffee.shop they.charge very.expensive but in the other not

‘In that coffee shop they charge a lot, but in the other one they don’t.’

d. En ese café cobran carísimo, pero [en dónde no ____]?

in that coffee.shop they-charge very.expensive but in where not

‘In that coffee shop they charge a lot, but where don’t they?’

In Spanish no verb or auxiliary element survives this deletion process. As a result, the examples in (24) superficially resemble instances of Stripping in English. However Brucart (1987, 1999), López (1999), López and Winkler (2000), and Gutiérrez-Bravo (2002a) provide evidence that these constructions are not instances of Stripping, but rather are a kind of phrasal ellipsis akin to VP ellipsis in English. First, it is a well-known fact that, in contrast with VP ellipsis, Stripping is not possible in embedded contexts. This is illustrated in (25). As noted in López and Winkler (2000), the Spanish constructions in (24) do appear in embedded contexts. Examples are shown in (26).

(25) a. *Tom owns a Mercedes, and I’m pretty sure that Susan too. (McCawley 1988)

b. *Sam read many books, but I think that not novels. (López and Winkler 2000)

¹⁶ See Gutiérrez-Bravo (2002a) for a detailed analysis of these facts.

(26) a. Tomás tiene un Mercedes y estoy seguro de que [Susana también ____].

Tomás has a Mercedes and I-am sure of that Susana too

‘Tomás owns a Mercedes and I’m sure that Susana does too.’

b. Samuel ha leído muchos libros, pero creo que [novelas no ____].

Samuel has read many books but I-think that novels not

‘Samuel has read a lot of books but I think that novels, he hasn’t.’

Secondly, as noted in McCawley (1988: 30), Stripping in English cannot occur in the presence of a conditional clause, but VP ellipsis can. In this respect, the Spanish deletion constructions under consideration behave like ellipsis, and not like Stripping.

(27) a. *If Tom owns a Mercedes, Susan too.

b. If Tom has bought a Mercedes, Susan has too.

(28) Si Luz puede resolver el problema, tú también ____.

if Luz can solve the problem you too

‘If Luz can solve the problem, you can too.’

Lastly, the deletion constructions in (24) are like English VP ellipsis in that they exhibit both strict and sloppy readings.

(29) María no sacó dinero de su cuenta pero [yo sí ____].

María not took.out money from her account but I yes

STRICT: ‘María did not take money out of her account but I did [~~take~~

~~money out of her account~~].?’

SLOPPY: ‘María did not take money out of her account but I did [~~take~~

~~money out of my account~~].?’

The evidence thus points to the conclusion that the data in (24) are a kind of phrasal ellipsis. However, it is also fairly clear that it is not VP-ellipsis. In Spanish the verb always moves from V to T. If the deletion in (24) were simply VP ellipsis, the verb (or an auxiliary element) should survive the deletion, contrary to fact. Instead, as noted in Laka (1990), the data receive a straightforward explanation if we assume that the remnant of ellipsis in Spanish occupies the specifier position of a Polarity Phrase headed by the negation. This polarity phrase in turn takes TP as its complement, as in (30).¹⁷

¹⁷ A referee asks what prevents [Spec, Pol] and [Spec, T] from being occupied simultaneously in this analysis, yielding a construction like (i):

(i) *_[Pol-P] Juan no _{[TP a Ernesto]_j reprobó_i _[VP t_i t_j]].}

Juan not ACC Ernesto failed

The answer is that (i) is ruled out by Economy of Movement. As mentioned previously, the EPP is satisfied in the specifier of the highest inflectional projection, PolP in (i). Movement of the subject DP *Juan* to this specifier position satisfies the EPP, but in contrast, movement of the object DP to the lower [Spec, T] position satisfies no well-formedness condition whatsoever. It is a gratuitous movement operation ruled out by Economy considerations. In OT terminology, movement of the object to [Spec, T] results in a gratuitous violation of STAY that does not improve the structure in any respect, and so the structure in (i) will always be sub-optimal when compared with (30).

(30) [_{Pol-P} Juan no [_{TP} reprobó_i [_{VP} t_i a Ernesto]]].

Juan not failed ACC Ernesto

‘Juan did not fail Ernesto.’

Laka (1990) observes that under this analysis, constructions like (24), (26), (28) and (29) can be uniformly analyzed as cases of TP ellipsis. From this perspective, the broader phenomenon under consideration can be characterized as phrasal ellipsis (VP ellipsis in English, TP ellipsis in Spanish).

An alternative to the Polarity Phrase analysis in (30) would be to posit TP as the highest functional projection in Spanish.¹⁸ Under such an analysis, the verb adjoins to negation on its way to T, as illustrated in (31).

(31) [_{TP} Juan [_{T⁰} [no+ reprobó_i]_j] [_{Pol-P} t_j [_{VP} t_i a Ernesto]]].

Juan not failed ACC *Ernesto*

This kind of analysis has been proposed in Suñer (1995) and Zubizarreta (1998). However, in this head-adjunction analysis it is unclear why the polarity head, but not the verb or auxiliary to which it has adjoined, can survive deletion under ellipsis in (24). Furthermore, even if an analysis were developed to account for this fact, it would necessarily result in a loss of generalization. Since V plus everything that follows it does not form a constituent in the analysis where the verb adjoins to the negation, this elision phenomenon could not be characterized as phrasal ellipsis. Its similarities with English VP ellipsis would thus be unaccounted for.

¹⁸ In which case the Pole could be simply equated with [Spec, T].

Now consider how the data from ellipsis provides further independent evidence for the notion of Pole. Spanish allows fronted topics to co-occur with preverbal subjects, IOs, *wh*-operators and other topics:

(32) a. Los dulces Luisa no los consiguió en Guadalajara.

the sweets Luisa not ACC-CL found in Guadalajara

‘The sweets, Luisa didn’t get them in Guadalajara.’

b. La tarea, quién no la hizo?

the homework who not ACC-CL did

‘Who did not do the homework?’

However, in constructions showing ellipsis, Spanish disallows the presence of a fronted topic when any of the XPs in (24) is already present. In other words, Spanish does not allow for multiple remnants in ellipsis.¹⁹

(33) a. *Juan consiguió las artesanías en Guadalajara, pero [los dulces Luisa no ____].

Juan found the handcrafts in Guadalajara but the sweets Luisa not

b. *Ya sé quién hizo los ejercicios, pero [la tarea, quién no ____]?

already I-know who did the exercises but the homework who not

Now, under the assumption that all the remnants in (24) occupy the same position, the generalization can be established that in Spanish the remnant of ellipsis must correspond to the Pole of the clause. In this case the Pole is [Spec, Pol], since the Polarity Phrase headed by *no* is the highest inflectional projection. When a remnant appears outside the Pole position, this results in ungrammaticality, as in (33). Notice that the data from ellipsis further show that the notion of the Pole cannot be reduced to [Spec, T], since the Pole in (24) corresponds to [Spec, Pol] and TP is ellided as a whole. Lastly, observe once more that this Spanish data calls for a strict distinction between the Pole and the subject grammatical relation, since the remnant of ellipsis (24a-d) can be any argument or adjunct of the clause.

The evidence presented above indicates that even though the subject grammatical relation is not relevant for the phenomena discussed so far, the specifier position of the highest inflectional projection is in fact fundamental. In this respect, introducing the notion of the Pole of the clause allows us to define constraints and well-formedness conditions that target the highest inflectional specifier without making reference to the grammatical relation of the constituent it corresponds to.

It is also important to note that the Pole of the clause does not correspond to existing notions of non-nominative arguments that can typically occupy the highest inflectional specifier position, such as logical subjects and quirky subjects. The logical subject is standardly defined as the entity of which some property is ascribed, i.e., it is the target of predication (Kuroda 1992, Aissen 1999b, among others). In Spanish, however, the Pole can correspond to a *wh*-operator (as in

¹⁹ Brucart (1999) and López (1999), presumably based on Peninsular Spanish, report some constructions like (33a) to be acceptable. Speakers of Mexican Spanish, however, mostly reject them, and Ordóñez and Treviño (1999) report judgments like those in (33) for both Peninsular and Mexican Spanish.

