3 Markedness constraints on syntactic structure

In the preceding chapter I introduced the notion of the Pole as a relevant notion for understanding a number of phenomena in Spanish. Building on this proposal, in this chapter I relate this notion to the word order facts observed in Mexican Spanish in the unmarked case. The guiding idea I develop in this chapter is that syntactic structure in Spanish is subject to markedness considerations in a way that is not unlike the markedness considerations that govern syllable structure in prosodic phonology. I begin by suggesting that clauses with a Pole are more marked than those which lack a Pole, because of Economy of Structure. Economy of Structure is thus in direct conflict with the EPP as defined in the previous chapter, which requires clauses to have a Pole. However, I will argue that just as in prosodic phonology, markedness is not necessarily simply a contrast between a marked structure and an unmarked one. Rather, different structures can show different degrees of markedness. I will then show how Optimality Theory provides an ideal theoretical framework for analyzing this state of affairs.

The crucial idea that I develop is that there exist constraints that target the relative markedness of different constituents in the Pole position. The existence of these constraints allows us to understand why the specifier of the highest inflectional projection must be filled in some cases but not in others. I will suggest that Harmonic Alignment (Prince & Smolensky 1993, Aissen 1999a) of a structural scale with a scale of semantic roles can derive a hierarchy of appropriate markedness constraints in a straightforward way. Embedding the EPP constraint in this hierarchy of

markedness constraints then provides a direct analysis of unmarked word order in Mexican Spanish. Throughout this chapter I discuss alternative analyses (both transformational and Optimality-theoretic), showing that they cannot account for the full range of data considered here.

3.1 Unmarked word order

In characterizing the unmarked word order for different kinds of clauses in Spanish I follow the standard diagnostic that this is the order that is felicitous in a sentence-focus context, which is the word order attested in sentences that felicitously answer questions such as '*what happened?*' and '*what's been happening?*'.

Let us briefly recapitulate now why the unmarked word order data from Mexican Spanish and other varieties of this language represents a challenge for previous analyses of word order, both transformational and optimality-theoretic. Consider transitive clauses first. As first discussed in §1, transitive clauses show an SVO order in the unmarked case.[1] I also noted there that the main reason to suspect that the EPP is a crucial factor for deriving the unmarked word order is that transitive (and also psych sentences) with an empty preverbal position are extremely marked in Mexican Spanish. The relevant contrast is shown in (1) and (2).

[1] As far as I have been able to determine from the literature, this is the unmarked word order that transitive sentences show in most varieties of Spanish. Costa (1998, 2001), however, reports a variety of Peninsular Spanish where VSO can also function as the unmarked word order. I refer the reader to Gutiérrez-Bravo (2000a) for a possible analysis of such varieties.

(1) UNMARKED WORD ORDER
Juan compró el periódico.
Juan bought the newspaper
'Juan bought the newspaper.' SVO

(2) MEXICAN SPANISH
??Compró Juan el periódico. VSO
bought Juan the newspaper

As mentioned in §1, the fact that the SVO/VSO alternation is absent in Mexican Spanish represents strong counter-evidence to the proposal in Alexiadou & Anagnostopoulou (1998) that the EPP is satisfied by verb raising in null subject languages.[2] In their analysis, the unacceptability of (2) goes unaccounted for, because the verb has risen to I^0, carrying the [+D] feature that characterizes verbal agreement morphology in null subject languages, so EPP checking should have taken place successfully. More importantly, as I have been suggesting up to this point, the evidence points to the conclusion that the EPP, although clearly active in Spanish, cannot be taken to be an all-or-nothing requirement. This is because a great number of constructions *do* allow for the preverbal position to remain empty in the unmarked case. Such is the case of unaccusative sentences, pro-dropped constructions, and impersonal passives, repeated here as (3).

(3) a. Llegó tu hermano.
arrive.3s *your brother*
'Your brother arrived.'

[2] Based on a different set of data, Goodall (2001) also arrives at the conclusion that the EPP is operative in Spanish, and that accordingly Alexiadou & Anagnostopoulou's proposal cannot be entirely correct. I refer the reader to Goodall's work for specific details.

b. Compraron el periódico.
bought.3p *the newspaper*
'(They) bought the newspaper.'

c. Se vendió la casa.
CL *sell*.3s *the house*
'The house was sold.'

The examples in (3) show that it is not possible to account for the contrast between (1) and (2) by suggesting that Mexican Spanish (as opposed to other varieties of Spanish) is set to the strict parameter where the EPP has to be satisfied by XP movement, since in (3) there is no pre-verbal XP that could potentially satisfy this requirement. I also pointed out in §1 that any analysis of this data needs to be compatible with the fact that Mexican Spanish still displays all the characteristics of languages in which the EPP is satisfied through verb raising in Alexiadou & Anagnostopoulou's analysis, namely, null subjects, lack of expletives, and lack of definiteness restrictions on post-verbal subjects. These are the crucial observations that motivate an OT analysis of the contrasts in (1-3).[3]

Consider now OT analyses of word order. The two best-known analyses of word order in OT-GB are the ones developed in Grimshaw (1997) and Grimshaw & Samek-Lodovici (1998), and the one developed in Costa (1998, 2001). In essence, these analyses have in common the standard GB proposal that fronting of the subject

[3] Although non-OT analyses could be developed to account for these facts, it seems to me that any such analyses would need to resort to either null expletives or to the existence of a "default topic". I will consider the former alternative later in this chapter, where I argue that it is conceptually and empirically undesirable when compared with the OT analysis I propose. I will present evidence against the latter alternative as part of the analysis of topicalization in the following chapter.

in SVO sentences is the result of a well-formedness condition that the subject can only satisfy in the preverbal field.[4] Costa's analysis is arguably the most influential analysis of word order typology in OT, so I begin the discussion by reviewing it. This analysis relies on the idea that fronting of the subject in the unmarked case in SVO languages is directly related to Case theory, such that it satisfies the following constraint (Costa 1998, 2001).

(4) SUBJCASE
Subjects are Case-licensed in Spec-IP.

This constraint crucially interacts with the STAY constraint of Grimshaw (1997), which penalizes the presence of traces in the representation (see §1.2 for discussion).

(5) STAY
Trace is not allowed.

In a nutshell, Costa's analysis for languages where the subject surfaces in the preverbal position in the unmarked case, such as English, Italian, Portuguese and most varieties of Spanish is as follows. Independently of the ranking of other constraints, these are all languages where SUBJCASE outranks STAY. Consequently it is better to have the subject DP in [Spec-I] with a trace in the representation than to

[4] The analysis in Grimshaw (1997) is actually more complex than this. I will return to this issue shortly. Neither analysis provides a characterization of the notion of "subject", though. For the purposes of our discussion, unless otherwise noted "subject" in what follows is to be understood as the lexical XP that agrees with the verb (see §2.2.2).

leave the subject in its VP-internal position, where it would not receive Nominative case. This is exemplified for English in the tableau in (6).

(6) ENGLISH
John will buy the newspaper.

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

Costa (1998) argues convincingly that Case plays a crucial role in determining word order effects in numerous languages, particularly so for direct objects. This kind of analysis, however, cannot straightforwardly account for the unmarked word order observed in different kinds of clauses in Mexican Spanish. Consider psych clauses with dative experiencers first. As shown in (7), in these clauses it is the dative IO *experiencer* and not the subject that occupies the preverbal position in the unmarked case[5] (Fant 1984, Masullo 1993, Arnaiz 1998, *inter alia*).[6]

[5] Psych verbs sometimes require a more elaborate discourse context as a diagnostic than the '*what's been happening?*' question-answer pair, presumably for pragmatic considerations. Fant (1984:109-114) has carried out an experiment to test for their unmarked word order using a number of different contexts. In his results, psych predicates where the *experiencer* is a post-verbal dative XP and where the subject *theme* is realized overtly in the preverbal position, (i.e. the inverse order of (7)) are found to be felicitous only between 16.7 and 11.1% of the time.

[6] The glosses and free translations of (7a-b) are my own. Similar word order facts are attested in Italian (Belletti & Rizzi 1988).

(7) a. A Carlos le gusta Pilar.
to Carlos DAT-CL *likes Pilar*
'Carlos has a crush on Pilar.' (Fant 1984:111)

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 the films of David Lynch*
'Juan loves David Lynch's movies.'

The SUBJCASE analysis instead predicts that the subject should be the argument that surfaces in the preverbal position. This is shown in the tableau in (8), where ✖ signals the candidate wrongly selected as the winner.[7]

(8) SPANISH: SENTENCE-FOCUS CONTEXT
A Juan le gustan los chocolates. IO V S
to Juan DAT-CL *like*.3p *the chocolates*
'Juan likes chocolates.'

