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**SUBJECT INVERSION IN SPANISH RELATIVE CLAUSES
A CASE OF PROSODY-INDUCED WORD ORDER VARIATION
WITHOUT NARROW FOCUS***

RODRIGO GUTIÉRREZ-BRAVO
CIESAS-Mexico City

1. Introduction

This paper analyses a number of word order alternations observed in relative clauses in Spanish and concludes that they are the result of intonational considerations. However, it is shown that the relevant intonational factors are not the same as those related to focalization (which is well-known to induce word order alternations in Spanish), but rather they relate to the relative prosodic weight of constituents in the intonational structure of these clauses.

Spanish relative clauses typically (but not necessarily) show transitive subjects in a post-verbal position, as in (1).

- (1) a. *El libro [que escribió la maestra].*
the book that wrote the teacher
“The book that the teacher wrote”
b. *El alumno [al que reprobó la maestra].*
the student ACC-the whom failed the teacher
“The student that the teacher failed.”

Given that Spanish is an SVO language, the post-verbal position of the transitive subjects in (1) is in need of an explanation. As a first step in explaining the word order alternation in (1), it is useful to compare these data with other cases where Spanish transitive subjects appear in a post-verbal position, such as *wh*-interrogatives (Torrego 1984, Contreras 1989) and clauses

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where the subject is the narrow focus of the clause (Contreras 1976, Zubizarreta 1998, Büring & Gutiérrez-Bravo 2001, Gutiérrez-Bravo 2002). Such a comparison indicates that the inversion facts in (1) are unlike those of these better-known cases of subject inversion.

1.1 *Wh-interrogatives*

Subject inversion is observed in Spanish *wh*-interrogatives like (2), as is well known. Many different analyses have been developed to account for this pattern, but recently Zubizarreta (1998) and Gutiérrez-Bravo (2002) have proposed that inversion in interrogatives results from the fact that *wh*-phrases in Spanish have Spec-TP as their final landing site. When Spec-TP is occupied by a *wh*-operator, as in (3b), the subject remains in its VP-internal position. Movement of the verb from V-to-T thus derives the *Wh-V-S* order.

- (2) *Qué escribió la maestra?*
 what wrote the teacher
 “What did the teacher write?”
- (3) a. [TP *la maestra_i escribió_k [VP *t_i t_k el libro*]]*
- the teacher wrote the book
- b. [TP *qué_i escribió_k [VP *la maestra t_k t_i*]]*
- what wrote the teacher

However, there are two reasons why this analysis cannot be extended to inversion in relative clauses. First, relative clauses admit preverbal subjects, but *wh*-interrogatives do not (presumably because Spec-TP is indeed available in (4), but not in (3)). See Torrego (1984) and Contreras (1989).

- (4) a. *El libro [que la maestra escribió].*
 the book that the teacher wrote
 “The book that the teacher wrote.”
- b. *El alumno [al que la maestra reprobó].*
 the student ACC-the whom the teacher failed
 “The student that the teacher failed.”
- (5) a. **Qué la maestra escribió?*
 what the teacher wrote
- b. **A quién la maestra reprobó?*
 ACC who the teacher failed

Secondly, the standard assumption is that relative clauses are CPs, not TPs. This is particularly evident in relatives with an overt C⁰ *que* ‘that’, and a null relative operator, such as (6b).¹ Since the landing site of the relative operators is Spec-CP, in these cases Spec-TP is an available position for the subject to move into, and so the optionality of inversion is unsurprising.

- (6) a. *El alumno* [_{CP} *al que*_i \emptyset [_{TP} ___ *reprobó* [_{VP} *la maestra t_i*]]].
 the student ACC-the whom failed the teacher
 b. *El libro* [_{CP} Op_i *que* [_{TP} ___ *compró* [_{VP} *la maestra t_i*]]].
 the book that bought the teacher

Inversion in relatives is thus not the same phenomenon as inversion in *wh*-interrogatives in Spanish. This is the same conclusion that is arrived at about inversion in French in Kampers-Manhe *et al.* (2004), although for reasons different from those presented here for Spanish

1.2 Focalization

As shown in (7), subjects in focus in Spanish typically occupy a post-verbal position. The explanation for inversion in these cases is that foci must be signaled with the nuclear accent of the clause, which is invariably clause-final in Spanish (Contreras 1976, Zubizarreta 1998, Büring & Gutiérrez-Bravo 2001). In order to meet this condition when the subject is in focus, the subject remains in its VP-internal position, while other constituents move to the left. This results in a subject-final construction like (7b), where the subject ends up in the position where it can receive the nuclear accent.