(18b) and (24d)), and *wh*-operators are not usually assumed to be in a predication relation with the rest of the clause.

A similar observation can be made against a proposal that equates Pole and quirky subject.²⁰ The Pole in Spanish is any argument or adjunct of the clause that occupies the highest inflectional specifier. This is clearly not the case of quirky subjects and other kinds of true oblique subjects, which are non-nominative arguments that are part of the argument structure of their verbs and display most of the properties that characterize nominative subjects. Furthermore, there is ample cross-linguistic evidence that not every subject-like non-nominative XP can be taken to be an oblique or quirky subject. This issue has been argued in detail in the Relational Grammar tradition and more recently in Moore and Perlmutter (2000). Moore and Perlmutter observe that Russian has two kinds of subject-like nominals that display dative case. One kind corresponds to the arguments of infinitival verbs that would otherwise display nominative case in finite contexts. The other kind are dative experiencers, which are not restricted to infinitival constructions, and which are very much like the Spanish preverbal IOs of psych verbs discussed here. Moore and Perlmutter refers to these dative experiencers as I-Nominals. Both kinds of dative nominals share a number of subject properties, but Moore and Perlmutter provide convincing arguments that only the former are true subjects. The dative experiencers of finite constructions, in contrast, are

²⁰ Masullo (1993), Fernández-Soriano (1999) and Rivero (2004) suggest that some preverbal obliques in Spanish, including the IOs of psych verbs, should be analyzed as quirky subjects (although Masullo acknowledges that preverbal obliques do not have several of the core properties of Icelandic quirky subjects). However, Alsina (1993, 1996) provides evidence that the same kinds of preverbal obliques in Catalan are not quirky subjects. With respect to Spanish, evidence that these preverbal obliques are not quirky subjects can be found in Gutiérrez-Bravo (2005). In any case, as discussed above, the notion of the Pole encompasses more than just preverbal subjects and datives, since it includes expletives, topics and *wh*-operators.

shown to be surface indirect objects. In this respect, analyzing the preverbal datives of Spanish as Poles, but not as subjects, is in accordance with the typological conclusions of Moore and Perlmutter (2000) that not every subject-like non-nominative should be analyzed as an oblique subject (see also Sigurðsson 2002).

Finally, it is worth mentioning that it is also undesirable to equate the notion of the Pole with definitions where the subject is taken to be a particular structural position (as a reviewer suggests, following Chomsky 1981 and Grimshaw 1997). In these definitions, the subject is taken to be, for instance, [Spec, T]. However, it seems misleading to label these as subject positions, once we look at languages other than English. Crosslinguistically, the [Spec, T] position can be occupied by obliques that do not have the properties of nominative subjects, such as the dative experiencers of Spanish discussed here (and also those of Catalan: Alsina 1993, 1996), and the I-Nominals of Russian. Crucially, this same structural position can also be occupied by true oblique subjects, such as the dative subjects of Russian (Moore and Perlmutter 2000) or the quirky subjects of Icelandic (Andrews 1976, Thrainsson 1979, Maling 1980, Zaenen 1985, Zaenen *et. al.* 1985, Sigurðsson 2002). With a structural definition of subject, both kinds of obliques are grouped together under the same category. This has the unfortunate consequence that it brings together two kinds of syntactic elements that have been shown to be clearly distinct.

The Pole instead simply corresponds to the XP (argument, adjunct, fronted topic or expletive) in the specifier of the highest inflectional projection, with no reference to any grammatical relation. An analogue to the notion of Pole can be found in the onset of syllable structure. There is a widespread requirement in many languages for the onset position to be filled (a requirement formalized as the ONSET constraint in OT phonology; see Prince and Smolensky 2004). However, this requirement can be fulfilled by very different kinds of segments (stops, nasals, etc.). The requirement is that *something* fill the onset position. Similarly, the structural

requirement in Spanish clauses is that something fill the highest inflectional specifier. Therefore I propose the following definition of the EPP, which crucially makes reference to the Pole and not to the subject grammatical relation.²¹

(34) EPP

Clauses have Poles.

The analysis developed so far provides a way of understanding the well-known problem that the preverbal subject position in Spanish does not seem to have the full range of properties associated with A-positions (Contreras 1991, Goodall 1991, Zubizarreta 1998, Ordóñez and Treviño 1999), but it clearly does not correspond to an A-bar position occupied by a clitic left-dislocated topicalized subject either (Masullo 1993, Goodall 2001, Suñer 2003).

Ultimately, my suggestion is that the Pole is not a construct specific to Spanish, since facts similar to those discussed so far have been reported for other languages. For instance, in Italian there is also a class of psych verbs where the IO, and not the subject, occupies the preverbal position in the unmarked case (Belletti and Rizzi 1988, Arnaiz 1998). Outside the Romance

²¹ It is not my intent to claim that this definition is specific to Spanish. Rather, as I suggest briefly in what follows, I believe it is worth investigating the cross-linguistic applicability of the notion of the Pole, and thus of a definition of the EPP that is based on this notion. Although this issue cannot be addressed in this paper, it does not seem to me that languages like English, where the EPP is mostly satisfied by the grammatical subject, represent an immediate problem for the definition in (34). It is possible to develop an analysis where the EPP requirement of English is similar to (34), but where the subject-EPP correlation in this language is derived not from the definition of the EPP (in contrast with Chomsky's original 1981 formulation), but rather from independent considerations, namely, the fact

family, a similar pattern is observed in German (Lenerz 1977, Zaenen *et. al.* 1985, among many others), and there are good number of non-Indo European languages, such Japanese (Perlmutter 1984), that behave in this way.

(35) GERMAN (UNMARKED WORD ORDER)²²

- a. Der Mann sieht den Freund
the man_{nom} sees the friend_{acc}
- b. Dem Mann gefällt ein Buch
the man_{dat} pleases a book_{nom}

(36) JAPANESE (UNMARKED WORD ORDER)

- a. Dono hito ga musuko ni sono hon o kuremasita ka?
 which person NOM son DAT that book ACC gave INTERR
 ‘Which person gave that book to my son?’
- b. Kimura-san ni sono mondai ga wakaru
 Mr. Kimura DAT that problem NOM understand
 ‘Mr. Kimura understands that problem.’ (Perlmutter 1984: 318)

Also, Yiddish (as analyzed in Diesing 1990 and Santorini 1992) is like Spanish in that subjects, topics, and *wh*-operators all have the specifier of the highest inflectional phrase as their landing

that in English the specifier of the highest inflectional phrase is also the position where nominative Case is assigned.

I return to English in Section 6.

²² I am thankful to an anonymous reviewer for help with this German data.

site.²³ Outside the Indo European family, Finnish, as analyzed in Holmberg and Nikanne (2002), is similarly a language where there is an active EPP requirement that is satisfied in the specifier position of the highest inflectional projection, and which can be satisfied by both preverbal subjects and fronted topics. This also appears to be the case in Tz'utujil Mayan, as described in Aissen (1999b).²⁴ Addressing the cross-linguistic applicability of the notion of the Pole requires a detailed and careful investigation of each relevant case that cannot be undertaken here.

²³ A reviewer points out that the analyses of Yiddish in Diesing (1990) and Santorini (1992) are unusual in that they do not posit that the verb moves from T to C in these V2 languages, which is the standard analysis of V2 in transformational frameworks. However, Zwart (1997) provides evidence that there is no T to C movement in Yiddish or other V2 languages that display verb-second phenomena in both matrix and subordinate clauses.

²⁴ Even in languages such as English, where the correlation subject-highest inflectional specifier is very strong, it may be argued that a distinction can be made between subject and Pole in some cases. For instance, in English *there*-existential constructions like (i), the expletive occupies the highest inflectional specifier and the (nominative) argument that controls agreement with the verb occupies a post-verbal position. Collins (1997) has further argued that in locative inversion constructions like (ii) the fronted PP occupies the [Spec, T] position and thus satisfies the EPP, while the nominative argument remains in the post-verbal field.

- (i) [TP There are some students waiting outside the coffee shop].
- (ii) [TP Down the hill rolled John].