	SUBJCASE	STAY
☞ a. [a Juan$_i$ le gustan [$_{VP}$ t$_i$ los chocolates]]. **IOVS**	*!	*
✖ b.[los chocolates$_i$ le gustan [$_{VP}$ a Juan t$_i$]]. **SVIO**		*

This data from Spanish presents a further conceptual complication for an analysis based on SUBJCASE. In both transitive and psych clauses an argument of the verb appears in the preverbal position. However, if a unified analysis of these two cases is

[7] For ease of exposition, in this tableau and the tableaux that follow I do not represent the violations of STAY that result from V-to-I movement, since they are irrelevant for the evaluation of the candidates. Further notice that the claim here is not that (8b) is an ungrammatical sentence in Spanish, but rather that it does not correspond to the unmarked word order (i.e. it is infelicitous in a sentence-focus context).

correct, then Case considerations are apparently not involved here at all. Under standard assumptions, the *experiencer* DP in Psych clauses is independently assigned Case by the preposition *a* 'to'. Accordingly, since there is at least one instance where a non-subject argument appears in the preverbal position in the unmarked case, it is much less obvious that the *agent* DP in transitive clauses undergoes fronting in order to be assigned [NOMINATIVE] Case.[8]

Similar observations hold of the analyses in Grimshaw (1997) and Grimshaw & Samek-Lodovici (1998), which are similar, but not identical, to Costa's. These analyses rely on the SUBJECT constraint, which interacts with STAY in the same way as in Costa's analysis. As noted in Grimshaw (1997), there are two alternative formulations of the SUBJECT constraint, listed in (9a) and (9b).

(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 I-related includes V, T, Agr, Neg, etc.
Grimshaw (1997: 390)

Although Grimshaw notes that SUBJECT corresponds essentially to the EPP of Chomsky (1981), this appears to be true only for the formulation in (9a). Under this

[8] One could presumably develop an analysis where the subject of transitive clauses moves to [Spec, I] because of Case considerations, and where the *experiencer* of psych clauses moves to this same position for other reasons. The proposal I will develop later in this chapter will provide a unified analysis of these two cases, though. Accordingly, it captures a generalization that is lost in the alternative where these two cases are analyzed separately.

formulation, SUBJECT is violated by clauses without a grammatical subject in the canonical position, as in the analysis in Grimshaw & Samek-Lodovici (1998). The second formulation of SUBJECT is more closely related to the numerous works cited in §2.2.2, where the EPP is taken to be a structural condition that requires a given specifier position to be filled by *some* XP, which can, but need not be, the grammatical subject. If my interpretation of Grimshaw (1997) is correct, (9b) would be independent of whether the highest I-related specifier is an A or an A-Bar position, and she further notes that it is conceivable that it can be satisfied by constituents other than the subject, although this does not play a role in her analysis.[9]

With these observations in mind, consider now an analysis of the data from Mexican Spanish in terms of SUBJECT and STAY. Under the first formulation of

[9] Once we have seen this second formulation of SUBJECT, the reader may wonder if the formulation of the EPP that I propose is actually any different from it. They are in fact different, and they make different predictions in a number of cases. Space considerations do not allow me to discuss every difference between the two constraints, but the following two cases are illustrative. In cases of IP recursion, for example, Grimshaw's SUBJECT is defined in such a way that the subject/EPP condition has to be satisfied in the highest recursion of IP. As discussed in the previous chapter, in my proposal it is actually the specifier of the lower IP that counts as the Pole, so my proposal predicts that the EPP will still have to be satisfied even when something occupies the specifier of the highest recursion of IP. This seems to be the case in negative inversion in English (which, as far as I can tell, involves IP recursion in Grimshaw's (1997) analysis). To the extent that expletives are attested in these constructions, this indicates that the preposed negative XP does not satisfy the EPP:

(i) a. Seldom would it bother him that the mail arrived late.
b. Under no circumstances will there be any exceptions made.

A second difference between the two proposals has to do with the domain in which the EPP applies. In Grimshaw's definition, this domain includes VP, whereas in my proposal it does not. Accordingly, Grimshaw's constraint predicts that in contexts where there is no inflectional layer (or in languages where there might not be an inflectional layer at all) there should still be EPP effects, whereas my proposal predicts that there shouldn't. Settling this matter is, of course, an empirical issue, but one that cannot be fully undertaken here. For the purposes of the discussion that follows it is enough to note that my definition of the EPP and Grimshaw's second formulation of SUBJECT are not equivalent.

SUBJECT, such an analysis would face the same problems as the one that relies on SUBJCASE. This is because this formulation specifically targets an A-specifier and the DP that bears the subject grammatical relation (since the subject is the argument that has one of its A-properties, i.e. Case, licensed in this specifier position; hence the name of the constraint itself) so it would also predict that the subjects of psych clauses should appear in the preverbal position. The second formulation of SUBJECT fares somewhat better, but still cannot account for the data. In this formulation, fronting to [Spec, I] is not related to the satisfaction of some A-property of the fronted XP, so fronting of the *experiencer* in a psych clause arguably satisfies SUBJECT, as shown in the tableau in (10). However, the candidate where the subject *theme* is fronted also satisfies this constraint, as can be seen in the same tableau, so the unmarked IO-V-S order cannot be derived by these two constraints alone.

(10) SPANISH: SENTENCE-FOCUS CONTEXT

A Juan le	gustan	los chocolates.	IO V S
to Juan CL-DAT	*like*.3p	*the chocolates*	

'Juan likes chocolates.'

	SUBJECT	STAY
a. [$_{IP}$ a Juan$_i$ le gustan [$_{VP}$ t$_i$ los chocolates]]. **IOVS**		*
b. [$_{IP}$ los chocolates$_i$ le gustan [$_{VP}$ a Juan t$_i$]]. **SVIO**		*

In fact, when further constraints are taken into account, this analysis incorrectly selects (10b) as the winner. This is because a Case requirement on DP's is also present in Grimshaw's analysis, in the form of the CASE constraint in (11).

(11) CASE
DPs must be Case marked. Grimshaw (1997: 374)

If my interpretation of Grimshaw (1997) is correct, there are at least two positions where CASE can be satisfied by subject DPs, [spec, V] and [Spec, I], but [spec, V] is only a Case position when no IP is projected. Accordingly, in all of the examples considered here the only Case position for subjects would be [Spec, I]. Now notice that as a result of this, even if CASE was a very low ranked constraint in Spanish, it would still get to decide the outcome (all else being equal), wrongly selecting as the winner the candidate where the subject surfaces in the preverbal position, which satisfies CASE . This is shown in tableau (12).

(12) SPANISH:
Psych clauses: SENTENCE-FOCUS CONTEXT

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

Consider now unaccusative predicates. As previously mentioned, the unmarked word order of unaccusative clauses in Mexican Spanish is VS (see Contreras 1976, Fant 1984, and Arnaiz 1998 for other varieties that show this word order; see also H. Kahane & R. Kahane 1950 and Hatcher 1956). Some examples are presented in (13).[10]

(13) a. Está cayendo granizo.
is falling hail
'It's hailing.' (H. Kahane & R. Kahane 1950:239)

b. Empezó la resistencia.
began the resistance
'The resistance began.' (Contreras 1976:5)

c. Estallaron dos bombas en la universidad de Navarra.
exploded two bombs in the university of Navarra
'Two bombs exploded at the University of Navarra' (Fant 1984:105)

This data is also problematic for the OT analyses discussed above. In Costa's analysis, the ranking SUBJCASE >> STAY again predicts that the subject should surface in the preverbal position.[11] This is shown in tableau (14).

[10] Glosses and free translations are my own. Similar word order facts are also attested for unaccusative verbs in Italian (see Pinto 1994, Zubizarreta 1998, and Arnaiz 1998). Before the unaccusative hypothesis, Spanish verbs that show an unmarked VS order were characterized as presentational verbs (Hatcher 1956, Contreras 1976), but unaccusative verbs without a presentational function also show this pattern, as in (13c) and (14).

[11] Costa (1998: 348-352) notes that this is also a problem for unaccusative clauses in Portuguese, which allow both VS and SV orders in the unmarked case. I refer the reader to Costa's work for a tentative solution to this problem.

(14) MEXICAN SPANISH : SENTENCE-FOCUS CONTEXT
Llegó tu hermano. **VS**
arrived your brother
'Your brother arrived.'

	SUBJCASE	STAY
☞ a. [$_{IP}$ llegó [$_{VP}$ tu hermano]] **VS**	*!	
✖ b. [$_{IP}$ tu hermano$_i$ llegó [$_{VP}$ t$_i$]] **SV**		*

The analyses in Grimshaw (1997) and Grimshaw & Samek-Lodovici (1998) face the same problem. In this case, as the reader can verify, under either definition of SUBJECT in (9), the ranking SUBJECT >> STAY predicts that the subject of unaccusative clauses will surface in [Spec, I].

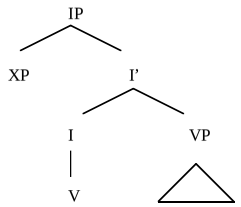
Before proceeding to develop an alternative OT proposal of these facts, it is worth highlighting what the more general problem of these two previous OT proposals is. In order to account for word order, these analyses rely on constraints that target either the subject grammatical relation or some property of the subject DP, such as (nominative) Case. Yet the evidence from Spanish suggests that grammatical relations and Case considerations do not play a role in determining word order in this language. Taking this observation as a starting point, in the following section I develop an analysis in which the unmarked word order in Mexican Spanish is dependent instead on the EPP as defined in §2, but where the satisfaction of the EPP crucially interacts with the semantic roles of the arguments of the verb and with structural markedness considerations.