- (7) a. Q: *Quién escribió el libro?*
 who wrote the book
 b. A: *El libro lo escribió [LA MAESTRA]_{Focus}.*
 the book ACC-CL wrote the teacher
 “The TEACHER wrote the book.”

However, there is evidence that the post-verbal position of subjects in relatives is in fact their unmarked position, and not a marked option resulting from focalization. This is observed with the diagnostic that constituents emerge in their unmarked word order when the whole sentence is in focus (i.e. sentence focus contexts). In these cases, the transitive subjects of relatives still emerge in a post-verbal position, as shown in (8). In contrast, the relative with

¹ See Zagona (2002) for evidence that *que* is a complementizer and not a relative pronoun when it appears by itself in relative clauses in Spanish.

a preverbal subject is infelicitous in this context, which is consistent with the general perception (see especially Contreras 1989) that the SV order is a marked option for these relatives.² Observe that the exact opposite situation is observed in matrix clauses like (9). In this case the subject-initial order is clearly preferred, and the subject inversion order is infelicitous.

- (8) a. *Qué pasó?*
what happened?
- b. *Pedro no leyó el libro [que escribió la maestra].* [(O)VS]
Pedro not read the book that wrote the teacher
“Pedro did not read the book that the teacher wrote.”
- c. *#Pedro no leyó el libro [que la maestra escribió].* [(O)SV]
Pedro not read the book that the teacher wrote
- (9) a. *Qué pasó?*
what happened?
- b. *La maestra escribió un libro.* SVO
the teacher wrote a book
“The teacher wrote a book.”
- c. *#Escribió la maestra un libro.* VSO³
wrote the teacher a book

The observation that the post-verbal position is the unmarked position of transitive subjects in the examples above is supported by evidence that preverbal subjects in (5) and (8c) above are sentence topics (in contrast with preverbal subjects in matrix clauses: see also Contreras 1989). For one thing, non-subject XPs functioning as topics have the same distribution, namely, they appear between the complementizer *que* and the verb in T, as shown in (10).

² A reviewer asks if there are cases of inversion in Spanish where the subject is part of a larger focus that includes the predicate. Such cases do exist (Zubizarreta 1998, Gutiérrez-Bravo 2002) but there are two reasons to think that inversion in (8) is unrelated to them. First, inversion with subject and predicate focus with transitive verbs in matrix clauses is not felicitous in a sentence focus context, as shown in (9c). Secondly, while a predicate+subject focus analysis may in principle be compatible with the inversion facts in (8b), by itself it would fail to explain the absence of inversion in ditransitive relatives, a fact discussed in section 4 of this paper. In any case, my claim is not that inverted subjects can't ever be part of a larger focus, but rather that this is not attested in matrix transitive clauses in a sentence focus context (i.e. 9c), in contrast with what is observed in relative clauses.

³ A reviewer asks whether VOS is a felicitous order in Spanish in this sentence focus context. It is in fact not, but it can be discarded on independent grounds because Spanish VOS necessarily has a reading where the subject is a narrow focus (Zubizarreta 1998). Hence the correct comparison must be between the SVO and VSO orders in (9).

- (10) a. *El apoyo masivo y superior [al que
the support massive and superior to-the which
originalmente tuvieron nuestros alcaldes].⁴
originally had our mayors
“The massive support superior to that which our mayors
originally had.”*
- b. *El respaldo [que **en su partido** disfrutaba Aznar] fue
the support that in his party enjoyed Aznar was
abrumador.⁵
overwhelming
“The support that Aznar enjoyed in his party was
overwhelming.”*

More importantly, when the subject of the relative has an instantiation in the previous discourse, it must occupy the preverbal (and not the unmarked post-verbal) position, a typical property of sentence topics in Spanish.

