

# Narrow Focus on Pre-nominal Modifiers in Spanish: An Optimality-Theoretic Analysis

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## 1. Introduction

This paper presents an Optimality-Theoretic (Prince and Smolensky 1993/2004) analysis of presentational focus on pre-nominal modifiers in Spanish. In particular, it argues that evidence from contexts putting focus on a pre-nominal number or other modifier should lead us to revise how we conceptualize constraints on stress-focus correspondence. I propose that, rather than an absolute requirement that stress and focus correspond, stress and focus must be aligned as closely as possible.

The discussion is laid out as follows. Section 2 presents the puzzle and new data. Section 3 discusses previous approaches to focus in Spanish and highlights why a refinement is necessary. Section 4 presents the analysis, and section 5 discusses its implications.

## 2. The puzzle

It is widely understood that the focused element of a sentence must correspond with the main stress of the sentence.<sup>1</sup> Consider, for example, (1-3).<sup>2</sup>

- (1) Who saw a movie? (Narrow subject focus)
  - a. [My **mom**]<sub>F</sub> saw a movie.
  - b. # [My mom]<sub>F</sub> saw a **movie**.
  
- (2) What did your mom see? (Narrow object focus)
  - a. # My **mom** saw [a movie]<sub>F</sub>.
  - b. My mom saw [a **movie**]<sub>F</sub>.
  
- (3) How many people saw a movie? (Narrow focus on the number)
  - a. [**Three**]<sub>F</sub> people saw a movie.
  - b. # [Three]<sub>F</sub> **people** saw a movie.
  - c. # [Three]<sub>F</sub> people saw a **movie**.

In each of these cases of narrow focus, a stress-focus mismatch is not possible; the main sentence stress must fall on the constituent in focus.

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<sup>1</sup> This is, of course, not true in all languages. It does not account for tonal languages or for those that mark focus morphologically (see Büring 2009). However, it is the case for a broad spectrum of languages, and certainly for Spanish and English.

<sup>2</sup> Here, and throughout, main stress is indicated by **boldface**, and the hash mark ‘#’ indicates infelicity. The constituent in focus is marked by brackets with the subscript ‘F.’

It is also generally understood that non-contrastive stress in Spanish must be rightmost, regardless of the context in which it appears. Consider (4-6).

- (4) Mi mamá vio una **película**.  
 my mom saw a movie  
 ‘My mom saw a movie.’
- (5) # Mi **mamá** vio una película.
- (6) Vio una película mi **mamá**.

Regardless of the focus, (5), with the main stress leftward, is infelicitous,<sup>3</sup> while (4) and (6) are possible realizations of this sentence, depending on the context. Both have rightmost stress.

We know, then, that stress in Spanish is rightmost, and that stress and focus must correspond. Focused constituents thus appear rightmost, where they also get main stress.

- (7) Who saw a movie? (Narrow subject focus)
- Vio una película [mi **mamá**]<sub>F</sub>.  
 saw a movie my mom  
 ‘My mom saw a movie.’
  - # [Mi mamá]<sub>F</sub> vio una **película**.
  - # [Mi **mamá**]<sub>F</sub> vio una película.
- (8) What did Lori sell to Meghanne? (Narrow object focus)
- Lori le vendió a Meghanne [un **erizo**]<sub>F</sub>.  
 Lori Cl.DAT sold to Meghanne a hedgehog  
 ‘Lori sold a hedgehog to Meghanne.’
  - # Lori le vendió [un erizo]<sub>F</sub> a **Meghanne**.
  - # Lori le vendió [un **erizo**]<sub>F</sub> a Meghanne.

In each of these examples, the focused element appears rightmost, where it also gets main stress. A focus-stress mismatch, as in (7b) and (8b) is infelicitous, as is shifting the stress to the focused constituent, as in (7c) and (8c).

However, focus on pre-nominal modifiers, such as numbers, complicates this picture. For some speakers, when the focus is on the modifier, as in (9), the stress is rightmost, but the stress and focus do not correspond. Despite the stress-focus mismatch, the subject must still be sentence-final. This is curious if one considers that many explanations (e.g. Zubizarreta 1998, Büring and Gutiérrez-Bravo 2001) for subject-final orders under narrow focus in Spanish motivate this word order variation by appealing to the fact that the focus must be stressed. Because main stress is rightmost in Spanish, it is argued, the focused element must appear rightmost, where it gets stress. However, in (9), the subject appears rightmost despite the fact that this word order does not allow for main stress on the focused element. In this case, then, subject-final order cannot be derived based on the focus needing to be in a position where it is stressed.