3.2 Markedness and syntactic structure

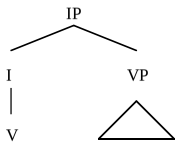
As a first step in developing an analysis of unmarked word order in Mexican Spanish, I suggest that the notion of markedness, which has been used successfully in many areas of linguistics, also extends to certain aspects of syntactic structure, and in particular to the Pole as defined in the previous chapter. Recall that the Pole is defined as the specifier of the highest Π-Projection (i.e. the highest inflectional projection). The Pole is a position defined relationally, so it corresponds to [Spec, I] when IP is the highest Π-Projection, but it corresponds to [Spec, Pol] when PolP is the highest Π-Projection, as is the case in Spanish when a sentential negation is present. For the sake of simplicity in this and subsequent chapters I concentrate on cases where IP is the highest Π-Projection, and so the Pole corresponds to [Spec, I]. However, the conclusions reached below extend to cases where the Pole corresponds to a different specifier position.

In terms of markedness, the first relevant observation is that, for reasons of Economy of Structure (Chomsky 1993, 1995; Grimshaw 1993, 2001), clauses with a Pole are more marked than clauses without a Pole. In other words, the structure in (15a), where [Spec, I] is projected, is more marked with respect to Economy of Structure than the structure in (15b).

(15) a.



b.



Intuitively, it is fairly straightforward why this should be so: (1a) has an extra layer of structure that (1b) lacks altogether. This is consistent with numerous intuitions on Economy of Structure developed in both transformational and optimality-theoretic research. Broadly, the intuition is that structure is only projected when necessary (i.e., as a "last resort").[12]

However, the EPP is clearly in direct conflict with Economy of Structure, since the EPP requires clauses to have a Pole.[13] In other words, the EPP favors the structure that is more marked with respect to Economy of Structure. This is another fact that motivates the OT analysis that follows, since Optimality Theory is designed to deal with conflicting grammatical requirements. My proposal, though, is that Spanish provides evidence that the resolution of the conflict between the EPP and Economy of Structure is not just an issue of prioritizing either requirement over the other. Rather, what is crucial for understanding the word order facts discussed in the previous

[12] In a way more or less analogous to the way in which Procrastinate, a general prohibition against movement, can only be overridden to make a derivation converge (Chomsky 1993). See Grimshaw (2001) for an OT formalization of economy of structure.

[13] This is a conclusion independently arrived at in Grimshaw (2001), although in her analysis EPP effects are derived through a different constraint on obligatory specifiers.

section is the *relative* degree of markedness of the canonical word order for different classes of sentences.

It is a well known fact that markedness is not necessarily just a contrast between a marked structure and an unmarked one.[14] Amongst marked structures, there are some structures that are more marked than others. In prosodic phonology, for example, syllables with a coda are more marked than syllables without a coda. However, amongst syllables that have a coda, those with a coda segment that is [+sonorant] are less marked than those where the coda segment is [-sonorant] (see for example Vennemann 1972, 1988; Zec 1988, 1994). What I propose is that something similar is observed with respect to the Pole position in syntax. Although all clauses that project a Pole are marked with respect to Economy of Structure when compared to those that do not, the relative degree of structural markedness of clauses with a Pole crucially depends on the semantic role of the constituent functioning as the Pole.

3.2.1 The Pole and the thematic hierarchy

The relevant word order contrasts discussed in the previous section are reproduced in (16).

(16) MEXICAN SPANISH:
Unmarked word order
a. Una muchacha compró los discos. S V O
a girl bought the records
'A girl bought the records.'

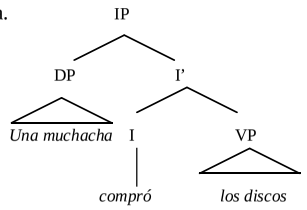
[14] Although this can indeed be the case when only binary contrast are involved.

b. A Juan le gustan los chocolates. IO V S
to Juan DAT-CL *like* *the chocolates*
'Juan likes chocolates.'

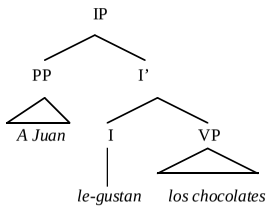
c. Llegó tu hermano. VS
arrived your brother
'Your brother arrived.'

Recall from the previous chapter that evidence from ellipsis, negation and the licensing of negative XPs indicates that the subject in (16a) and the oblique *experiencer* in (16b) occupy the same structural position, a proposal first developed in Masullo (1993). In terms of my proposal, they both correspond to the Pole of the clause, in this case [Spec, I]. Accordingly, I analyze the structural respresentation of these examples as in (17).[15]

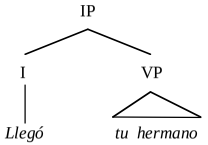
(17) a.



b.



c.



[15] As in the previous chapters, throughout I assume V-to-I movement and movement of the constituent in [Spec, I] from its base position inside the VP. Following Suñer (1988), I further assume that clitics in Spanish are instances of morphological agreement.

The question that needs to be addressed at this point is why transitive and psych clauses display a constituent functioning as the Pole (and thus comply with the EPP), but unaccusative clauses do not. My proposal is that the Pole is a position that is sensitive to the semantic role of the constituent that occupies it, and that this relates directly to markedness. I previously argued that clauses with a Pole are more marked with respect to Economy of Structure than those without a Pole. However, the word order facts from Spanish in (17) show that markedness is not an all-or-nothing matter: rather, these facts are amenable to an interpretation where there are different degrees of markedness. The reasoning goes as follows. As previously discussed, there is an inherent conflict between the requirements of the EPP, which requires that the specifier of the highest Π-Projection be filled, and Economy of Structure, which requires that the projection of structure be kept to a minimum. The structures in (17a) and (17b), where the Pole of the sentence is an *agent* and an *experiencer*, respectively, are both marked with respect to Economy of Structure, since Spec-IP is projected. Their particular degree of markedness, however, is not high enough to warrant a violation of the EPP. In other words, it is better to have a marked syntactic structure than to leave the requirements of the EPP unfulfilled. Here, the EPP overrides structural markedness.

Crucially, in the case of the unaccusative construction in (17c), the exact opposite state of affairs is observed. The unique argument of the verb, the *theme*, stays in its VP-internal position and does not move to Spec-IP. Apparently, a construction with a

theme as the Pole has a degree of markedness high enough that now it is preferable to violate the EPP. In this case structural markedness overrides the EPP.

These observations correlate directly with much work done on the Thematic Hierarchy. The works that postulate the existence of the Thematic Hierarchy all suggest that what are described traditionally as semantic roles are not only different because of their semantic properties or entailments. Semantic roles are further organized in a hierarchical relation where some roles are more prominent than others, and this hierarchical relation has an effect on numerous grammatical properties (the mapping into argument structure (Grimshaw 1990), case marking, morphological cross-reference, etc.).

There have been a number of proposals regarding the precise characterization of the Thematic Hierarchy, and I cannot provide a complete overview of them and their differences here. For the purposes of the analysis that follows I assume a characterization of the Thematic Hierarchy based on the proposals in Larson (1988), Speas (1990) and Bakovic (1998), which are shown below (in Bakovic's proposal, ARGUMENT encapsulates *agent* and *theme*).

(18) a. Larson (1988: 382)
AGENT > THEME > GOAL > OBLIQUES (manner, location, time, ...)

b. Speas (1990: 16)
AGENT > EXPERIENCER > THEME > GOAL/SOURCE/LOCATION > MANNER/TIME

c. Bakovic (1998: 37)
ARGUMENT > LOCATION > MANNER > REASON

The hierarchical relations AGENT > EXPERIENCER and EXPERIENCER > THEME are mostly uncontroversial in the literature on the Thematic Hierarchy (see also Pesetsky 1995). The three proposals in (18) have a further property in common, namely, that they consider a *theme* to be higher in the hierarchy than *locative*, *temporal*, *manner* and *reason*. This is a fairly controversial issue, since a number of characterizations of the thematic hierarchy in the literature have the *theme* semantic role at or near the bottom of the hierarchy (see for example Grimshaw 1990). Settling this particular issue is a problem that goes beyond the scope of this dissertation, though, and so I will simply assume the proposals laid out in (18).[16]

Bringing together the proposals in (18), I assume the characterization of the thematic hierarchy in (19), which brings together different elements from the hierarchies in (18a-c) (while respecting the basic hierarchical relations they have in common) and which includes only those roles that will be relevant in my analysis. For our immediate purposes, the crucial hierarchical relations represented in (19) are: (i) *agents* are more prominent than both *experiencers* and *themes*, and; (ii) *experiencers* are in turn more prominent than *themes*.

[16] It is worth pointing out, however, that to the extent that one accepts the proposal that *wh*-extraction from certain contexts is only possible for constituents which bear roles from the higher end of the Thematic Hierarchy (Rizzi 1990, Cinque 1990), it is problematic for proposals where the *theme* ranks low in the hierarchy to explain why direct objects, for example, can typically undergo extraction from such contexts, whereas other more adjunct-like *wh*-operators do not. This same pattern is arguably also observed cross-linguistically in relative clause formation, as in work on the Accessibility Hierarchy (Keenan & Comrie 1977). Lastly, Torrego (1984), Suñer (1994) and Bakovic (1988) provide extensive evidence from *wh*-movement in Spanish that *themes* are thematically more salient than oblique arguments and adjuncts.

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

We can now return to the analysis of unmarked word order in Mexican Spanish and its relation to markedness. I have suggested that the degree of markedness is the factor that settles the conflicting requirements of the EPP and Economy of Structure. My proposal was that clauses with an *agent* or an *experiencer* as the Pole are not marked enough to warrant a violation of the EPP, but clauses with a *theme* as the Pole are. Accordingly, in the latter case we get a VS and not an SV sentence. Simply stated as such, at first sight there is no obvious reason why this should be so. But once we see that this correlates directly to numerous proposals about the structure of the Thematic Hierarchy in the literature, then these descriptive observations can be grouped together in a broader generalization, namely that the degree of structural markedness of the Pole is inversely proportional to its relative prominence in the Thematic Hierarchy. In other words the more prominent the semantic role of the constituent in the Pole, the lower the Pole's structural markedness.[17] The cut-off point at which the degree of markedness is high enough to warrant a violation of the EPP in Mexican Spanish is found between the *experiencer* and the *theme* roles in the scale in (19).