My proposal allows for an analysis of these cases that does not compromise the concept of *grammatical subject*. In (i) and (ii) the expletive and the inverted locative correspond to the Pole, since they are the elements that occupy the highest inflectional specifier. The post-verbal DPs correspond in turn to the grammatical subject, as evidenced by the fact that they are the arguments that show agreement with the verb or auxiliary. Developing such an analysis, however, goes far beyond the scope of this paper, so I leave this possibility open for future research.

Nevertheless, I provide a preliminary typology of languages with different word order phenomena based on the notion of the Pole in Section 6.

3.2 Absence of EPP effects

So far, we have seen that there is evidence that there is an active EPP in Spanish. Yet, the unmarked VS order of unaccusative clauses like (3) clearly indicates that the EPP is not always active in this language. Recall from Section 1 that (as expected in a discourse-configurational language) unaccusative clauses alternate between the VS and the SV order. The SV order is of course compatible with our conclusion that the EPP is active in Spanish. Consequently, it would be attractive to investigate whether the SV order is not the unmarked word order for these clauses; the VS order could then be taken to be a derived order, resulting from pragmatic considerations such as focussing. However, there is evidence that indicates that VS is the unmarked word order, and that the SV order occurs only when the subject has the pragmatic properties of a sentence topic. In this latter case, the subject is fronted into the Pole position, just like any other sentence topic.

The evidence is as follows. First, native speakers have solid intuitions that VS is the unmarked order, and so it is not surprising that it has been widely reported as such in the literature on word order in Spanish (see specially Bordelois 1974, Contreras 1976 and Fant 1984). In contrast, all the speakers consulted find the SV order robustly infelicitous in a sentence-focus context like *'what happened?'*

(37) Qué pasó?

what happened?

a. Llegó tu hermano.

arrived your brother

‘Your brother arrived.’

b. #Tu hermano llegó.

your brother arrived

Secondly, as first noted in Fant (1984), when the unaccusative subject has an instantiation in the previous discourse, it must appear in the preverbal position. An example is presented in (38), where it can be seen that the unmarked word order VS is infelicitous in this context. This points to the conclusion that the SV order is an instance of subject topicalization.

(38) A: Estábamos esperando a que [llegara *tu hermano*] para ir a la fiesta

pero no vamos a poder ir.

‘We were waiting for [*your brother* to arrive] so that we could go to the party, but we’re not going to be able to go.’

B: Por qué?

‘Why?’

A: a) Porque [tu hermano llegó], pero no trajo el coche. **S V**

because your brother arrived but not brought the car

‘Because your brother arrived, but he didn’t bring the car with him.’

b) #Porque [llegó tu hermano], pero no trajo el coche. **V S**

because arrived your brother but not brought the car

Lastly, recall that fronted topics create islands for long *wh*-extraction. For some reason that remains to be investigated unaccusative subjects functioning as topics do not lead to such strong island effects as those observed in (16). However, as shown in (39), such examples are still perceived as clearly deviant or strongly deviant.²⁵

(39) a. ?Cuándo_i dices [que tu hermano llegó t_i]?

when you-say that your brother arrived.

‘When did you say that your brother ARRIVED?’

b. ??Cuándo_i dices [que el calentador explotó t_i]?

when you-say that the heater exploded.

(‘When did you say that the water heater exploded?’)

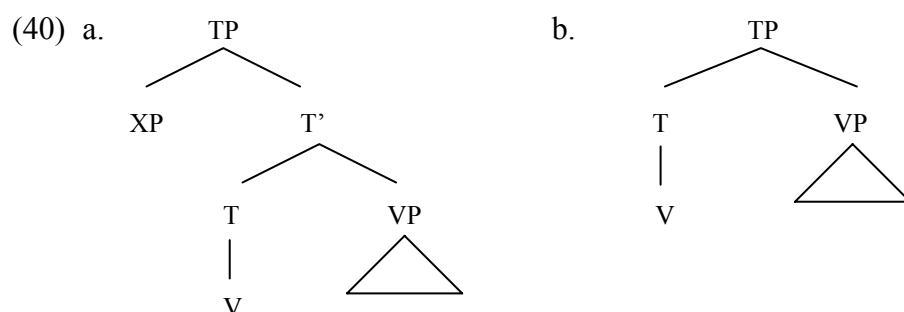
As such, the unmarked VS order of unaccusative clauses is still in need of an explanation. In addition, we still need to explain why the Pole corresponds to the indirect object and not to the subject in psych clauses like (2), since, in principle, either of these arguments could satisfy the EPP requirement. In the following section, I develop an OT analysis that addresses these issues.

²⁵ My intuition is that (39a) is only possible with a reading where the verb is a contrastive focus. Accordingly, it may be the case that (when the verb is in focus) the requirement that focus be rightmost in Spanish (Contreras 1976, Zubizarreta 1998) overrides the well-formedness condition that would otherwise make the extraction from the topic island strongly ungrammatical. Settling this matter is an important issue, but one that lies beyond the scope of this paper.

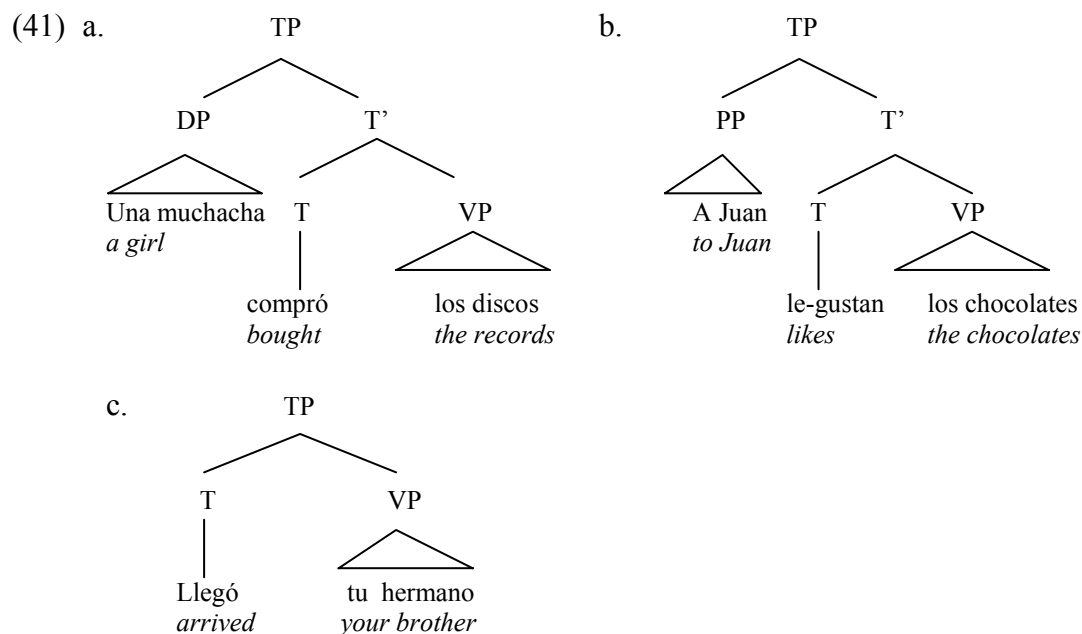
4. Prominence scales and unmarked word order

4.1 Structural markedness and the EPP

As part of the analysis of the word order facts presented in the previous section it is important to compare the status of clauses with a Pole vs. clauses that lack a Pole altogether. The relevant observation is that clauses with a Pole (i.e. (40a)) have an extra layer of structure above clauses without a Pole, and so I take the former kind of clause to be more marked than the latter with respect to their overall clause structure. Henceforth I refer to this particular type of markedness as STRUCTURAL MARKEDNESS.



The EPP, which requires clauses to have a Pole, is thus in conflict with whatever constraints militate against structural markedness. This is because the EPP favors the more marked structure in (40a), whereas the structural markedness constraints favor the less marked structure in (40b). My interpretation of the different word orders displayed by different classes of verbs in Spanish is that this conflict is resolved in favor of the EPP in transitive and psych clauses (as in (41a-b)), but in favor of structural markedness in unaccusative clauses (as in (41c)).