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<sup>3</sup> It is possible to shift the stress in cases of contrastive/emphatic focus, which is not the type of focus this paper considers. Contrastive focus appears to be able to break all the rules, as it were, and its proper analysis is outside the scope of this paper. I am concerned here with presentational or information focus.

- (9) How many police officers arrested the suspect? (Narrow focus on the number)
- Arrestaron al sospechoso [cuatro]<sub>F</sub> **policías**.  
arrested the suspect four police officers  
'Four police officers arrested the suspect.'
  - # Arrestaron al sospechoso [**cuatro**]<sub>F</sub> policías.
  - # [**Cuatro**]<sub>F</sub> policías arrestaron al sospechoso.
  - \* Policías arrestaron al sospechoso [**cuatro**]<sub>F</sub>.
  - # [Cuatro]<sub>F</sub> policías arrestaron al **sospechoso**.

As with examples (7c) and (8c), shifting the stress to the focused constituent, as in (9c), is infelicitous. However, in this case, stress-focus mismatch is felicitous (9a).<sup>4</sup> Further, having a sentence-final subject but shifting the stress even a bit (9b) is out, as is moving the noun out from behind the modifier to put the number in rightmost position (9d). Interestingly, though stress-focus mismatch is allowed when the subject is sentence-final (9a), this mismatch in a sentence with canonical word order (9e) is infelicitous.

Before continuing, it should be noted that not all speakers agree with the judgments in (9). Some strongly prefer (9b) to (9a), while others strongly prefer (9a) to (9b). Some prefer (9c). No speakers, as far as I am aware, accept (9d) or (9e). Despite these differences, though, this data, taken from speakers of Peninsular Spanish, certainly describes some subset of Spanish speakers. Further, those whose judgments are different can also be accounted for under the analysis presented here via constraint re-ranking (see section 4.4). More work is needed to determine how widespread this phenomenon is and whether its distribution may be dialectal; while this variation is certainly intriguing, such discussion is outside the scope of the present work, since I am principally interested here in what the grammars of those speakers whose judgments pattern like (9) can tell us about our conceptualization of stress-focus correspondence. To be clear, then, I am not claiming that the data in (9) represents all or even most Spanish speakers; there is significant variation which merits further study. However, some speakers do have the judgments in (9), and this case is an especially interesting one, in that it raises questions about our understanding of focus, which is why it is my principal focus here.

Though I will focus on the example in (9) in the rest of the paper for ease of explanation, it is worth noting that these facts appear to be the same with other focused modifiers as well, not just numbers. For instance, the same pattern holds of ordinal numbers (10), demonstratives (11), and pre-nominal adjectives (12).

- (10) Which contestant won the prize? (Narrow focus on the number)
- Ganó el premio el [primer]<sub>F</sub> **concurante**.  
won the prize the first contestant  
'The first contestant won the prize.'
  - # Ganó el premio el [**primer**]<sub>F</sub> concursante.
  - # El [primer]<sub>F</sub> concursante ganó el premio. (Regardless of stress)

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<sup>4</sup> An anonymous reviewer points out that a more natural way to respond to the question in (9) is by omitting the noun altogether, as in something along the lines of (i).

- How many police officers arrested the suspect?  
Lo arrestaron [**cuatro**]<sub>F</sub>.  
CL.ACC arrested four  
'Four (police officers) arrested him.'

While I recognize that this strategy, among others, is perhaps more common in natural speech, and is worth investigating as well, it does not permit us insight into the questions of stress-focus correspondence which are of principal interest here, and, as such, I will not consider it in this work.