- (11) *Sé que **la maestra** ha editado muchos libros, pero
I-know that **the teacher** has edited many books but
yo estoy buscando...
I am looking-for*
- a. *#el libro que escribió la maestra. [(O)VS]*
the book that wrote the teacher
- b. *el libro que la maestra escribió. [(O)SV]*
the book that the teacher wrote

Lastly, at least some speakers reject relatives with preverbal subjects when the subject is indefinite and non-specific, as shown in (12).

- (12) a. *Podemos presentar una carta [que redacte una estudiante].
we-can present a letter that can-write a student
“We can present a letter that a student can write.”*
- b. *??Podemos presentar una carta [que una estudiante
we-can present a letter that a student
redacte].
can- write*

⁴ *Corpus del Español*, Illinois State University/Brigham Young University.

⁵ Note from The Associated Press, Madrid.

The evidence thus indicates that the unmarked subject position in the relatives under consideration is the post-verbal position, which rules out an analysis where this position results from narrow focalization of the subject.

2. *Prominence, prosodic weight and word order*

2.1 *Prosodic structure*

The proposal I develop to account for these word order facts is that the VS order of relatives results from intonational considerations, although not those that are relevant for focus. The assumptions that I adopt about prosodic structure and its relation to syntactic structure are the following. I assume that, intonationally, clauses correspond to Intonational Phrases (iPs), which are composed in turn of Phonological Phrases (PhonPs), as in Nespor & Vogel (1986) and Selkirk (1984). This is schematized in (13).

- (13) (iP)
 (Phon-P)(Phon-P)(Phon-P)
 [Clause]

I also assume the analysis in Nespor & Vogel (1986) where it is observed that relative clauses in Spanish form their own intonational phrases. This is schematized in (14), from Nespor & Vogel (1986: 213).

- (14) (iP) (iP)
Ése es el escorpión que espantó al tucán
 that is the scorpion that scared the toucan
 (iP) (iP)
que espantó al faisán que se paseaba en el jardín.
 that scared the pheasant that was taking a walk in the garden

I further assume that PhonPs are typically aligned with some syntactic constituent (Truckenbrodt 1999). Following Büring & Gutiérrez-Bravo (2001), I assume that in Spanish, the constituents that PhonPs align themselves with are stressed lexical heads (plus any unstressed elements, typically clitics, that precede or follow the lexical head). This is schematized in (15).

- (15) (iP)
 (Phon-P)(Phon-P)(Phon-P)
Ése es el escorpión
 that is the scorpion

(henceforth in double boldface brackets) are those whose edges are aligned with the edges of a lexical XP (cf. Truckenbrodt 1999), whereas light PhonPs are PhonPs that do not meet this condition. Observe how this relates to the Spanish facts previously discussed. Since in Spanish the nuclear accent must fall on the rightmost PhonP of the iP, when the PhonPs under consideration correspond to the subject (a heavy PhonP) and the verb in T (a light PhonP), the only way to satisfy W-TO-P is to resort to the non-canonical word order VS, as in (19b), where the subject remains in its VP-internal position and the PhonP aligned with it becomes the head of the iP.⁶

- (19) a. $(_{iP} \quad \mathbf{X})$
 $((_{PhonP} \quad \mathbf{X}))_{(PhonP} \quad \mathbf{X})$
 $[_{TP}[_{NP} \quad \mathbf{S}] \quad \mathbf{V} \quad [_{VP} \quad t \quad t]]$
- b. $(_{iP} \quad \mathbf{X})$
 $(_{PhonP} \quad \mathbf{X}) \quad ((_{PhonP} \quad \mathbf{X}))$
 $[_{TP} \quad \mathbf{V} \quad [_{VP}[_{NP} \quad \mathbf{S}] \quad t]]$

Spanish can thus be characterized as a language that prioritizes intonational considerations over canonical subject position. This is not surprising, since it is well-known that a similar state of affairs is observed in cases of narrow focus on the subject like (7b) (see Büring & Gutiérrez-Bravo 2001).