However, I do not claim that the contrast in (41) is a binary one, based solely on structural markedness. Rather, I propose that clauses with different constituents in the Pole position have different degrees of markedness, depending on the semantic role of the XP which functions as the Pole. In other words, clauses with a Pole are more marked than clauses without a Pole, but clauses with a Pole can still display different degrees of markedness when compared to one another. The evidence presented below indicates that the degree of markedness of clauses with a Pole runs along the version of the Thematic Hierarchy in (42):²⁶

(42) AGENT > EXPERIENCER > THEME > LOCATION > MANNER/TIME > REASON

Following this hierarchy, a Pole that bears the AGENT semantic role constitutes the least marked instance of a Pole. An EXPERIENCER constitutes the next least marked instance of a Pole, and so

²⁶ The Thematic Hierarchy in (42) builds on the versions proposed in Larson (1988), Speas (1990), and Baković (1998).

on, until we reach XPs with a REASON semantic role, which constitute the most marked Poles. Once again, the analogy with syllabic phonology is illustrative. Although different kinds of segments can occupy the onset position of the syllable, stops in onset position are less marked than glides.

My analysis of the word order facts of Spanish proposes that, all else being equal, clauses with AGENT or EXPERIENCER Poles have a degree of structural markedness that is not enough to warrant a violation of the EPP. In these cases, the EPP overrides structural markedness. However, in clauses with a Pole that is a THEME or lower, the degree of structural markedness is high enough that it is preferable to violate the EPP, resulting in verb-initial structures like (41c). In such cases, structural markedness overrides the EPP. In the following subsection I argue that Optimality Theory provides a straightforward account of the conflict between structural markedness and the EPP, and the way in which it relates to the relative markedness of the different kinds of arguments when they occupy the Pole position.

4.2 An OT analysis

Optimality Theory (Prince and Smolensky 2004), where the grammar of a language is a ranking of violable constraints, provides an ideal set of theoretical tools for accounting for the way in which the conflict between the EPP and structural markedness is resolved in Spanish. First, recall that the discussion so far points to the conclusion that the EPP is not an all-or-nothing requirement in Spanish. This receives a straightforward explanation in an OT analysis where the EPP, as defined in (34), is a violable constraint. Secondly, the mechanisms exist in OT with which we can formalize the special structural status of the Pole and the sensitivity of the Pole position to the semantic role of the XP that occupies it.

The special structural status of the Pole position appears to be related to its prominence in clause structure. Observe that (all else being equal) the Pole may be viewed as the most prominent constituent of the clause, in that it asymmetrically c-commands every other constituent in the clause. This can be represented by the structural prominence scale in (43) (see Prince and Smolensky 2004).

(43) Pole > Non-Pole²⁷

Next, the relation between the Pole position and the scale of semantic roles in (42) can be formalized by Harmonic Alignment (Prince and Smolensky 2004), which has been applied in the domain of syntax in Aissen (1999a, 2003). Harmonic Alignment is the alignment of two scales that derives a complex pair of relative well-formedness scales (i.e. harmony scales in OT terminology), which in turn can be translated into a pair of subhierarchies of markedness constraints. The scale (43) corresponds to the structural binary scale and the Thematic Hierarchy in (42) corresponds to the second scale. Harmonic alignment of these two scales yields the Harmony scales in (44), which in turn translate into the subhierarchies of markedness constraints in (45).

²⁷ “Non-Pole” is a term that encapsulates every specifier and complement position in the lexical layer (VP or a VP shell). The constraints in (45b) which target these VP internal positions do not play a role in the analysis of the facts that follow. See Gutiérrez-Bravo (2002a) for discussion of these constraints.

- (44) a. Pole/Agent \succ Pole/Experiencer \succ Pole/Theme \succ Pole/Location
 \succ Pole/Manner-Time \succ Pole/Reason.
- b. Non-Pole/Reason \succ Non-Pole/Manner-Time \succ Non-Pole/Location
 \succ Non-Pole/Theme \succ Non-Pole/Experiencer \succ Non-Pole/Agent
- (45) a. *Pole/Reason \gg *Pole/Manner-Time \gg *Pole/Location \gg *Pole/Theme \gg
 *Pole/Experiencer \gg *Pole/Agent
- b. *Non-Pole/Agent \gg *Non-Pole/Experiencer \gg *Non-Pole/Theme \gg
 *Non-Pole/Location \gg *Non-Pole/Manner-Time \gg *Non-Pole/Reason

The harmony scale in (44a) expresses the fact that the least marked instance of a Pole corresponds to an AGENT, whereas a Pole filled by a REASON adverb corresponds to the most marked instance. Inversely, the harmony scale in (44b) expresses the fact that a VP-internal AGENT corresponds to the most marked instance of a VP-internal argument or adjunct, whereas a REASON adverb corresponds to the least marked instance of a VP-internal argument or adjunct. These harmony scales are in turn translated into the hierarchies of markedness constraints in (45).

The constraints in the hierarchy in (45a) target the relative markedness of a constituent with the specified semantic role when it appears as the Pole of the clause. In other words, *Pole/Agent is violated when the Pole is an AGENT, *Pole/Experiencer is violated when the Pole is an EXPERIENCER, etc. The most severe violation is incurred when the Pole is a REASON expression, whereas the least severe violation is incurred in when an AGENT functions as the Pole. Henceforth I refer to this hierarchy as the Pole Hierarchy. It is this hierarchy that will crucially be used to provide an analysis of unmarked word order in Spanish. I also assume that adjoined positions are

never targeted by the constraints in either of the hierarchies in (45), although this assumption plays no role in the analysis that follows.

Observe now that the hierarchy of constraints not only captures the intuition that clauses with different kinds of constituents in the Pole have different degrees of markedness, it does so without making reference to the subject grammatical relation. As discussed in Section 1, this is a fundamental characteristic that must be taken into account in any account of word order in Spanish. Now that we have developed the necessary technical infrastructure, the unmarked word order facts can be accounted by embedding the EPP in the hierarchy in (45a), as in (46).

(46) *Pole/Reason » *Pole/Manner-Time » *Pole/Location » *Pole/Theme » EPP »
 *Pole/Experiencer » *Pole/Agent

We now need just one more constraint to complete the analysis. Most varieties of Spanish do not allow expletive insertion to satisfy the EPP. Following the analyses in Grimshaw (1997) and Grimshaw and Samek-Lodovici (1998), it is thus reasonable to assume that the FULL-INTERPRETATION constraint in (47), which penalizes the presence of expletives in the output representation, outranks the EPP. For illustration, in the analysis that follows I take FULL-INTERPRETATION to be undominated in Mexican Spanish. I discuss more elaborate interactions between FULL-INTERPRETATION and the constraints in the Pole Hierarchy in the final section of this paper.

(47) FULL-INTERPRETATION

Parse lexical conceptual structure.

(Grimshaw 1997)

For the purposes of this paper we can take FULL-INTERPRETATION to be violated any time there is an element in the output representation that does not have a corresponding element in the input (see Grimshaw 1997 for a full definition). This is typically the case of expletives and dummy auxiliaries or light verbs, which make no contribution to the semantics of the constructions they appear in.

Consider now how the ranking in (46) derives the different word orders of transitive, psych and unaccusative clauses. The first case corresponds to an SVO transitive construction.

(48) Transitive clauses

Una muchacha compró los discos. **SVO**

a girl bought the records

‘A girl bought the records.’

(49) INPUT: <buy (x, y), x=a girl (Ag), y=the records (Th)>

	FULL-INT	*Pole/Theme	EPP	*Pole/Agent
☞ a. [TP una muchacha compró [VP los discos]] SVO				*
b. [TP compró [VP una muchacha los discos]] VSO			*!	
c. [TP los discos los compró [VP una muchacha]] OVS		*!		
d. [TP <i>exp</i> compró [VP una muchacha los discos]]	*!			

In the analysis of (48) in tableau (49) and the tableaux that follow, I assume that the input consists of a predicate-argument structure with no syntactic representation (Grimshaw 1997). This input is mapped into a number of candidates that are generated in accordance with X-Bar theory, but which display different word orders by virtue of different movement operations, or by

the absence of movement operations altogether.²⁸ As is standard in analyses of Spanish, I further assume that V-to-T movement is obligatory, and results from an undominated constraint related to the morphology of the verb.