- (11) Which platypus ate all the food? (Narrow focus on the demonstrative)
- Comió toda la comida [este]<sub>F</sub> **ornitorrinco**.  
ate all the food this platypus  
'This platypus ate all the food.'
  - # Comió toda la comida [**este**]<sub>F</sub> ornitorrinco.
  - # [Este]<sub>F</sub> ornitorrinco comió toda la comida. (Regardless of stress)
- (12) Which of the thieves admitted the crime? (Narrow focus on the adjective)
- Admitió el crimen el [supuesto]<sub>F</sub> **ladrón**.  
admitted the crime the alleged thief  
'The alleged thief admitted the crime.'
  - # Admitió el crimen el [**supuesto**]<sub>F</sub> ladrón.
  - # El [supuesto]<sub>F</sub> ladrón admitió el crimen. (Regardless of stress)

There is also the same stress-focus mismatch when the modifier is before a noun in object position, though these cases are somewhat less interesting, in that we don't have to account for their post-verbal position, since the canonical position of the object is after the verb and thus there is no discourse-related word order variation.

- (13) Which platypus did Kalyani buy? (Narrow focus on the demonstrative)
- Kalyani compró [este]<sub>F</sub> **ornitorrinco**.  
Kalyani bought this platypus  
'Kalyani bought this platypus.'
  - # Kalyani compró [**este**]<sub>F</sub> ornitorrinco.
- (14) Which Bad Religion record did you buy? (Narrow focus on the adjective)
- Compré su [último]<sub>F</sub> **disco**.  
bought.1st their latest record  
'I bought their latest record.'
  - # Compré su [**último**]<sub>F</sub> disco.

Though I will focus mainly on example (9), this phenomenon appears to hold for a broad set of pre-nominal modifiers. This situation, then, which admits stress-focus mismatch, yet still requires the subject to be rightmost (when the focused modifier is the subject's), is a curious one that poses a problem for analyses of Spanish focus, and which has not, to my knowledge, been discussed in the literature.<sup>5</sup> The goal of this paper is to give an analysis of this data, which will require rethinking how we approach stress-focus correspondence. In order to do this, though, we must first discuss how rightmost focus in Spanish is generally analyzed.

### 3. Rightmost focus in Spanish

Perhaps the most influential analysis of focus in Spanish is Zubizarreta's (1998) monograph, in which she analyzes rightmost focus in Spanish in terms of prosodically motivated movement (*p-movement*). In Zubizarreta's system, there are two stress rules, a Nuclear Stress Rule (NSR) and a Focus Prominence Rule (FPR), and, when they conflict, *p-movement* intervenes to save the structure. *P-movement* moves discourse-given constituents leftward so that the focused constituent, which is assigned stress by the FPR, ends up in rightmost position, where it is assigned stress by the NSR.

Zubizarreta proposes that the Nuclear Stress Rule (Chomsky and Halle 1968) be rethought as two different NSRs, one based on selection (the S-NSR) and one based on asymmetric *c-command* (the C-NSR). In Spanish, the C-NSR is the only one that applies, and Zubizarreta defines it as in (15).

<sup>5</sup> I am aware of discussions of pre-nominal modifiers in English (e.g. in Selkirk 1995), but not in Spanish.

(15) C-NSR (Zubizarreta 1998:19, ex. 45)

C-NSR: Given two sister categories  $C_i$  and  $C_j$ , the one lower in the asymmetric c-command ordering is more prominent.

Under Zubizarreta's assumptions, the rightmost constituent in a sentence is always lowest in the asymmetric c-command ordering, and so the C-NSR always assigns stress to the rightmost constituent.

The other rule on stress that Zubizarreta proposes is the Focus Prominence Rule, building on the Focus Prosody Correspondence Principle proposed by Chomsky (1971) and Jackendoff (1972).

(16) FPR (Zubizarreta 1998:88, ex. 159)

Given two sister nodes  $C_i$  (marked [+F]) and  $C_j$  (marked [-F]),  $C_i$  is more prominent than  $C_j$ .

The consequence of the FPR is that the focused constituent (the constituent marked [+F]), must receive main stress.

If the NSR assigns main stress at the end, and the FPR assigns main stress to the constituent in focus, when the focused constituent is not rightmost, these rules conflict, and the structure should crash. Example (17) shows such a conflict.

(17)\*

	FPR		NSR
	⇓		⇓
Lori le	vendió	[un erizo] <sub>F</sub>	a Meghanne.
Lori Cl.DAT	sold	a hedgehog	to Meghanne
'Lori sold a hedgehog to Meghanne.'			