[17] To the best of my knowledge, the observation that a scale like (19) defines the possibility of a constituent occupying a peripheral position in Spanish was first made in Contreras (1976) with respect to the right periphery. I address Contreras' analysis in the following chapter.

It is now necessary to characterize the state of affairs above in a meaningful way that will derive clear, falsifiable predictions and consequences that can be tested in other areas of the syntax of Spanish. Furthermore, given the interpretation of the data proposed above, there are two crucial issues that any analysis of the facts needs to account for. The first one is that the inherent conflict between the EPP and structural markedness is not resolved in such a way that the EPP always overrides markedness or vice versa. The second one is that markedness does not represent an absolute value, but rather, there are different degrees of markedness that appear to correlate with thematic information. In the remainder of this chapter, I will argue that Optimality Theory provides an ideal set of theoretical tools for analyzing the facts presented in (16). More specifically, I will develop an analysis where the EPP, as defined in the previous chapter, is taken to be a violable constraint. This constraint, as part of the constraint ranking that corresponds to the grammar of Mexican Spanish, is embedded in a hierarchy of markedness constraints that target the thematic role of the constituent that corresponds to the Pole. This hierarchy of markedness constraints will be derived through Harmonic Alignment of a hierarchy of semantic roles with a binary structural scale.

3.2.2 Harmonic Alignment

The idea developed in the previous section is that Poles that bear a semantic role that ranks high in the Thematic Hierarchy are less marked than Poles whose semantic roles ranks low in this same dimension. The question at this point is how to formalize

this particular state of affairs. One of the main reasons for developing an Optimality-theoretic account of the data presented so far is that OT provides the ideal mechanism achieving this formalization, namely, Harmonic Alignment (Prince & Smolensky 1993).

In essence, Harmonic Alignment is the alignment of two scales that derives a complex pair of relative well-formedness scales (i.e. harmony scales in standard OT terminology), which in turn can be translated into a pair of subhierarchies of markedness constraints.[18] The definition of this mechanism is presented in (20).

(20) Alignment. Suppose given a binary dimension D_1 with a scale X > Y on its elements {X, Y}, and another dimension D_2 with a scale a > b ... > z on its elements. The harmonic alignment of D_1 and D_2 is the pair of Harmony scales:

H_x: X/a ≻ X/b ≻ ... ≻ X/z
H_y: Y/z ≻... ≻ Y/b ≻ Y/a

The constraint alignment is the pair of constraint hierarchies:

C_x: *X/z >> ... >> *X/b >> *X/a
C_y: *Y/a >> *Y/b >> ... >> *Y/z

(Prince & Smolensky 1993: 136)

In other words, alignment of the dimensions D_1 and D_2 (where the connective > between the elements of these two dimensions stands for "more prominent than") results in two different well-formedness scales, H_x and H_y (where the connective ≻ between the elements of these scales stands for "more harmonic than"). Constraint alignment is the translation of these two scales into two hierarchies of markedness constraints. In the original proposal in Prince & Smolensky (1993), which is designed to formalize a number of universal properties on syllable structure, D_1 is a binary structural scale Peak/Margin (P > M). Peak corresponds to the syllable nucleus and margin to onsets and codas. The hierarchical relation P > M represents the fact that syllable nuclei are more prominent than onsets and codas. D_2 in turn is a prominence scale determined by the sonority of different segments.

It is worth pointing out from the start that Harmonic Alignment is not just a technical mechanism for deriving markedness constraints. Rather, Harmonic Alignment is a formalism (see Prince & Smolensky (1993: 139-150) for a full definition) that expresses two fundamental properties of markedness/relative well-formedness. The first one is that there are instances of markedness that arise only when elements from two different dimensions are combined into interpretable representations (Prince & Smolensky 1993: 67). As noted by Prince & Smolensky in their discussion of prosodic phonology, high sonority (for instance) does not by itself entail high or low markedness. Rather, when a segment occurs in a structural position such as nucleus, onset or coda, its intrinsic sonority in combination with the character of its position results in a given degree of markedness. Secondly, Harmonic Alignment expresses the fact that associating less prominent elements (like *z* in (20)) to the more prominent position and more prominent elements (like *a*) to the less prominent position results in higher degrees of markedness (Prince & Smolensky

[18] Other authors, most notably Bakovic (1998) have developed markedness subhierarchies without making use of Harmonic Alignment. I discuss Bakovic's proposal in detail in chapter 5.

1993: 136). This also relates to the fact that, for example, even when a less prominent element (like *z*) in the more prominent position constitutes a marked representation, this same element in the less prominent position constitutes an unmarked representation (see also Aissen 1999a). This situation is characterized in the literature on markedness as Markedness Reversal (Aissen 1999a; Battistella 1990, 1996; Croft 1996).

Harmonic Alignment was originally developed to account for phenomena in the domain of prosodic phonology, but has recently been expanded into the domain of syntax and morphosyntax in Aissen (1999a, 2000).[19] Here I will illustrate Aissen's application of Harmonic Alignment to syntax with her analysis of markedness and subject choice (Aissen 1999a). Aissen's analysis begins with the observation widely attested in the descriptive and the functional literature that different languages are sensitive to different prominence scales when determining which of the arguments of a predicate will be realized as the grammatical subject. Aissen suggests that the formalization of these facts can be achieved by aligning a binary scale of grammatical relations (for example, Subject > Object), with different prominence scales, such as a scale of semantic roles, a scale for different grammatical persons, and a scale of discourse prominence.[20] This results in a number of different hierarchies of markedness constraints, each of which targets the relative markedness of subjects and

[19] See also Asudeh (2001), Lee (2001), Mikkelsen (2000), and Sharma (2001) for other implementations of Aissen's proposal.
[20] I refer the reader to Aissen's work for a full characterization of these scales and their typological implications.

objects with respect to a specific prominence scale. For example, given the two scales in (21), Harmonic Alignment derives the harmony scales and constraint hierarchies in (22) and (23), respectively.

(21) a. Subject > Object
b. Agent/Patient

(22) a. Su/Agt $\succ$ Su/Pat
b. Obj/Pat $\succ$ Obj/Agt

(23) a. *Su/Pat >> *Su/Agt
b. *Obj/Agt >> *Obj/Pat

The effect of the constraints in (23a), for example, will be the following. When the input of a representation includes both an *agent* and a *patient*, the *agent* will be mapped as the subject and the *patient* as the object, all else being equal. This is shown in the tableau in (24).

(24) **Subject choice based on semantic role**
(Following Aissen 1999).

INPUT: <V (x, y), x= agent, y=patient>	*Su/Pat	*Su/Agt
☞ a. Agent/Subject - Patient/Object		*
b. Patient/Subject - Agent/Object	*!	

Following Aissen's fundamental insights about the application of Harmonic Alignment in syntax, and Prince & Smolensky's original idea that the binary

dimension (D_1) that undergoes alignment corresponds to a structural prominence dimension, I will now develop a Harmonic Alignment analysis of the word order facts in Spanish that crucially relies on the notion of the Pole developed in the preceding chapter.

3.2.3 The Pole Hierarchy

Returning now to word order in Mexican Spanish, the analysis I will develop follows the idea developed in §3.2.1 that Poles that bear a semantic role that ranks high in the Thematic Hierarchy are less marked than Poles whose semantic roles rank low in this same dimension.. To formalize this state of affairs by Harmonic Alignment, I will make use of the structural prominence scale in (25), where Non-Pole is a term that encapsulates every complement and specifier position in the lexical layer of the extended projection (VP or a VP shell for our purposes).

(25) Pole > Non-Pole

Appealing to a dimension of structural prominence (as opposed to, for example, one of relational prominence) is consistent with the discussion developed so far. Briefly, we have seen in the preceding chapter that there is evidence for the existence of a particular specifier position in the functional layer of the sentence, and that the grammatical properties associated with this position do not depend on the grammatical relation of the constituent that occupies it. Furthermore, I have suggested

in this chapter that the presence vs. the absence of this specifier position is closely related to Economy of Structure considerations. Lastly, I have also argued that the word order observed in different kinds of clauses in the unmarked case is directly related to the semantic role of the constituent that occupies this structural position, and not by its grammatical relation. What unifies these observations is a specific structural position, the Pole, and so it is appropriate to postulate a structural prominence dimension based on it.

Following the assumption from the preceding chapter that matrix clauses are minimally constituted by an IP, the scale in (25) is intended to reflect the fact that the Pole is more prominent than any other constituent in the extended projection, all else being equal. Structurally, this is because the Pole c-commands every other constituent of the extended projection except the IP itself (see §2.2.2). Once we have this binary structural scale, it can be aligned with the Thematic Hierarchy assumed here (repeated in 26). The result of the alignment of these two scales is the two harmony scales in (27), which translate into the constraint hierarchies in (28).