Consider now the different losing candidates in (49). The VSO candidate (49b), akin to the strongly degraded examples in (15), leaves the Pole position empty. It consequently loses to the SVO candidate (49a) because of its violation of the EPP constraint. Candidate (49c) satisfies EPP because the direct object occupies [Spec, T], the Pole position. However, by doing so it incurs in a fatal violation of *Pole/Theme, since the semantic role of the constituent functioning as the Pole corresponds in this case to a THEME. Finally, candidate (49d) avoids a violation of the EPP by insertion of an expletive (*exp*),²⁹ but loses because of its violation of undominated FULL-INTERPRETATION, as previously discussed. Candidate (49a), which incurs only a violation of the low-ranked markedness constraint *Pole/Agent, thus emerges as the winner.

Now in cases such as (50), with psych predicates, the ranking in (46) ensures that the IO will emerge in the preverbal position. This is because the Pole Hierarchy in (45a) favors an

²⁸ Following Grimshaw (1997) I also assume that arguments that move outside the lexical projection of their predicate (VP in this case) must form a chain with a trace inside this lexical projection. This results in a violation of the STAY constraint, which penalizes the presence of traces in the output representation. However, the presence of traces left by the constituent that moves to [Spec, T] and the corresponding violations of STAY do not have any effect on the analysis that follows, and so for clarity they are omitted from the tableaux.

²⁹ In this tableau and the tableaux that follow, *exp* stands for an overt expletive. In those varieties of Spanish that do have overt expletives, the form of the expletive is *ello*, homophonous with the demonstrative pronoun *ello* ‘that’. Thus, candidate (49a) would perhaps be more accurately represented as *ello compró una muchacha los discos* (‘there bought a girl the records’), robustly ungrammatical in the variety of Spanish considered here. For the sake of clarity I resort to the notation *exp* throughout.

EXPERIENCER Pole over a THEME Pole. This is independent of the specific grammatical relations of the arguments involved.

(50) Psych clauses

A Juan le gustan los chocolates. **IO V S**

to Juan CL-DAT *like-3PL* *the chocolates*

‘Juan likes chocolates.’

The analysis is presented in tableau (51). Just as in the case of (49), the candidate that leaves the Pole position empty, candidate (51b), loses because of its violation of EPP, while (51d) loses because of its violation of undominated FULL-INTERPRETATION. The crucial comparison now is between the losing S-V-IO candidate (51a) and the winning IO-V-S candidate (51c). In contrast with what is observed in tableau (49), the subject-initial candidate (51a) now incurs a violation of the high-ranked *Pole/Theme constraint, because in this case the subject is a THEME, and not an AGENT. This violation proves fatal when candidate (51a) is compared with candidate (51c), which instead violates the lower-ranked *Pole/Experiencer constraint by virtue of making the EXPERIENCER IO the Pole of the clause. The IO-V-S candidate (51c) thus emerges as the winner in this case.

(51) INPUT: <like (x, y), x=chocolates (Th), y=Juan (Ex) >

	FULL-INT	*Pole/Theme	EPP	*Pole/Exper
a. [TP los chocolates le gustan [VP a Juan]] S V IO		*!		
b. [TP le gustan [VP los chocolates a Juan]] V IO S			*!	
☞ c. [TP a Juan le gustan [VP los chocolates]] IO V S				*
d. [TP <i>exp</i> le gustan [VP los chocolates a Juan]]	*!			

Observe that by adopting the notion of the Pole as a position unrelated to subjecthood we achieve this correct result, in contrast with analyses that rely on the subject grammatical relation (i.e., 9, 12, and 14). Further note that the analysis in (51) is not equivalent to an analysis where the relevant constraints target instead the subject grammatical relation (e.g. *Subject/Theme and *Subject/Experiencer). This is because in all of the candidates in (51) the THEME argument is mapped into the subject relation (and hence it is realized as the nominative argument that agrees with the verb). Consequently, all the candidates in (51) would violate a *Subject/Theme constraint. Such an account would not distinguish between these candidates in the way that *Pole/Theme does in my analysis.

Lastly, consider VS unaccusative constructions like (52).

(52) Unaccusative clauses

Llegó tu hermano.

VS

arrived your brother

‘Your brother arrived.’

What is crucial in this case is that under the ranking in (46), it is better to leave the Pole position empty than to have a THEME occupy it. As previously discussed, this is because the degree of markedness of a clause with a THEME as the Pole is higher than the degree of markedness of a clause that lacks a Pole altogether. Consequently, as opposed to the previous two cases, a verb-initial construction, candidate (b) in tableau (53) below, emerges as the output. Again, the candidate that inserts an expletive to satisfy the EPP loses because of its violation of FULL-INTERPRETATION.

(53) INPUT: <arrive (x), x=your brother (Th)>

		FULL-INT	*Pole/Theme	EPP
a.	[_{TP} tu hermano llegó [_{VP}]]	SV	*!	
☞ b.	[_{TP} llegó [_{VP} tu hermano]]	VS		*
c.	[_{TP} <i>exp</i> llegó [_{VP} tu hermano]]	exp-VS	*!	

The analysis illustrated in (48-53) represents the core of my proposal. There are two crucial aspects of this account. First, by introducing the notion of Pole as (a) the unique position in the clause where the EPP is satisfied, and (b) a position sensitive to the semantic role of the XP that occupies it, it is possible to account for Spanish word order without invoking specific grammatical relations. Secondly, by embedding the EPP constraint in the hierarchy in (46) we account for why the preverbal position needs to be occupied in some cases but not in others; this result cannot be achieved in analyses where satisfaction of the EPP is an all-or-nothing requirement.

The markedness constraints in the Pole Hierarchy are also violable constraints. This is important when we consider topicalization, where (as discussed in Section 2.2) an XP that bears the THEME semantic role can occupy [Spec, T] and function as the Pole of the clause. In these instances, the fronted THEME corresponds to a topic, as in (54a-b). This can be taken to be the result of a ranking where the constraint that requires topics to be fronted to a left-peripheral position (the TOPICFIRST constraint of Costa 1998, 2001) outranks *Pole/Theme. I return to this issue in Section 5. Something similar occurs when AGENT subjects in focus occupy the clause-final position, leaving [Spec, T] empty, as in (54c). In this case, the requirement that constituents in focus appear in a clause-final position in order to be signaled with the nuclear stress of the

clause (Contreras 1976, Zubizarreta 1998) outranks the EPP constraint. As a result, the optimal structure is a VS clause with an empty preverbal position.³⁰ The full analysis of topicalization and focusing in these cases is developed in Gutiérrez-Bravo (2002a), to which I refer the reader for detailed discussion.

- (54) a. [TP [Los discos]_{TOP} los compró una muchacha]. **OVS**
 the records ACC-CL *bought a girl*
 ‘The records, a girl bought them.’
- b. [TP [Tu hermano]_{TOP} llegó]. **SV**
 your brother arrived
 ‘Your brother arrived.’
- c. Lo compró Juan. **VS**
 ACC-CL *bought Juan*
 ‘JUAN bought it.’

One objection to the proposal developed here might be that it is not clear to what extent the ranking in (46) is more than a restatement of the facts, namely that AGENTS and EXPERIENCERS occupy the preverbal position in the unmarked case in Spanish, whereas THEMES do not. In reply to this objection, two things should be noted. The first one is that, like any other OT analysis, the analysis developed so far brings with it a number of predictions that result from different rankings of the constraints proposed here (these typological predictions are discussed in Section

³⁰ In this respect, my proposal is entirely compatible with previous OT analyses of focus-driven subject inversion, such as Samek-Lodovici (1996), Costa (1998), and Grimshaw and Samek-Lodovici (1998).