In a case such as (17), p-movement saves the day by moving the discourse-given constituent *a Meghanne* above the focused constituent *un erizo*. In this way, the focused constituent ends up lowest in the asymmetric c-command order, and is thus in the position where the NSR assigns main stress. Since it is focused, the FPR assigns it main stress as well, and since both rules agree now, the structure is acceptable.

(18)

	FPR	NSR
	⇓	⇓
Lori le	vendió	a Meghanne [un <b>erizo</b> ] <sub>F</sub> .
Lori Cl.DAT	sold	to Meghanne a hedgehog
'Lori sold a hedgehog to Meghanne.'		

Via p-movement, then, rightmost focus is derived in Spanish. In every case, p-movement ensures that the focused constituent ends up in rightmost position so that it can be assigned stress by both the NSR and the FPR.

However, in the case of pre-nominal modifiers, as in (9) above, p-movement cannot be the correct explanation. P-movement occurs so that the NSR and FPR can both be satisfied, but, in the case of (9), the stress and focus do not correspond, so the FPR is not satisfied. The NSR is satisfied, in that stress is rightmost, but the focused constituent *cuatro* is not stressed. In fact, the movement that one might expect, leaving only *cuatro* rightmost, where it would get stress by the FPR and NSR, as in (9d), is not possible. Nonetheless, the subject is rightmost rather than in pre-verbal position, so some sort of movement does appear to have occurred. This movement can't be motivated by satisfying the NSR and FPR, though, in that they are not both satisfied in the end. This case of stress-focus mismatch can't be rescued by p-movement.

If p-movement is not a possible explanation for the data in (9), we should consider other possible analyses. Several promising recent studies have analyzed focus realization in terms of Optimality Theory (OT) (Prince and Smolensky 1993/2004). Büring and Gutiérrez-Bravo (2001) discuss English, Spanish and German; Gutiérrez-Bravo (2002) discusses English and Spanish; and Samek-Lodovici (2005) discusses English, German, Italian, and French. These authors propose fundamentally similar approaches to the analysis of focus, and I will thus consider them together.





## (21) TRACE-GOVERNMENT (T-GOV)

A trace is governed.

*Violated once for each trace that is not properly governed.*

This constraint outranks rightmost stress in Italian and is undominated, and it has the practical effect of disallowing a structure like (20d), where the noun moves out from behind the modifier. In this way, Samek-Lodovici (2005:711-713) accounts for the Italian data in (22).

## (22) How many children arrived? (Narrow focus on the number)

- a. Sono arrivati [**tre**]<sub>F</sub> bambini.  
are arrived three children  
'Three children have arrived.'
- b. \*Bambini sono arrivati [**tre**]<sub>F</sub>.
- c. \***[Tre]**<sub>F</sub> bambini sono arrivati.
- d. #Sono arrivati [tre]<sub>F</sub> **bambini**.

It is obvious, though, that the Italian data is different from the Spanish data, in that Italian puts stress on the modifier *tre* 'three,' as in (22a), while the Spanish data puts stress on the noun, like in (22d) (cf. example 20). Samek-Lodovici's proposal correctly predicts (22a) and disallows (22d) for Italian, but an account of the Spanish data will need to be different. Nonetheless, Samek-Lodovici's proposal appears to be on the right track, and it shows a few reasons that an OT account may be particularly well suited to accounting for focus.

Because constraints in OT are violable, the addition of a higher-ranked constraint can account for structures that can't be captured in a system with inviolable rules. Note that Samek-Lodovici is able to give an account of pre-nominal modifiers in Italian because T-GOV can outrank constraints on stress. In contrast, a proposal like Zubizarreta's admits no such possibility, in that the FPR and NSR must always be satisfied. Samek-Lodovici also shows us that not all constraints on syntax are created equal. T-GOV, a constraint on syntax, can outrank prosodic constraints, which in turn outrank other syntactic constraints. This ability to intermingle constraints touching on the different components of the grammar is another advantage of using a theory like OT to account for focus, which involves multiple parts of the grammar. Because of these and other advantages, it seems that an OT model is particularly well-suited to the analysis of focus, even though the previous approaches discussed in this section cannot fully give an account for the pre-nominal modifier data. As such, I turn in the next section to building on these analyses in order to give such an account.