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

(27) a. Pole/Agent ≻ Pole/Experiencer ≻ Pole/Theme ≻ Pole/Location ≻ Pole/Manner-Time ≻ Pole/Reason.

b. Non-Pole/Reason ≻ Non-Pole/Manner-Time ≻ Non-Pole/Location ≻ Non-Pole/Theme ≻ Non-Pole/Experiencer ≻ Non-Pole/Agent

(28) a. *Pole/Reason >> *Pole/Manner-Time >> *Pole/Location >> *Pole/Theme >> *Pole/Experiencer >> *Pole/Agent

b. *Non-Pole/Agent >> *Non-Pole/Experiencer >> *Non-Pole/Theme >> *Non-Pole/Location >> *Non-Pole/Manner-Time >> *Non-Pole/Reason

The harmony scale in (27a) expresses the fact that the least marked instance of a Pole is one filled by the *agent*, whereas a Pole filled by a *reason* adverb corresponds to the most marked instance. Inversely, the harmony scale in (27b) 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.[21] As mentioned before, these harmony scales are in turn translated into the hierarchies of markedness constraints in (28). The constraints in the hierarchy in (28a) target the relative markedness of a constituent with the specified semantic role when it appears as the Pole of the clause. The most severe violation is incurred when the Pole is filled by a *reason* expression, whereas the least severe violation is incurred in when an *agent* functions as the Pole. The hierarchy in (28b), by contrast, targets the relative markedness of a constituent with the specified semantic role when it surfaces in its VP-internal position. In this case, the most severe violation of the hierarchy in (28b) is incurred when an *agent* is found in a VP-internal position, whereas the least severe violation is incurred in when a

[21] Expressions with a *reason* semantic role display an irregular behavior in this respect though. For instance, when the *reason* expression is an adverbial clause it is typically the sentence-final constituent. This is consistent with the Harmony scale in (27b), in that the adverbial clause can be taken to be the most deeply embedded constituent in a VP shell (Larson 1988). However, other *reason* expressions (such as *for some reason*) typically appear in the left periphery instead. It may be the case that some independent factor (such as scope) is responsible for the displacement of the *reason* adverb in these cases. This is an issue I will leave open for future investigation.

reason expression occupies a VP-internal position. Crucially, I further assume that adjoined positions (both in the lexical and in the functional layer) are never targeted by the constraints in these hierarchies.

Throughout the remainder of this dissertation, I will concentrate on the constraint hierarchy in (28a), which I will refer as the *Pole Hierarchy*. The role that the constraints in (28b) play in the syntax of Spanish and other languages is an issue that I will leave for future research.[22]

3.3 An OT analysis based on markedness

3.3.1. Structural markedness and unmarked word order

At this point we need only one more constraint in order to provide an analysis of unmarked word order in Mexican Spanish. Since the EPP is central to our discussion, and since there are languages where the EPP is satisfied by expletive insertion, we need to account for the fact that Spanish lacks expletives altogether. For this purpose,

[22] It is worth pointing out that there is some evidence that in languages other than Spanish the Non-Pole constraints may well play a fairly important role in determining clause structure. English, for example, does not allow existential-*there* constructions with *agents*, and this can be the result of *Non-Pole/Agent ranking very high in this language. Other Germanic languages do allow for *agents* in existential constructions, as in Icelandic Transitive Expletive Constructions. However, Jonas & Bobaljik (1996) argue that in these cases the *agent* subject is in a VP-external position so again this might be the result of a high-ranking *Non-Pole/Agent constraint.

The reader may also wonder if postulating the existence of the Non-Pole constraints does not inevitably lead to some bizarre typological predictions. For example, ranking all of the Non-Pole constraints above STAY derives a language where it is better to move every argument and adjunct out of the VP than to have them surface in their base position. Yet the analyses of polysynthetic languages in Jelinek (1984) and Baker (1995), where lexical arguments are always adjoined to more peripheral positions, do not appear to be very different from this situation. Testing the full typological predictions that are derived from my proposal is of course an important issue, but one that lies beyond the scope of this dissertation.

I will incorporate into the analysis the FULL-INTERPRETATION constraint of Grimshaw (1997) and Grimshaw & Samek-Lodovici (1998), which is the constraint that penalizes DEPendency violations (McCarthy & Prince 1995) in syntax.

(29) FULL-INTERPRETATION
Parse lexical conceptual structure.
Failed by expletives and auxiliary *do*.
Grimshaw & Samek-Lodovici (1998).

This constraint is violated when there is a lexical item in the output that has no corresponding element in the input (this is the way of understanding in OT the fact that expletives and auxiliary *do* are devoid of meaning). Specifically for the analysis that follows, it will be violated by insertion of an expletive, as in Grimshaw & Samek-Lodovici (1998). With these constraints set up, we can now provide an analysis of Mexican Spanish. This language is characterized by the constraint ranking in (30), where, crucially, the EPP is interpolated into the Pole Hierarchy between *Pole/Theme and *Pole/Experiencer. Furthermore, the undominated FULL-INTERPRETATION prevents an expletive from being inserted in the Pole to satisfy the EPP.

(30) FULL-INT >>*Pole/ Reason >> *Pole/Manner-Time >> *Pole/Location >> *Pole/Theme >> EPP >> *Pole/Experiencer >> *Pole/Agent[23]

[23] Furthermore, it must also be the case that EPP outranks STAY, otherwise movement into the Pole position would be disallowed altogether. STAY does not play a crucial role in the evaluation of the candidates for the set of data under consideration, for ease of exposition I will leave this constraint and the traces it penalizes out of the tableaux that follow.

Consider now how the ranking in (30) derives the word orders of different kinds of clauses. The first case, illustrated in (31), corresponds to a transitive construction.

(31) a. Una muchacha compró los discos. S V O
a girl bought the records
'A girl bought the records.'

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

	FULL-INT	*Pole/ Theme	EPP	*Pole/ Agent
☞ a. [$_{IP}$ una muchacha compró [$_{VP}$ los discos]] **SVO**				*
b. [$_{IP}$ compró [$_{VP}$ una muchacha los discos]] **VSO**			*!	
c. [$_{IP}$ los discos los compró [$_{VP}$ una muchacha]] **OVS**		*!		
d. [$_{IP}$ *exp* compró [$_{VP}$ una muchacha los discos]]	*!			

Let us go through the losing candidates in (31) one by one. Candidate (31b), (which corresponds to example (2) in §3.1), leaves the Pole position empty, and thus loses to (31a) because of its violation of the EPP constraint. Candidate (31c) satisfies EPP because the direct object occupies Spec-IP, but by doing so it incurs in a fatal violation of *Pole/Theme. Finally, the *exp*-VSO candidate (31d) also satisfies EPP by insertion of an expletive (*exp*), but loses because of its violation of FULL-INTERPRETATION, in a way analogous to what is argued for Italian subject inversion in Grimshaw & Samek-Lodovici (1998). Candidate (31a), which incurs only in a violation of the low ranked markedness constraint *Pole/Agent, thus emerges as the winner. I am not claiming by this analysis that all losing candidates

are unattested or ungrammatical sentences in Mexican Spanish, though. Once the constraints related to information structure are introduced in the following chapter, it will become clear how candidate (31c) can emerge as the winner over the candidate that displays the unmarked word order in this tableau.[24]

In the case of Psych clauses, the ranking in (30) ensures that it will not be the subject that will emerge in the preverbal position, but rather the IO, since given the Pole Hierarchy in (28a) it is better to have an *experiencer* than a *theme* as the Pole of the extended projection. The analysis is presented in (32).

(32) a. A Juan le gustan los chocolates. IO V S
to Juan CL-DAT *like* *the chocolates*
'Juan likes chocolates.'

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

		FULL-INT	*Pole/ Theme	EPP	*Pole/ Exper
a. [$_{IP}$ los chocolates le gustan [$_{VP}$ a Juan]]	**S V IO**		*!		
b. [$_{IP}$ le gustan [$_{VP}$ a Juan los chocolates]]	**V IO S**			*!	
☞ c. [$_{IP}$ a Juan le gustan [$_{VP}$ los chocolates]]	**IO V S**				*
d. [$_{IP}$ *exp* le gustan [$_{VP}$ a Juan los chocolates]]		*!			

Just as in the case of (31), the candidate that leaves the Pole position empty, candidate (32b), loses because of its violation of EPP, while (32d) loses because of its violation of undominated FULL-INTERPRETATION. Candidate (32a), where the subject emerges in the preverbal position, loses because of its fatal violation of *Pole/Theme. The most harmonious candidate (32c) is the one that violates the low-ranked *Pole/Experiencer constraint and thus it emerges as the winner.

Lastly, consider unaccusative constructions. What is crucial in this case is that under the ranking in (30), it is better to leave the Pole position empty than to have a *theme* occupying it, because the degree of markedness of a clause with a *theme* as the Pole is higher that the degree of markedness of a clause that lacks a Pole altogether. Consequently, as opposed to the previous two cases, a verb-initial construction emerges as the output.

(33) a. Llegó tu hermano. VS
arrived your brother
'Your brother arrived.'

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

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

The analysis presented in (31-33) represents the core of this proposal, and it has three crucial properties. First of all, it accounts for the fact that for different verb classes different arguments occupy the preverbal position in the unmarked cases.

[24] The same is true of some of the losing candidates in tableaux (32) and (33). Concretely, (32a) and (33a) are just infelicitous in a sentence-focus context. The distinction between infelicity and ungrammaticality in my analysis is dealt with in the following chapter. See also §1.2.2.