6). Since predictions result from formalized analyses but not from descriptions, there is a clear difference between the explicit and predictive constraint ranking in (46) and a mere descriptive statement. The second reply to this objection is that the alternative generalization (that AGENTS and EXPERIENCERS occupy the preverbal position in the unmarked case, whereas THEMES do not) is actually incorrect. In Spanish, EXPERIENCERS do not always occupy the preverbal position in the unmarked case. Rather, as discussed in the following section, they only do so in the absence of an AGENT. This is predicted by my analysis, where the least marked structure that projects a Pole is the one where an AGENT occupies this position. Once again, since the analysis makes this correct prediction, the ranking in (46) rises above a mere descriptive restatement of the facts.

5. Other Cases of Psych Verbs

In this section I consider data which are related to this proposal, and which I argue provide further support for the analysis developed above. The data correspond to classes of psych verbs different from those analyzed in the previous section.

Spanish has different classes of psych predicates, roughly along the lines of those described for Italian in Belletti and Rizzi (1988). The verb *gustar* ‘like’, analyzed above, belongs to a class which is essentially equivalent to the *piacere* ‘please’ class of Belletti and Rizzi (1988). In a second class of Spanish psych verbs (roughly equivalent to the *temere* class of Belletti and Rizzi 1988), the EXPERIENCER is realized as the nominative subject and the THEME as an accusative argument. An example with the verb *amar* ‘love’ is provided in (55).³¹

³¹ Other verbs in this class include *conocer* ‘know’, *admirar* ‘admire’, *odiar* ‘hate’, *despreciar* ‘loathe/despise’, etc.

(55) UNMARKED WORD ORDER

Juan ama a María.

S V O

Juan loves ACC *María*

<EXP> <THEME>

‘Juan loves María.’

Observe that the unmarked word order facts for this class of verbs are the ones predicted by my analysis. In terms of semantic roles, these predicates are just like *gustar* ‘like’, and so we expect them to show the same word order behavior. Concretely, in both cases the EXPERIENCER occupies the preverbal position, irrespective of whether it corresponds to a dative IO (50-51) or to the nominative subject, as in (55).

A third class of psych verbs warrants a closer inspection. Belletti and Rizzi (1988) discuss the Italian *preoccupare* ‘worry’ class. In clauses with this class of verbs, the EXPERIENCER is realized as an accusative object and the nominative subject occupies the preverbal position.

(56) ITALIAN (Belletti and Rizzi 1988:291)

Questo preoccupa Gianni.

S V O

this worries Gianni

However, most of the Italian verbs in this class considered by Belletti and Rizzi (1988) actually participate in the *gustar* pattern of Spanish, as shown in (57).

(57) A Juan le preocupan sus hijos.

IO V S

to Juan DAT-CL *worry-3P* *his children*

<EXP> <THEME>

‘Juan is worried about his children.’

Spanish does have some psych verbs with which the EXPERIENCER is realized as an accusative object in the post-verbal field and where the nominative subject appears in the preverbal position. Verbs of this kind include *atemorizar* ‘terrorize’ and *intimidar* ‘intimidate’:

(58) a. Juan atemoriza a sus hermanos. **S VO**

Juan terrorizes ACC his siblings

‘Juan terrorizes his siblings.’

b. El gobierno intimida a los activistas.

the government intimidates ACC the activists

‘The government intimidates the activists.’

My claim is that the word order observed in these cases is due to the fact that the subject is not really a THEME, but rather is closer in its thematic properties to an AGENT (see also Pesetsky 1995).³² The broad semantic role labels we have been using so far are not enough to clarify the state of affairs in (58). However, Dowty (1991) proposes a finer distinction in terms of ProtoRole entailments, which sheds light on this issue. The subjects in (58) are perhaps not equivalent to transitive AGENTS, but these verbs do necessarily entail their ‘volitional involvement in the event or state’, which is one of the entailments associated with the Agent Proto-Role in Dowty’s analysis.³³ This is in contrast with what is observed with respect to the

³² Belletti and Rizzi (1988) note that some verbs of the *preoccupare* class can have an interpretation where one of the arguments functions as an AGENT.

³³ In this respect, it is relevant that Spanish *intimidar* in (58b) is not exactly equivalent to English ‘to intimidate’, since the former necessarily implies that purposeful actions are taken to bring about the intimidation. Accordingly,

object in (55) and to the subject in (57), where the psych verbs do not entail the *volitionality* of these arguments. The crucial observation is that the subjects in (58) already carry two of Dowty's five possible Proto-Agent entailments, 'causing an event or change of state in another participant' and 'existing independently of the event named by the verb'. Apparently, the additional volitionality entailment of the verbs in (58) is enough for their subjects to qualify as agents. If this analysis is correct, the SVO order of (58) is thus consistent with my proposal.³⁴

Spanish has an additional class of psych verbs that provides support for this particular analysis. As noted in Treviño (1992), verbs like *molestar* 'bother', *alterar* 'get on one's nerves', *conmover* 'be moved by', *asustar* 'frighten', etc., show an alternation where the EXPERIENCER is realized as either an accusative DO or a dative IO. Crucially, this alternation is correlated with an alternation in unmarked word order, a fact that to the best of my knowledge has previously gone unnoticed in the literature. Both alternations are shown in the examples in (59).

(59) UNMARKED WORD ORDER

- a. Los niños molestan a Juan. S V O
the children bother ACC Juan
 'The children bother Juan.'

(58b) cannot mean that the activists are intimidated simply because of the presence or the amount of power of the government.

³⁴ An anonymous reviewer asks whether it is not problematic to introduce Dowty's proposal in this way as part of the analysis. Specifically, the reviewer points that if the subject of an unaccusative verb like *llegar* 'arrive' is an animate, volitional entity, then it is no longer obvious that this subject is not an AGENT. However, it should be noted that Dowty's Proto-Agent entailments refer exclusively to the semantic properties of predicates, and not to the semantic properties of their arguments. In this respect, *llegar* does not entail a volitional subject (cf. *llegó la primavera*, 'Spring arrived') and so this does not represent a problem for my analysis.

b. A Juan le molestan los niños.³⁵ IO V S

to Juan DAT-CL bother the children

‘(The) children bother Juan.’

Ackerman and Moore (1999, 2001) develop an analysis of the alternation of the grammatical function of the EXPERIENCER in Spanish verbs like (59). They propose that this alternation results from the Paradigmatic Argument Selection Principle (PASP), a well-formedness condition on the lexicon that builds on Dowty’s (1991) proposal. In essence, the PASP establishes that given two related predicates (say, *molestar* in (59a) and *molestar’* in (59b)), the internal argument of the predicate with the most Proto-Patient entailments will be realized as a DO whereas the internal argument of the other predicate will display a more oblique grammatical function. Following the diagnostics in Treviño (1992), Ackerman and Moore show that the verb in (59a) has the ‘change of state entailment’, but the verb in (59b) does not. Hence the EXPERIENCER in (59a) surfaces as a DO, whereas the EXPERIENCER in (59b) surfaces in the more oblique grammatical function of IO, in accordance with the PASP.

The conclusions in Ackerman and Moore (1999, 2001) seem well motivated and will not be contested here. However, it seems to me that the Proto-Agent entailments of the verbs in (59) are also different, and that this difference explains the observed word order alternation. The relevant observation here is that the meaning of these two examples is not the same. Example (59a) means that the children are intentionally engaged in doing things with the purpose of bothering Juan. In contrast, (59b) means that Juan finds the children bothersome, i.e., he is irritated by their mere

³⁵ In some of the so-called *leista* dialects of Spanish, human direct objects can be doubled by the clitic *le* instead of the accusative clitic *lo*. Mexican Spanish is not one of these dialects, so it is certain that the EXPERIENCER in (59b) is

presence or by the normal things that children usually do. My suggestion then is that the verb in (59a) has the volitionality entailment, which in turn the subject of (59b) lacks. The subject in (58a) thus qualifies as an AGENT and so it occupies the preverbal position. In contrast, the subject of (59b) can be considered to be a THEME and so it appears in the post-verbal field in the unmarked case, as predicted by my analysis.³⁶

Two independent facts support this conclusion. Analyzing data from Polish PRODUCTIVE INVERSION, Ackerman and Moore (2001) show that the external argument of verbs with the volitionality entailment are compatible with adverbials that entail volitionality, whereas verbs that lack this entailment are not. This same behavior is observed with the Spanish verbs in (59). Whereas (59a) is compatible with certain adverbs like *a propósito* ‘on purpose’, (59b) (with a subject-oriented reading) is not.