## 4. Analysis

As noted in the previous section, an account of focus in Spanish must consider constraints on prosody, on syntax, and on stress-focus correspondence. Let's begin with prosody.

### 4.1. Prosodic Constraint

I assume a constraint on prosody similar to the ones proposed by Samek-Lodovici (2005), which requires that the main sentence stress be aligned with the right edge of the intonational phrase.

## (23) ALIGN (HEAD, RIGHT; IP, RIGHT) (ALIGN-IP-R)

The head of each intonational phrase is aligned with the right edge of the phrase.

*Violated once for phonological phrase boundary between the intonational phrase head and the intonational phrase's right edge.*

Crucially, an alignment constraint of this sort admits gradient violation. That is, it incurs additional violations for each 'step' away from the right edge that the main stress falls. The gradient nature of this constraint is evident from cross-linguistic evidence from English. (Recall that constraints

are assumed to be universal, so a constraint on prosody in Spanish should be the same as the one in English. For additional evidence from Spanish, though, see section 4.4.) In (24-27), we can see that the stress falls ‘as far right as possible’ given the focus structure of the sentence. That is, in each case, the optimal candidate is that candidate that incurs the fewest violations of ALIGN-IP-R while satisfying stress-focus correspondence.

(24) What’s up?

- a. [Lori sold a hedgehog to **Meghanne**]<sub>F</sub>.
- b. # Any stress farther left (on *hedgehog*, say)

(25) What have you heard about Meghanne recently?

- a. [Lori sold a **hedgehog**]<sub>F</sub> to Meghanne.
- b. # Any stress farther left (on *sold*, say)

(26) I just saw Meghanne with a hedgehog. How did she get it?

- a. [Lori **sold**]<sub>F</sub> that hedgehog to Meghanne.
- b. # Any stress farther left

(27) Who sold a hedgehog to Meghanne?

- a. [**Lori**]<sub>F</sub> sold a hedgehog to Meghanne.

The constraint ALIGN-IP-R, then, is an alignment constraint requiring stress to be aligned as closely as possible with the right edge of the iP while satisfying all higher-ranked constraints, and it admits gradient violation. Further, I assume, following Büring and Gutiérrez-Bravo (2001) and Gutiérrez-Bravo (2002), that this constraint is undominated in Spanish, meaning that no other constraint outranks it in Spanish. Stress right-alignment (ALIGN-IP-R) being undominated will yield the correct predictions that Spanish stress must always be rightmost, since even a single violation will be enough to doom the structure.

#### 4.2. Syntactic Constraints

Turning now to constraints on syntax, I assume, following Samek-Lodovici (2005), two basic and uncontroversial constraints on syntactic well-formedness: EPP and STAY.

(28) EPP

Clauses have subjects.

The highest A-Specifier (or the Spec of I-related heads such as T<sup>0</sup>, Agr<sup>0</sup>, Neg<sup>0</sup>) must be overtly filled.

*Violated if a clause does not have an overt pre-verbal subject.*

(29) STAY

No traces.

*Violated once for each trace (or copy).*

EPP requires that sentences have overt pre-verbal subjects, and STAY penalizes movement. As we have already seen, these constraints must be ranked low in Spanish, in that Spanish permits movement and post-verbal subjects in order to accommodate stress-focus correspondence and rightmost stress. I will also assume that EPP outranks STAY, since subjects do move to pre-verbal position in violation of STAY in unmarked contexts.

As discussed in section 3, though, these two low-ranked constraints on syntax are not enough to account for the modifier data. Something like Samek-Lodovici’s T-GOV is also necessary in order to ensure that nouns do not move out from behind their modifiers. Such a constraint must be ranked high, as it is evident that no discourse or prosodic considerations are sufficient to cause a noun to move from

behind its modifier. I assume, then, that some constraint like T-GOV (repeated in (30)) is active, and I further assume that it is undominated.

(30) TRACE-GOVERNMENT (T-GOV)

A trace is governed.