3. *An OT analysis*

Optimality Theory (Prince & Smolensky 2004) is an ideal framework for the analysis of conflicts between different grammatical requirements, and so the conflict described above between syntactic and intonational requirements receives a straightforward account in this theory. In OT, the

⁶ In all cases considered here, the relative clauses are sentence-final. This means that the iP that corresponds to these relative clauses is the last iP of the larger prosodic unit that corresponds to the whole sentence in each example (the Phonological Utterance; see Nespor & Vogel 1986). Accordingly, the rightmost accent of the relative clauses is also the nuclear accent of the sentence, and henceforth I refer to it as such. Observe, however, that the analysis is not dependent on relative clauses being sentence-final (my own intuitions are that the word order facts are the same when relative clauses are not sentence-final). The constraint in (18) does not make reference to the nuclear accent of the sentence: rather, it simply requires that the head of every iP be a heavy prosodic category, irrespective of the position of iP in a larger prosodic/syntactic structure. When the relative clause is not sentence-final, the rightmost accent of the iP that corresponds to it is not the nuclear accent of the sentence, but (18) still requires that this accent fall on a heavy phonological phrase.

	TOPICFIRST	W-TO-P	EPP
a. $\begin{matrix} (iP & & x) \\ (x) & ((x)) & (x) \end{matrix}$ El libro [que [la maestra] _{TOP} escribió]. SV		*	
b. $\begin{matrix} (iP & & x) \\ (x) & (x) & ((x)) \end{matrix}$ El libro [que escribió [la maestra] _{TOP}]. VS	*!		*

Tableau 2: *topicalized subjects in relative clauses*

4. *Extensions of the Analysis*

In this final section I consider a number of extensions and predictions that result from the analysis developed so far. First, consider the unmarked position of the subject in relative clauses with two complements, where the direct object is again relativized. An important property of these relative clauses that is not addressed in previous literature is that for these relatives speakers have clear intuitions that the unmarked position of the subject is not the post-verbal position, but rather the canonical preverbal position. This is shown by the felicity contrast between (23a) and (23b) in a sentence focus context. In this respect, relatives with two complements are no different from matrix transitive clauses like those in (9).

- (23) *Qué pasó?*
 what happened?
- a. #*Estoy leyendo la carta [que le mandó la maestra a Pedro]*
 I-am reading the letter that DAT-CL sent the teacher to Pedro
- b. *Estoy leyendo la carta [que la maestra le mandó a Pedro]*
 I-am reading the letter that the teacher DAT-CL sent to Pedro
 “I’m reading the letter that the teacher sent to Pedro.”

The OT analysis developed here correctly predicts that this should be so: just as in the case of matrix transitive clauses (21), in relative clauses with two complements there is no conflict between W-TO-P and EPP. The analysis of (23) is presented in Tableau 3.

	W-TO-P	EPP
a. $\left(\begin{array}{c} \text{iP} \\ (\text{x}) \end{array} \right) \left(\left(\begin{array}{c} (\text{x}) \end{array} \right) \left(\begin{array}{c} (\text{x}) \end{array} \right) \left(\begin{array}{c} (\text{x}) \end{array} \right) \right)$ La carta [que $\left[\begin{array}{c} \text{TP} \\ \text{le-mandó a Pedro} \end{array} \right]$]. S-V-IO		
b. $\left(\begin{array}{c} \text{iP} \\ (\text{x}) \end{array} \right) \left(\begin{array}{c} (\text{x}) \end{array} \right) \left(\left(\begin{array}{c} (\text{x}) \end{array} \right) \left(\begin{array}{c} (\text{x}) \end{array} \right) \right)$ El libro [que $\left[\begin{array}{c} \text{TP} \\ \text{le-mandó la maestra a Pedro} \end{array} \right]$]. V-S-IO		*!

Tableau 3: *Relative clauses with two complements*

As can be seen in this tableau, candidate (a), which corresponds to (23b), satisfies both EPP and W-TO-P, because the subject occupies the Spec-TP position and the nuclear accent falls on the heavy PhonP that corresponds to the indirect object: with respect to the two constraints under consideration, it is optimal both syntactically and intonationally. In contrast, candidate (b) gratuitously violates EPP. It leaves [Spec, T] empty and this does not improve the intonational structure of the relative clause in any respect, since the head of the iP is already the heavy PhonP aligned with the indirect object. Consequently, candidate (b)'s violation of EPP proves fatal and the S-V-IO candidate (a) emerges as the winner.