(60) a. Los niños molestan a Juan a propósito.

the children bother ACC Juan to purpose

‘The children bother Juan on purpose.’

a dative indirect object, and not a clitic left-dislocated human direct object.

³⁶ The theory developed in Ackerman and Moore (1999, 2001) and their complete definition of the PASP predicts that differences in the Proto-Agent entailments of paradigmatically related predicates should indeed exist. Ackerman and Moore (2001) show that this is observed in PRODUCTIVE INVERSION constructions in Polish, where there is a class of verbs whose external argument can be realized either as a nominative subject or as a dative IO. Ackerman and Moore show that this alternation depends in part on whether the verb has the volitionality entailment or not. The alternation observed in (59) can be thought of as being similar to the Polish data in Ackerman and Moore (2001).

- b. ??A Juan le molestan los niños a propósito.

to Juan DAT-CL *bother* *the children* *to purpose*

(The children irritate Juan on purpose.)

Secondly, Ackerman and Moore show that the external arguments of the Polish verbs in their study can control into purpose clauses only if the verb has the volitionality entailment. Once again, this same behavior is observed in the Spanish data. As shown in (61), the subject of the verb with an accusative EXPERIENCER can control into a purpose clause, but the subject of the verb with a dative EXPERIENCER cannot.

- (61) a. Los niños molestan a Juan [para PRO hacerlo llorar].

the children bother ACC *Juan* *for* *to-make-him* *cry*

‘The children bother Juan in order to make him cry.’

- b. *A Juan le molestan los niños [para PRO hacerlo llorar].

to Juan DAT-CL *bother* *the children* *for* *to-make-him* *cry*

(The children irritate Juan in order to make him cry.)

Summarizing, the other classes of psych verbs in Spanish provide further evidence that unmarked word order is regulated by the thematic roles of the arguments of a verb and not by the subject grammatical relation. The observed semantic contrasts are subtle enough that it is not immediately obvious how to capture them with atomic semantic role labels like AGENT and

The difference is that while the different Proto-Agent entailments in Polish result in an alternation of grammatical function, the different Proto-Agent entailments in Spanish result in an alternation of the unmarked word order.

THEME. However, once more nuanced analytical tools like those of Dowty (1991) and Ackerman and Moore (2001) are introduced into the analysis, the evidence points to the conclusion that the Pole in Spanish in the unmarked case does correspond to the argument of the verb that ranks higher in the Thematic Hierarchy.

6. Some typological predictions

In this final section I discuss some typological predictions that are derived from the analysis developed here. Many of these predictions are similar to those that result from the subject-oriented analyses of word order in Samek-Lodovici (1996), Costa (1998, 2001) and Grimshaw and Samek-Lodovici (1998), with the added advantage that further distinctions can be made with respect to the semantic roles of the arguments of the verb, as will be discussed in what follows.

Consider first VSO languages like Irish (McCloskey 1997, 2001). Irish is a strict VSO language where no constituent moves into the highest inflectional specifier in the unmarked case:

(62) Thóg sí teach dófa ar an Mhullach Dubh.

raised she house for-them on the

‘She built a house for them in Mullaghduff.’

(McCloskey 2001: 161)

In the present analysis, the word order of Irish results from the ranking where all of the constraints in the Pole Hierarchy outrank the EPP constraint (i.e. *Pole/Reason »... » *Pole/Agent » EPP), a ranking that would also derive the varieties of Peninsular Spanish reported to have VSO as their unmarked word order (Costa 1998, 2001). Under this ranking, any candidate that moves an argument or adjunct to the highest inflectional specifier (irrespective of its semantic role) loses to the verb-initial candidate that leaves the highest inflectional specifier empty,

violating the EPP. Observe that this analysis is consistent with McCloskey's arguments that the subject in Irish does move to a position in the inflectional layer below TP where subjects have their nominative Case licensed. Since the Pole is defined as the highest inflectional specifier, movement of the subject in Irish to a specifier position below TP does not bring with it any violations of the constraints in the Pole Hierarchy. Irish can thus be analyzed as a language where clauses do not have a Pole in the unmarked case. In my analysis, this does not entail the absence of other positions in the inflectional layer that license properties typically associated with subjects (e.g. nominative Case). Finally, the fact that Irish and similar VSO languages display no expletive insertion results from a ranking where FULL-INTERPRETATION outranks EPP.

Consider now a language where the whole of the Pole Hierarchy outranks the EPP, as in Irish, but where EPP in turn outranks FULL-INTERPRETATION. This results in a VSO language with expletives in the highest inflectional specifier. It may be that some varieties of Arabic show this pattern (Huybregts 1996, cited in Alexiadou and Anagnostopoulou 1999:104):

(63) *inna-hu fatah-a l-'awlaad-u l-baab-a* (Huybregts 1996)
that-CL PERF.open-3SG.M the boys the door

The gist of the proposal in Huybregts (1996) seems to be to analyze Arabic *inna*, traditionally taken to be a matrix complementizer, as an expletive element.³⁷ Although further research is required to demonstrate if this is indeed a viable proposal, I take (63) to simply be a potential instantiation of the kind of language predicted by my analysis.

³⁷ Many thanks to Anders Holmberg for clarification on this point and discussion of this issue.

Next, consider the effects of having the EPP constraint dominate FULL-INTERPRETATION and embedding them both in the Pole Hierarchy.³⁸ This results in a number of possible languages where expletives are inserted in [Spec, T] to satisfy the EPP in some cases but not in others, depending on the semantic roles of the arguments involved. For instance, the ranking in (64) corresponds to a language that inserts expletives in [Spec, T] when the only argument of a verb is a THEME (because *Pole/Theme » FULL-INTERPRETATION), but not when one of the arguments of the verb is an AGENT (or an EXPERIENCER). This is because in any ranking where FULL-INTERPRETATION dominates *Pole/Agent, the candidate that moves the AGENT to [Spec, T] to satisfy the EPP will beat the candidate that instead inserts an expletive in this position.

(64) ... *Pole/Theme » EPP » FULL-INTERPRETATION » *Pole/Experiencer » *Pole/Agent

Dominican Spanish instantiates this kind of language. Perhaps unique among contemporary Spanish dialects, Dominican Spanish exhibits overt expletives (Toribio 1994, 2000, and references therein).³⁹ Some examples are shown in (65), where it can be seen that the expletive *ello* is homophonous with the demonstrative *ello* ‘that’.

(65) a. Ello llegan guaguas hasta allá.

expl arrive-3PL buses until there

‘Buses reach there.’

³⁸ The same kinds of languages result from having an undominated EPP and embedding FULL-INTER by itself in the Pole Hierarchy.

³⁹ Henríquez-Ureña (1939: 222), however, reports that expletive insertion was also observed in some Peninsular Spanish texts from the 16th through 19th centuries.

b. Ello hay muchos mangos este año.

expl be-3PL many mangoes this year

‘There are many mangoes this year’

(Toribio 1994: 422)

Observe that Dominican Spanish does not allow expletive insertion in transitive clauses, as shown in (66).

(66) a. Ramón compró un chivo.

Ramón bought a goat

‘Ramón bought a goat.’

b. *Ello compró Ramón un chivo

expl bought Ramón a goat

(Toribio 2000)

In the analysis developed here no extra machinery is required to account for the fact that some languages allow transitive clauses with expletives (i.e. Icelandic, Arabic under the analysis in (63)) whereas others do not (Dominican Spanish). This follows directly from the ranking of FULL-INTER relative to *Pole/Agent (*Pole/Agent »...» FULL-INTER in Arabic, FULL-INTER »...» *Pole/Agent in Dominican Spanish). Furthermore, the analysis predicts that there should be no language that allows expletive constructions with transitive verbs but not with unaccusative verbs, a prediction that appears to be correct. Such a language can only be derived by the ranking EPP » *Pole/Agent »...» FULL-INTER »...» *Pole/Theme. However, Harmonic Alignment does not allow for a hierarchy of constraints where *Pole/Agent outranks *Pole/Theme, because AGENT is more prominent than THEME in the Thematic Hierarchy.