*Violated once for each trace that is not properly governed.*

Note that, though Samek-Lodovici formulates this constraint in terms of government, nothing in my argument hinges on the technical implementation of this constraint. All that is necessary is that some constraint disallow extracting a noun from behind its modifier.<sup>8</sup>

### 4.3. Stress-Focus Correspondence

With the constraints on syntax and on prosody established, we can turn to a discussion of stress-focus correspondence. To begin with, let us take an uncontroversial formulation of a constraint of this type, such as Büring and Gutiérrez-Bravo's (2001) FOCUSPROMINENCE.

(31) FOCUSPROMINENCE (FP) [Initial formulation]

Focus is most prominent.

*Violated if the main stress (the *iP*-level stress) does not correspond to the Foc-marked node(s).*

As previously mentioned, previous OT analyses of focus take such a constraint to be undominated. In fact, some similar principle—such as the Stress-Focus Correspondence Principle (Reinhart 2006; Szendrői 2001) or the Focus Prosody Correspondence Principle (Zubizarreta 1998, based on Chomsky 1971 and Jackendoff 1972)—seems to be a part of all analyses of focus, regardless of their theoretical paradigm. The commonality that all these approaches share is in their assumption that stress and focus must always correspond, or else the structure fails.

However, as we have already seen, stress and focus do not correspond in the Spanish modifier data (9), repeated here in (32). Knowing that stress-focus correspondence does not occur, and knowing that Spanish rightmost stress (ALIGN-*iP*-R) is undominated, the first move one might make is to allow ALIGN-*iP*-R to outrank FP. However, this move will not yield correct predictions, in that it would predict that (32e) would be the optimal candidate.

(32) How many police officers arrested the suspect? (Narrow focus on the number)

- a. Arrestaron al sospechoso [cuatro]<sub>F</sub> **policías**.  
arrested the suspect four police officers  
'Four police officers arrested the suspect.'
- b. # Arrestaron al sospechoso [**cuatro**]<sub>F</sub> policías.
- c. # [**Cuatro**]<sub>F</sub> policías arrestaron al sospechoso.
- d. \* Policías arrestaron al sospechoso [**cuatro**]<sub>F</sub>.
- e. # [Cuatro]<sub>F</sub> policías arrestaron al **sospechoso**.

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<sup>8</sup> I should note, in response to an insightful question from an HLS audience member, that an alternative to T-GOV would be to conclude that certain aspects of the syntactic structure are in fact specified in the input to the Optimality computation. This appeals to the idea that there are some aspects of the syntax that can be manipulated in order to satisfy discourse requirements and other aspects of the syntax that are insensitive to such requirements. I remain agnostic as to the ultimate solution to this question, which is really beyond the scope of this paper, but I will continue to build an analysis completely within OT for the sake of crafting a coherent argument. Further, I do not believe that the possibility that some of the syntax is specified in the input weakens the broader case for OT being a good way to analyze focus, and it does not impact the rest of the argumentation in this paper.



alignment of focus with the edges of prosodic phrases, not with stress, but it serves to show that the general idea of aligning prosody with focus is within the realm of possibility.

Most importantly, this formulation of FP yields the correct predictions, as we can see in (34).

(34) How many police officers arrested the suspect? (Narrow focus on the number)

- a. Arrestaron al sospechoso [cuatro]<sub>F</sub> **policías**.  
 arrested the suspect four police officers  
 ‘Four police officers arrested the suspect.’
- b. # [Cuatro]<sub>F</sub> policías arrestaron al **sospechoso**.

N: {cuatro, policías, arrestar, el, sospechoso} Context: x police officers arrested the suspect	ALIGN-IP-R	T-GOV	FP	EPP	STAY
( * )I a. ( * )( * )( * )( * )P Arrestaron al sospechoso [cuatro] <sub>F</sub> policías.			*	*	*
( * )I b. ( * )( * )( * )( * )P [Cuatro] <sub>F</sub> policías arrestaron al sospechoso.			**!*		*

Comparing just the two problem cases from (32) here in (34), we can see that the reformulated FP makes the correct predictions, in that (a) is chosen as optimal. This is because it incurs the fewest violations of FP. The main stress in (a) is misaligned with the focused element *cuatro* ‘four’ by only one step, while the distance between the focus and the main stress in (b) is much greater.