Secondly, by embedding the EPP constraint in the subhierarchy in (28a) we explain why the preverbal position needs to be occupied in some cases but not in others, a result that cannot be achieved straightforwardly in frameworks where satisfaction of the EPP is an all-or-nothing requirement. Lastly, by introducing the notion of Pole it is possible to achieve this result without the need to invoke specific grammatical relations when determining which argument of the verb occupies the preverbal position. This will be the most fundamental part of the analysis as a whole, and for Spanish it cannot be replaced by a constraint hierarchy that targets specific grammatical relations instead, as the discussion of previous analyses in §3.1 shows.

3.3.2 Alternative analyses

To end this section, I comment briefly on two alternatives to my proposal, one based on null expletives and the other one based on null locative topics (Pinto 1994, Zubizarreta 1998, Goodall 2001).[25] Consider an analysis where, just as in my analysis, transitive subjects and dative experiencers satisfy the EPP in the unmarked case, but where the VS order of unaccusatives is the result of an inviolable EPP being satisfied by a null expletive in [Spec,I], as in the representation in (34), where (*exp*) represents a null expletive.

[25] There are two other possible alternatives to the analysis of word order I have developed, one based on the notion of *default topic* and the other one based on Alignment constraints. Since the data that more strongly corroborate the adequacy of my analysis vs. these alternatives comes from topicalization, I delay their discussion until the next chapter.

(34) $[_{IP}$ (*exp*) llegó $[_{VP}$ tu hermano]]
arrived your brother

Independently of whether or not this is a viable proposal, (34) is not a possible representation in an OT analysis. The reason for this is as follows. As previously noted, in OT syntax expletive elements are elements that are included in the representation by GEN when it generates the set of candidates, but which do not correspond to any element in the input. As such, they necessarily incur a DEPENDENCY (DEP) violation, typically understood as a violation of the FULL-INTERPRETATION constraint previously discussed. Crucially, though, in order to establish whether a DEP violation has indeed occurred one must be able to compare the elements in the candidates with the elements in the input. This comparison cannot be established directly if the expletive elements inserted by GEN are null elements that have no visible effect on the representation, so it is a standard assumption in OT syntax that expletive elements necessarily have phonetic content (Grimshaw & Samek-Lodovici 1998: see also McCarthy & Prince 1995). This is a welcome result, since the resulting theory is very restrictive with respect to the null elements that it allows. Further notice that the null expletive analysis would not explain why the unmarked word order of psych verbs with dative experiencers is IO-VS, whereas in my analysis this word order and the word order of unaccusative clauses are both explained by the ranking *Pole/Theme >> EPP.

Independently of this, the null expletive analysis has been rejected in a number of works, most notably by Alexiadou & Anagnostopoulou (1998) and Goodall (2001).

These authors point out that it is very implausible that a null expletive satisfies the EPP in a construction like (34) since the fundamental characteristic of expletives is that they induce a definiteness effect which is not observed in unaccusative or other types of VS sentences in Spanish and other *pro*-drop languages. Now one could consider the possibility that null expletives in some languages do not induce a definiteness effect, and that precisely this would appear to be the case in Spanish. But this carries with it the consequence that the null expletive hypothesis then becomes unfalsifiable. To the extent that we assume the existence of null expletives whose properties are not those of overt expletives, and whose only observable effect on the surface representation is the VS word order attested in a very specific number of cases, it becomes impossible to verify or refute their existence. In other words, if (in contrast with overt expletives), null expletives have no set of properties associated with them other than satisfying the EPP, we cannot really test for their presence in any way. Consequently, such an alternative should be abandoned on methodological grounds and does not constitute a viable alternative to my proposal.

Another alternative analysis, proposed in Pinto (1994) for Italian and further developed in Zubizarreta (1998) and Goodall (2001) for Spanish, relies on the idea that in VS sentences the preverbal position is occupied by a null topical locative or temporal adverb. There are two facts that disconfirm this alternative. Fronted topics create islands for extraction, as is well known (see Rochemont 1989, Rizzi 1990, Müller & Sternefeld 1993, *inter alia*) and this is clearly attested for left-peripheral locative and temporal expressions in Spanish, as shown in (35).

(35) a. ??Qué dices [que ayer compró Juan]?
what you-say that yesterday bought Juan
('What are you saying that yesterday Juan bought?')

b. *Cuántas personas decidieron [que en Mérida van
*how-many persons you-*PL*-decided that in Mérida you-*PL*-go*
a entrevistar]?
to interview
('How many people did you decide that in Mérida you are going to interview?)'

Wh-extraction from complement VS clauses, however, is not subject to any such effects, as shown in (36).

(36) Cómo dices [que llegó tu hermano *t*]?
how you-say that arrived your brother
'How are you saying that your brother arrived (i.e., by bus, by train, etc.)?

If, in order to sidestep the contrast between (35) and (36), we suggest that null locatives and temporal adverbs do not have the same properties as overt topics, then once again we face an unfalsifiable hypothesis, since we cannot test for their presence in the representation in any way. Secondly, the null locative/temporal hypothesis faces a serious problem when transitive sentences are considered. We have seen that VSO and V-IO-S sentences with an empty preverbal position are not tolerated in Mexican Spanish. But if a null locative/temporal can satisfy the EPP in unaccusative VS sentences, then it is unclear why such an option cannot rescue the VSO sentence in (2), for instance.

3.4 Other constructions

Before concluding this chapter, I discuss how a number of constructions different from the ones discussed so far fit in the analysis developed here. The constructions I will look at are *pro*-drop constructions, impersonal passives, other kinds of psych clauses and impersonal active constructions.[26] Much work remains to be done in terms of characterizing the precise behavior of some of these constructions, and so for the time being I will only suggest a tentative analysis for them.

Impersonal passives and *pro*-dropped constructions, exemplified in (37a) and (37b) respectively, are straightforwardly analyzed in the proposal developed so far.

(37) a. Se vendió la casa.
CL *sold*.3s *the house*
'The house was sold.'

[26] An issue that I leave open for future research is the word order of clauses with morphologically derived predicates, such as periphrastic passives, exemplified in (i).

(i) Los delincuentes fueron capturados (por las autoridades).
the criminals were captured by the authorities
'The criminals were captured by the authorities.'

In (i), the *theme* subject surfaces as the Pole, and the oblique *agent* appears in the post-verbal field, contrary to what would be expected in my analysis. Furthermore, the reverse order is not possible at all. One possible solution for this problem relies on information structure considerations. It has long been observed in the functional literature that the passive in English is chosen over the active when the *patient* is more discourse-prominent than the *agent* (Tomlin 1985, Thompson 1987). Discourse prominence is conditioned by several factors (empathy, topicality, discourse coherence) which are grouped together in Aissen (1999a) under the label *Thematic Prominence* (not to be confused with prominence along the Thematic role Hierarchy). Now it is also a well known fact that the preverbal position in Spanish is typically a topic position, as I will discuss in detail in the following chapter, and so it may be possible that it is also a position for discourse-prominent arguments. Consequently, if as argued in Aissen (1999a) active and passive sentences are members of the same candidate set, then a passive sentence like (i), where the *patient* surfaces in the prominent Pole position, emerges as the winner when the *patient* is more discourse-prominent than the *agent*.

b. Compraron el periódico.
bought.3p *the newspaper*
'(They) bought the newspaper.'

The subject *theme* of the impersonal passive surfaces in the post-verbal position because of the ranking *Pole/Theme >> EPP, so the analysis in this case is essentially the same as the one of unaccusative sentences. A similar situation is found in *pro*-dropped constructions like (37b). Here the only overt argument XP of the predicate is the direct object *theme*. As expected under this proposal, this XP still does not move to the preverbal position to satisfy the EPP.[27]

Consider now other kinds of psych predicates. In their influential analysis of psych verbs in Italian, Belletti & Rizzi (1988) list three basic classes of these verbs. One class, the *piacere* 'please' class, where the *theme* is realized as the nominative subject and the *experiencer* as a dative oblique, corresponds to the psych verbs we have discussed so far. In another class, the *temere* 'fear' class, the *experiencer* is realized as the nominative subject and the *theme* as an accusative argument. This class of psych verbs is also observed in Spanish, and includes verbs like *conocer* 'know', *admirar* 'admire', *amar* 'love', *odiar* 'hate', *despreciar* 'loathe/despise',

[27] The precise analysis of *pro*-dropped constructions depends largely on the assumptions that we start out with. In an OT analysis where there are no null subjects at all (Samek-Lodovici 1996), the EPP is violated in (37b), but this is still better than violating *Pole/Theme. In OT analyses that do allow for null subjects (Costa 1998), it is necessary to determine first if null elements can satisfy constraints like the EPP, CASE, etc., and then determine if there is any evidence that a *pro* is functioning as a Pole in *pro*-dropped constructions. Settling this issue goes beyond the scope of this dissertation, but my proposal is compatible with either analysis.

aceptar 'accept', etc. The unmarked word order of clauses with these verbs, where the *experiencer* subject occupies the preverbal position, is illustrated in (38).

(38) Juan ama a María. **S V O**
Juan loves ACC *María* <EXP> <THEME>
'Juan loves María.'

These word order facts are the ones predicted by my analysis. In terms of semantic roles, these predicates are just like *gustar* 'like', analyzed in (32), and so we expect them to have in a similar way, independently of the specific grammatical relations that their arguments display.