This proposal is also consistent with what is observed in languages where [Spec, T] strongly correlates with the subject grammatical relation, such as English and French. A possible interpretation of this fact is that in languages like English and French, most of the effects that result from the Pole Hierarchy are masked by the high ranking of the constraint that requires the nominative argument to be assigned Case in [Spec, T]. However, they will still be observed in some other parts of the syntax of these languages, such as semantic role restrictions on *there*-existential clauses. Future research should indicate if some of the differences between Spanish, on the one hand, and French and English, on the other, are best accounted for in this way.

Now observe that in contrast with a parametric account, this OT analysis derives the existence of expletives in Dominican Spanish without involving other properties previously associated with the Null-Subject Parameter. The observed facts result exclusively from a ranking where EPP outranks FULL-INTERPRETATION. Following Grimshaw and Samek-Lodovici (1998), other properties of *pro*-drop languages could still be attested, depending on the relative ranking of other constraints. Concretely, the existence of null subjects would still result as long as the DROPTOPIC constraint of Grimshaw and Samek-Lodovici (which requires discourse-old referents to be dropped) outranks EPP. Similarly, free subject inversion would still be observed if EPP is outranked by the constraint that requires constituents in focus to be rightmost (Costa 1998, 2001, Grimshaw and Samek-Lodovici 1998, Gutiérrez-Bravo 2002a,b). In other words, the OT architecture adopted here predicts that overt expletive insertion, *pro*-drop, and free subject inversion should pattern independently. Dominican Spanish provides evidence that this prediction is correct, since it still displays null subjects, subject-verb inversion and other characteristics typical of other varieties of Spanish (see Toribio 2000). This, however, does not imply that crosslinguistic syntactic variation is random. As in any OT analysis, the different rankings of the relevant constraints derive a clear typology of possible languages. It just happens

that the OT typology is richer than the typology predicted by a parametric account. The facts observed in Dominican Spanish point to the conclusion that the OT typology is to be preferred.

The analysis proposed in this paper can also be extended to account for languages that differ with respect to the interaction between [Spec, T] and topicalization. I consider three different patterns here. The first pattern corresponds to English, where the subject occupies the Pole position irrespective of its semantic role and irrespective of the fronting of any sentence topic. I take sentence topics in English to be left-adjoined to TP (McCloskey 1992).

(67) [_{TP} Yesterday [_{TP} John bought the newspaper]].

The characteristics of this kind of language relevant for the analysis are: (i) the EPP is always satisfied; (ii) in most cases the EPP is satisfied by the subject, and; (iii) the language tolerates adjunction to TP in order to accommodate a fronted topic, since [Spec, T] is not an available landing site for the topic. The fact that the subject occupies the Pole position irrespective of its semantic role is derived with a ranking where the SUBJCASE constraint (4) outranks all of the constraints in the Pole Hierarchy. Accordingly, the priority is that the subject receive nominative Case in [Spec, T]. On the other hand, the fact that a sentence topic is allowed to adjoin to TP follows from any ranking where the TOPICFIRST constraint of Costa (1998, 2001) dominates the constraint that militates against adjunction, which I henceforth represent as *ADJUNCTION. A possible ranking that derives these properties is presented in (68).⁴⁰

(68) EPP » SUBJCASE » TOPICFIRST » *ADJUNCTION, *Pole/Reason »... » *Pole/Agent

⁴⁰ For an OT analysis of other properties of English, such as expletive insertion, see Grimshaw (1997).

The second pattern corresponds to Spanish. As we have seen, two central properties of Spanish are: (i) the EPP has to be satisfied in some, but not all, instances, and (ii) a fronted non-subject topic can occupy the Pole position, in which case the transitive subject stays in its VP-internal position (i.e. (54a)). On the other hand, Spanish is just like English in that a topic can be adjoined to TP when [Spec, T] is already occupied by some other constituent. This is most clearly observed in cases of multiple topicalization like (69).⁴¹

(69) [_{TP} Ayer [_{TP} el periódico lo compró [_{VP} Juan]]].

yesterday the newspaper CL bought Juan

‘Yesterday, JUAN bought the newspaper.’

The constraint hierarchy in (70) derives these properties. The ranking of SUBJCASE below the whole of the Pole Hierarchy derives the effect that any constituent can move into [Spec, T] even if this means that the subject is not assigned nominative Case in this position. The ranking of TOPICFIRST over *ADJUNCTION in turn allows for a topic to be adjoined when [Spec, T] is already occupied by some other constituent, just as in English.⁴²

(70) TOPICFIRST » *ADJUNCTION » *Pole/Reason »... » *Pole/Theme » EPP »

*Pole/Experiencer » *Pole/Agent » SUBJCASE

⁴¹ In such examples the VP-internal subject has a focus reading, but this has no relevance for the present discussion.

⁴² See Gutiérrez-Bravo (2002a) for a detailed analysis of topicalization and multiple topicalization in Spanish.

The third pattern corresponds to a certain kind of verb-second language.⁴³ A characteristic of V2 languages is that they disallow the pattern in (67) and (69), where two different XPs appear simultaneously in the preverbal field, as exemplified in (71) for German.

(71) *Auf dem Weg der Junge wird eine Katze sehen.

on the way the boy will a cat see

(On the way, the boy will see a cat).

(Santorini 1992)

Consider now the V2 languages where the verb remains in T and the XP that precedes it is in [Spec, T], such as Yiddish (Diesing 1990, Santorini 1992, Zwart 1997). In these languages, we can associate the satisfaction of the EPP to the [Spec, T] position. The EPP has to be satisfied, but it can be satisfied by the subject or by a fronted non-subject topic. Examples from Yiddish are presented in (72).

(72) a. [TP Dos yingl vet oyfn veg zen a kats].

the boy will on-the way see a cat

‘The boy will see a cat on the way.’

b. [TP Oyfn veg vet dos yingl zen a kats].

on-the way will the boy see a cat

‘On the way, the boy will see a cat.’

⁴³ I am greatly indebted to an anonymous reviewer for pointing out to me the relevance of V2 behavior to the typology that follows from my analysis.

c. *Oyfn veg [TP dos yingl vet zen a kats].

on-the way the boy will see a cat (Santorini 1992)

However, Yiddish has a property absent in both English and Spanish: once [Spec, T] is occupied by either the subject or a topic, fronting of another constituent is not tolerated, as in (72c). I take this to be a prohibition against the kind of adjunction to TP observed in (67) and (69). Thus, this language is like English in that the EPP has to be satisfied in every case, and it is like Spanish in that it can be satisfied by constituents other than the subject, but it is different from both Spanish and English in that it does not tolerate adjunction to TP once [Spec, T] is occupied. These properties are derived by the constraint hierarchy in (73). In this hierarchy, EPP is undominated (as in English), the whole of the Pole Hierarchy outranks SUBJCASE (as in Spanish), but crucially *ADJUNCTION outranks TOPICFIRST, thus preventing multiple topicalization by adjunction to TP.

(73) EPP » *ADJUNCTION » TOPICFIRST » *Pole/Reason »... » *Pole/Agent » SUBJCASE

Future research should determine if a similar analysis can be made of V2 languages where the verb moves from T to C (Schwartz and Vikner 1996).

7. Conclusions

In this paper I have developed an analysis where the unmarked word order in Spanish is determined by the semantic properties of the arguments of different classes of verbs, and not by their grammatical relation. I have argued that the relevant word order facts can be accounted for by appealing to the notion of the Pole as the constituent that occupies the highest inflectional specifier and satisfies the EPP, independently of its grammatical relation. A central point of this

analysis has been to suggest that clauses with different constituents in the Pole position have different degrees of structural markedness. With respect to this I have suggested that Harmonic Alignment as part of an Optimality-Theoretic analysis can account for when and whether the highest inflectional specifier is filled in the unmarked case. The resulting analysis allows us to dispense altogether with the notion of a subject position in the inflectional layer of the clause in Spanish, while still accounting for the cases where the subject occupies [Spec, T]. It further provides an account for the cases where the highest specifier of the extended projection is occupied by a constituent other than the subject and for the cases where it is left empty.

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