This reformulation of FP also gives us an explanation for the curious fact that the subject is sentence-final despite the stress-focus mismatch. Recall that the explanation for focus-final structures given by both Zubizarreta and the OT analyses discussed above is that stress must be rightmost, and focus and stress must correspond, so focus must be rightmost. Since focus and stress do not correspond in this case, it is clear that being in a position to get main stress on the focus cannot be the motivation for the sentence-final subject in cases of nominal modifiers. However, if we conceive of stress-focus correspondence as stress-focus alignment, it is clear why the subject should be sentence-final even though there’s a stress-focus mismatch: it is because having the subject in final position minimizes the mismatch, even though it can’t eliminate it. That is, a final subject (when its pre-nominal modifier is in focus) incurs fewer violations of FP than a pre-verbal subject, because the focused modifier is as close to the main stress as it can possibly be, while respecting higher-ranked constraints.

Because reformulating stress-focus correspondence as an alignment constraint gives the correct predictions for this data and provides an explanation for sentence-final subjects in these cases despite the stress-focus mismatch, I suggest that we should rethink stress-focus correspondence in terms of alignment.

#### 4.4. Variation

As noted in section 1, not all speakers agree with the data in (9). Nonetheless, the analysis developed here can account for this variation via constraint re-ranking. In OT, cross-linguistic variation is accounted for by different rankings of universal constraints for different languages. The same concept can be applied to different varieties of the same language. The grammars of those Spanish speakers who prefer (9b) to (9a) can thus be modeled by assuming a different ranking of the constraints presented above. More specifically, for these speakers, stress-focus correspondence outranks stress right-alignment. This is presented in (35).



I have argued that stress-focus correspondence is not absolute, but rather that it is an alignment constraint admitting gradient violation. This puts it in line with other constraints on prosody (like ALIGN-IP-R), which are formulated in terms of alignment. This formulation gives an explanation for sentence-final subjects when their pre-nominal modifiers are in focus despite the stress-focus mismatch.

I have also argued that stress-focus correspondence is not always undominated, but rather that it can be dominated by constraints on prosody and syntax, such as ALIGN-IP-R and T-GOV. I propose the constraint ranking in (36) for (some speakers of) Spanish.

(36) Constraint Ranking  
(T-GOV <<>> ALIGN-IP-R) >> FP >> EPP >> STAY

In fact, it is only because FP is dominated by other constraints that we can see its gradient violations. In other languages, like English, for example (as well as for some speakers of Spanish), it appears that FP is in fact undominated, which is what gives it the appearance of being an either/or constraint. When FP is undominated, even a single violation is enough to doom the structure, and thus it makes sense that previous analyses have considered it an absolute requirement. However, due to the fact that in the Spanish under consideration here stress right-alignment outranks FP, we are able to understand more about the nature of FP.

There are several implications of these conclusions. First, almost every approach to focus assumes that there is some constraint (in OT models) or some principle/rule (in other models) that requires stress and focus to correspond, and that this constraint or rule must always be satisfied to produce a felicitous structure. The data and analysis presented here argue against this view. Second, this paper does, on the other hand, generally support those analyses that claim that prosody plays a central role in the realization of focus. That is, even though there can be stress-focus mismatch, the general point that stress is a major part of understanding focus is supported.

A third implication of this data concerns those approaches that derive focus from stress. For example, the Stress-Focus Correspondence Principle of Reinhart (1995) and Szendrői (2001) and the F-marking rules of Selkirk (1995) take stress as the input for determining the focus. That is, rather than a rule like Büring and Gutiérrez-Bravo's (2001), which says that the focused element gets stress, these approaches say that the stressed element gets focus (in Selkirk's terms, the stressed constituent is F-marked). If the analysis presented here is correct, these approaches may need to be rethought. In the case of pre-nominal modifier focus in Spanish, the focused element is in fact not stressed, yet it is still clearly in focus based on the context. As such, the focus on the modifier cannot be derived from stress, since the modifier is not stressed.

Instead, the data and analysis I've presented point to a system in which focus is determined independently of the stress, perhaps based on the pragmatics of the context, such as the proposal made by Schwarzschild (1999). The main stress is also determined independently, and then the focus and the stress are required to correspond (as closely as possible).

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