The situation is slightly more complex with the third class considered in Belletti & Rizzi (1988), which corresponds to the *preoccupare* 'worry', class. In this case the *experiencer* is realized as an accusative argument, and the nominative subject occupies the preverbal position, as shown in the Italian example in (39).

(39) ITALIAN (Belletti & Rizzi 1988:291)
Questo preoccupa Gianni. **S V O**
this worries Gianni

Most of the Italian verbs of this class considered in Belletti & Rizzi (1988) actually belong to the *gustar* class in Spanish (i.e. the *experiencer* is realized as a dative which surfaces in the preverbal position in the unmarked case). This is shown for *preocupar* 'to worry' in example (40)

(40) 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 where the *experiencer* is realized as an accusative object in the post-verbal field, though. Examples are shown in (41).

(41) a. Juan atemoriza a sus hermanos. **S V O**
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, however, is that in these cases the subject is not really a *theme*, but rather is closer in its thematic properties to an *agent* (see also Pesetsky 1995).[28] The broad semantic role labels we have been using so far are not enough to clarify the state of affairs in (41), but Dowty's (1991) finer distinctions in terms of ProtoRole entailments do shed light on this issue. The subjects in (41), 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.[29] This is in contrast with what is observed

[28] Belletti & Rizzi (1988) in fact note that some verbs of the *preoccupare* class can have an interpretation where one of the arguments functions as an *agent*.
[29] In this respect, it is relevant that Spanish *intimidar* in (41b) is not exactly equivalent to English 'to intimidate', since the former necessarily implies that purposeful actions are taken to bring about the intimidation. Accordingly, (41b) cannot mean that the activists are intimidated simply because of the presence or the amount of power of the government.

with respect to the object in (38) and to the subject in (40), where the psych verbs do not entail the *volitionality* of these arguments.

Notice also that, just like the *theme* arguments of the *gustar* 'like' class (see (40)), the subjects in (41) 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* (see Dowty 1991). Apparently, the additional *volitionality* entailment of the verbs in (41) is enough for their subjects to qualify as *agents*.[30] With these considerations in mind, the word order in (41) is expected under my analysis. Given the ranking EPP >> *Pole/Experiencer >> *Pole/Agent (see (30)), whenever there is both an *agent* and an *experiencer* present, the candidate that satisfies the EPP by moving the *agent* into the Pole emerges as the winner.

In support of this proposal, notice that even though Spanish does not appear to have a large class of verbs equivalent to the Italian *preoccupare* class, it does have a large class of psych verbs that show an alternation where the *experiencer* is realized either as a dative or as an accusative argument. Verbs in this class include *molestar*

[30] My analysis thus resembles the analysis in Pesetsky (1995) (vs. the analysis in Grimshaw 1990) in suggesting that the subjects of psych verbs can display more thematic distinctions than what is standardly assumed (for example, in Belletti & Rizzi 1988). Ultimately, though, Linking analyses like Pesetsky (1995) and Grimshaw (1990), account for which argument of a predicate is mapped as the subject and/or the external argument. Word order, however, is a separate phenomenon. For instance, Grimshaw (1990) and Pesetsky (1995) both agree that a *cause* semantic role is usually enough for an argument of a psych predicate to be mapped as the subject (with the observation that in Grimshaw's analysis the subject of a psych verb does not always correspond to the external argument). The Spanish data in (40-41) corroborate this hypothesis. However, this still does not account for the word order facts, as can be observed in these same data, because the subject occupies a different position in each case. It is precisely here that the finer semantic distinctions in Dowty (1991) become crucial.

'bother', *alterar* 'get on one's nerves', *conmover* 'be moved by', *asustar* 'frighten', *excitar* 'turn on', etc. Crucially, this alternation is correlated to unmarked word order, as shown in (42).[31]

(42) UNMARKED WORD ORDER

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

b. A Juan le molestan los niños.[32] **IO V S**
to Juan DAT-CL *bother* *the children*
'(The) children bother Juan.'

Example (42a) means that the children are intentionally engaged in doing things with the purpose of bothering *Juan*. In contrast, (42b) means that *Juan* finds the children bothersome, i.e., he is irritated by their mere presence or by the normal things that children usually do. This alternation can be straightforwardly accounted for in terms of Proto-Role entailments. In both cases, *the children* are the *cause* of Juan's mental state, but (42a) further has a *volitionality* entailment. This can be seen in that (42a) is compatible with certain adverbs like *a propósito* 'on purpose', whereas (42a) (with a subject-oriented reading) is not.

[31] The *dative/accusative* alternation is also reported for certain Italian verbs in Belletti & Rizzi (1988: 335, fn. 28). I am unaware if the alternation in Italian is also dependent on semantic entailments, though.

[32] In some dialects of Spanish, human direct objects can be doubled by the clitic *le* (the so-called *leista* dialects). Mexican Spanish is not one of these dialects, so it is certain that the *experiencer* in (42b) is a dative indirect object, and not a clitic left-dislocated direct object.

(43) a. Los niños molestan a Juan a propósito.
the children bother ACC *Juan to purpose*
'The children bother Juan on purpose.'

b. ??A Juan le molestan los niños a propósito.
to Juan DAT-CL *bother the children to purpose*
(The children irritate Juan on purpose.)

In terms of word order, when *molestar* 'to bother' entails volitionality, its subject has enough Proto-Agent entailments to count as an *agent*, and so it will surface as the Pole in the unmarked case, as in (42a). In the absence of this entailment, the subject of *molestar* corresponds to a *theme*, and so (42b) displays the *experiencer*-verb-*theme* order observed in the two other major classes of psych verb (the *gustar* 'like' class, and the *amar* 'love' class).[33]

Finally, I consider a number of active intransitive constructions, labeled *impersonal* constructions in the literature on Spanish, which have been recently analyzed in Fernández-Soriano (1999). These constructions are of two kinds. The first kind involves intransitive stative predicates and meteorological verbs that can appear with a preposed locative XP; some of these predicates (such as *faltar* 'lack') can also take a dative XP as their argument. The second class corresponds to intransitive eventive predicates (such as *suceder, ocurrir* 'happen') that can take either a locative

[33] Ultimately, it seems feasible to develop a more refined analysis in which the Pole would be sensitive not to the broad semantic role labels I have been using so far, but rather to finer semantic distinctions such as those expressed in Dowty's Proto-Agent and Proto-Patient entailments. However, for the purposes of the chapters that follow, which concentrate on the properties of the Pole in relation to word order perturbations that result from topicalization and *wh*-movement, the broader semantic role labels will suffice.

or a dative XP as an argument, which can also appear in the preverbal position. The two constructions are exemplified in (44) and (45), respectively.[34]

(44) En Madrid nieva.
in Madrid snows
'It snows in Madrid.'

(45) a. Aquí pasa algo.
here happens something
'Something's going on here.'

b. A Juan le pasa algo.
to Juan DAT-CL *happens something*
'Something's going on with Juan.'

Fernández-Soriano provides considerable evidence that the locative and dative XPs in (44) and (45) are arguments of these predicates. She shows that they behave differently from adjuncts in a number of respects, such as extraction from coordinate clauses and interrogative inversion. She further shows that these arguments are base generated in a position that is both structurally higher than the base position of the *theme* subject and the base position of the locative and dative (*goal*) arguments of other classes of predicates. These conclusions seem well-motivated and will not be contested here.

However, Fernández-Soriano goes on to propose that these locative and dative XPs are quirky subjects that appear in the preverbal subject position in the unmarked case. This would be problematic for my analysis for two reasons. First, in the

[34] Examples (44) and (45a) are taken from Fernández-Soriano (1999).

proposal I have developed, *agents* and *experiencers* are predicted to appear in the preverbal Pole position in the unmarked case, but it is not immediately clear if the dative arguments of impersonal constructions can be grouped under either of these semantic roles. The second problem is that my analysis predicts that *locative* XPs should not appear in the Pole position in the unmarked case, because the constraint *Pole/Locative, which penalizes locative Poles, outranks the EPP (see the ranking in (30)). In relation to the analysis I propose here, Fernández-Soriano's claims about the unmarked word order of these constructions require some clarification.

Consider first the predicates that take a dative complement, like *pasar* 'happen' in (45b). For these constructions I agree with Fernández-Soriano both in that the unmarked word order corresponds to the one in (45b), where the dative appears in the preverbal position, and in that it is fairly clear that these are not psych predicates in the general sense. However, this does not by itself exclude the possibility that the dative XP has the *experiencer* semantic role. In fact, Fernández-Soriano hints at this solution in two different ways. First, she notes that the dative XPs in these constructions do not behave like the *goal* arguments of ditransitive predicates with respect to secondary predication, interrogative inversion and other phenomena. Secondly, she notes that other predicates in this class express a psychological state in relation to some element (call it X) that is not realized as a nominal expression. Instead X is realized as a clause, as in (46a) or it has no (overt) syntactic expression whatsoever, as in (46b):

(46) a. A Pedro le daba lo mismo [decírmelo o no].
to Pedro DAT-CL *gave the same to-tell-me-it or not*
'Pedro didn't care about telling me or not.'

b. A Marta le fue bien en Buenos Aires.
to Marta DAT-CL *went well in Buenos Aires*
'Marta had a very good time in Buenos Aires.'

(Fernández-Soriano 1999: 123)[35]

Based on this observation, it is not unreasonable to suggest that the predicates in (46) simply correspond to a particular kind of Psych predicates. In this class, the *theme* that corresponds to the origin/cause of the psychological state need not be realized as a nominal argument. Similar observations can be made with respect to (45b). In this case, the dative XP can be thought of as an *experiencer* that is affected by the state expressed by verb and the subject *theme*. Still, one probably has to acknowledge that the *experiencer* status of the datives in other verbs of this class is much less clear than in the examples in (45b) and (46). This is the case of the verb *faltar* 'lack', exemplified in (47):

(47) A la silla le falta una pata.
to the chair DAT-CL *lacks a leg*
'The chair has a leg missing (Lit. "a leg is lacking from the chair").'

The thematic characterization of the arguments of this verb does not seem to fit in the Thematic Hierarchy assumed up to now. The dative is clearly not a *experiencer*,

[35] The glosses are my own.

but it is clearly not a *goal* either, since the verb expresses a state. Rather, *faltar* seems to establish something akin to a whole-part relation between the *dative* argument and the subject DP, where it is unclear if semantic roles as understood in §3.2 are of any relevance in defining this relation.[36] However, it does not necessarily follow from this that the arguments of the verb must be equally prominent. In light of our discussion of semantic entailments in psych verbs, it is not unreasonable to think that the Pole may be sensitive to other prominence hierarchies, one of which could include *whole > part* as a part of the scale. This would explain why the dative appears in the preverbal position, since the whole would be more prominent than the part. Investigating this issue in detail, however, requires a more detailed analysis of the semantics of these predicates than is possible here.

The case of preposed locative XPs in (44) and (45a) is somewhat clearer. In this case there is considerable evidence that these preposed locative XPs are topics, and that, *contra* Fernández-Soriano's analysis, they do not appear in the preverbal position in the unmarked case. Fernández-Soriano claims that the word order in (44) and (45a) is felicitous in an out-of-the-blue (i.e. sentence focus) context, which corresponds to our diagnostic for unmarked word order. Although I do not share this judgement, it is possible that part of the problem has to do with the fact that (44) and (45a) correspond to the habitual present, which to my ear is easily amenable to an

[36] This is not an idiosyncratic characteristic of Spanish, of course. For example, French can express some possessive relations by realizing the possessed entity as a nominative DP and the possessor as a dative, as is well known. See also Aissen's (1999b) analysis of external possession in Tz'utujil (Mayan).

interpretation where the referent of the locative has already been introduced in the discourse and/or is readily identifiable by both speaker and hearer.[37] In contrast, imagine a context where speaker A walks into a room and sees speaker B watching the news on television; he then utters the question in (48). In this context, the answers where the locative PP of meteorological verbs occupies the preverbal position are robustly infelicitous for all speakers of Mexican Spanish consulted:

(48) Qué pasa?
what happens
'What's happening?'

(49) a. Está nevando en Barcelona.
it-is snowing in Barecelona
'It's snowing in Barcelona.'

b. #En Barcelona está nevando.
in Barcelona it-is snowing

(50) a. Está lloviendo en Guadalajara.
it-is raining in Guadalajara
'It's raining in Guadalajara.'

b. #En Guadalajara está lloviendo.
in Guadalajara it-is raining

As further evidence that fronted locatives in these constructions are functioning as topics, notice that for some speakers their acceptability is considerably downgraded in an out-of -the-blue context when they are indefinite, as shown in (51-52).[38] Although

[37] See the section on sentence topics in §4.3.

[38] Definiteness and specificity are variables that are not controlled for in Femández-Soriano's investigation. In most of her example sentences, the preverbal locatives are either deictic locative

this is not the case for all speakers, its worth pointing out that, in contrast, preverbal *agents* and *experiencers* are not subject to this restriction, as shown in (53).

(51) a. Aquí pasa algo.
here happens something
'Something's going on here.'

b. %En un salón pasa algo.
in a classroom happens something

(52) a. Aquí falta azucar.
here lacks sugar
'There's sugar missing here.'

b. %En una mesa falta azucar.
in a table lacks sugar

(53) a. Una muchacha compró los discos.
a girl bought the records
'A girl bought the records.'

b. A un reportero le gustó tanto tu discurso que
to a journalist DAT-CL *liked so-much your speech that*
lo quiere publicar.
ACC-CL *he-wants to-publish*
'A journalist liked your speech so much that he wants to publish it.'

Consider also one of the crucial arguments presented by Fernández-Soriano in favor of her analysis of these locative XPs as quirky subjects. In her analysis, these locative XPs must receive quirky case in [Spec, I], which helps explain why they surface in this position in the unmarked case. In support of this proposal, Fernández-

pronouns like 'here' or proper names corresponding to locations, whereas the post-verbal subjects are almost always indefinite or bare NPs. Given the nature of Spanish as a discourse-configurational language, it is important to control for these variables.

Soriano notes that the locative XPs are in complementary distribution with the dative XPs previously discussed, which are also quirky subjects. This is shown in (54)

(54) a. Me falta café.
to-me misses coffee
'I am missing coffee.'

b. Aquí falta café.
here misses coffee
'Coffee is missing here.'

c. ??Aquí me falta café.
here to-me misses coffee (Fernández-Soriano 1999:121)

The argument is that if quirky case is discharged on the dative, then there is no possibility for the locative to receive quirky case in [Spec, I]. Example (54c), however, seems to me to be simply pragmatically anomalous, since one can readily construct other instances where the *locative* and the dative are not in complementary distribution.

(55) a. En Barcelona nos pasó lo peor.
in Barcelona to-us happened the worst
'The worst happened to us in Barcelona.'

b. En esta colonia nos faltan policias.
in this neighborhood to-us lack policemen
'We do not have enough policemen in this neighborhood.'

Fernández-Soriano claims that constructions like (55) are only possible when the locative is not an argument of the verb, in which case their interpretation is

necessarily that of an adjunct. In other words, (54c) would have to be interpreted as something like 'when I am here, I lack coffee' (Fernández-Soriano 1999: 122). Although this is certainly a possible interpretation for (55a), ('When we were in Barcelona, the worst happened to us'), example (55b) cannot have an interpretation along these lines (i.e. 'When we are in this neighborhood, we don't have enough policemen'). This points to the conclusion that the presence of the locative XP in [Spec, I] is not related to its status as either an argument or an adjunct, but rather to information structure considerations (i.e. topicalization).

Finally, recall from §3.3.2 that fronted topics create islands for extraction. The fronted locative XPs of impersonal verbs behave like topics in this respect, as shown in the examples in (56-57). Notice here that extraction is perfect when the locative XP appears in the post-verbal field. In contrast, preverbal subjects (Goodall 2001) and *experiencers* do not lead to such island effects, as shown in (58) (example (58a) is from Goodall 2001). This contrast holds both when the extracted *wh*-operator is D-Linked (as in (57a) and (58b)) and when it is not (as in (56a) and (58a)).

(56) a. *Qué$_i$ dices [que en Barcelona pasó t_i la semana pasada]?
what you-say that in Barcelona happened the week past

b. Qué$_i$ dices [que pasó t_i en Barcelona la semana pasada]?
what you-say that happened in Barcelona the week past
'What did you say happened in Barcelona last week?'

(57) a. ??Cuántos días$_i$ dices [que en Barcelona nevó t_i la semana pasada]?
how-many days you-say that in Barcelona snowed the week past

b. Cuántos días$_i$ dices [que nevó t_i en Barcelona la semana pasada]?
how-many days you-say that snowed in Barcelona the week past
'For how many days did you say that it snowed in Barcelona last week?'

(58) a. 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?'

b. Qué discurso$_i$ dices [que a Juan le gustó tanto t_i [que lo quiere publicar]]?
what speech say that to Juan DAT-CL *liked so-much that* ACC-CL *wants to-publish*
'What speech did you say that Juan liked so much that he wants to publish it?'

Summing up, Spanish impersonal constructions clearly deserve more study, but their behavior does not appear to represent immediate counter-evidence against my proposal. On the one hand, the dative arguments of impersonal verbs can be taken to be either *experiencers* or elements that are semantically more prominent than the subject DP along a scale different from the Thematic Hierarchy. On the other, the *locative* arguments of these verbs do not seem to surface in the Pole position in the unmarked case, and in those cases where they do appear in the preverbal field the evidence indicates that this is the result of topicalization.

3.4 Conclusions

In this chapter I have proposed that the unmarked word order observed in transitive, psych and unaccusative clauses in Spanish is dependent on structural markedness considerations. Poles with different semantic roles instantiate different degrees of markedness, and beyond a certain degree it is better to leave clauses without a Pole, in violation of the EPP. The scale of structural markedness responsible for these effects can be formalized by Harmonic Alignment of a scale of semantic roles with a structural prominence scale that incorporates the notion of the Pole. Embedding the EPP in the subhierarchy of markedness constraints that results from Harmonic Alignment then provides an analysis of the relevant word order facts. The resulting analysis also accounts straightforwardy for the unmarked word order observed in impersonal passives, *pro*-dropped constructions and in clauses with different kinds of psych verbs, and it can accommodate the basic word order facts observed in impersonal constructions.

The analysis developed in this chapter and the previous one constitute the core of my proposal. However, the markedness constraints in the Pole Hierarchy are not only relevant for defining the unmarked word order in Spanish. As I discuss in the chapters that follow, the sensitivity of the Pole to the semantic role of the constituent that occupies it can also be observed in topicalization and *wh*-movement. This provides further support for my approach, and allows us to develop an analysis where a

number of left-peripheral word order phenomena in Spanish are directly linked to the properties of the Pole.