Another prediction made by this analysis is that, all else being equal, verb-final constructions in Spanish should be marked when compared with constructions where a full XP is clause final. Clearly enough, intransitive verbs, both in matrix and subordinate clauses, constitute an obvious testing ground for this prediction. A number of independent factors make this prediction difficult to test, but to the extent that these factors can be neutralized or isolated, the data from intransitive verbs does provide further support for the analysis developed here.

Consider unaccusative verbs first. It is widely acknowledged that the unmarked word order of clauses with unaccusative verbs in Spanish is VS and not SV (Contreras 1976, Gutiérrez-Bravo 2002, *inter alia*). This is shown in (24), where it can be seen that the SV order is infelicitous in a sentence-focus context.

- (24) *Qué pasó?*
 what happened?
- a. *Llegó tu hermano.* **VS**
 arrived your brother
 "Your brother arrived."
- b. *#Tu hermano llegó.* **SV**
 your brother arrived

On a first approximation, it would seem that this data corroborates the prediction made by my analysis. Unfortunately, both Contreras (1976) and Gutiérrez-Bravo (2002) provide evidence that constituents in Spanish with thematic roles that are low in the Thematic Hierarchy (such as *themes* or *patients*) occupy a post-verbal position in the unmarked case irrespective of their grammatical relation. Hence, these works show that unaccusative subjects in Spanish independently occupy the post-verbal position in the unmarked case because of their thematic role.

Consider now unergative verbs in matrix clauses. There is no agreement in the literature about the unmarked word order of these clauses in Spanish, and it is often noted that speakers have no clear intuitions about them. For instance, Zubizarreta (1998) reports, for speakers of Peninsular and Rioplatense Spanish, that both SV and VS orders are accepted as unmarked. The same results were observed with speakers of Mexican Spanish, as shown in (26). Consequently, these data do not allow us to test the prediction under consideration either.

- (25) a. *Qué pasó?*
what happened?
b. *Juan (se) rió / (Se) rió Juan.*
Juan CL laughed CL laughed Juan
(Zubizarreta 1998)

- (26) *Qué pasó?*
what happened?
a. *Bailaron los estudiantes.* VS
danced the students
b. *Los estudiantes bailaron.* SV
the students danced

However, it is possible that the SV order in (25) and (26) results from the subject being interpreted as a sentence topic, since the subjects in both cases are highly individuated nominal expressions (proper names and definite NPs, respectively). Observe that when the subject is indefinite, some speakers show a slight preference for the VS order.

- (27) *Qué pasó?*
what happened?
a. *Bailaron unos estudiantes.* VS
danced some students

- b. (#) *Unos estudiantes bailaron.* **SV**
 some students danced

Although in matrix clauses this preference is very slight indeed, a clearer picture emerges in subordinate clauses with unergative verbs. In CP complements with unergative verbs there is a slight preference for the VS order when the subject is definite and a clear preference for this order when the subject is indefinite.¹⁰

- (28) *Qué pasó?*
 what happened?
- a. *Quiero [que naden los niños].* **VS**
 I-want that swim the children
 “I’d like that the children swim.”
- b. (#) *Quiero [que los niños naden].* **SV**
 I-want that the children swim
- (29) *Qué pasó?*
 what happened?
- a. *Quiero [que bailen unos estudiantes].* **VS**
 I-want that dance some students
 “I’d like that some students dance.”
- b. # *Quiero [que unos estudiantes bailen].* **SV**
 I-want that some students dance

¹⁰ In example (29) the verb of the complement CP is in the subjunctive. This is important to achieve these results, since this contrast does not hold in complement clauses in indicative mood. The elicitation was set up in this way to prevent the indefinite subjects from being interpreted as [+specific], given the well-known observation that subjunctive contexts tend to block the [+specific] interpretation of indefinites (observe that this is not an absolute restriction: indefinites in both complement and relative clauses in the subjunctive can be interpreted as [+specific] under the right discourse conditions). This variable was controlled for under the assumption that the [+specific] feature would be enough for an NP to qualify as a topic in Spanish, even when indefinite. Observe that if this interpretation of the role of specificity is correct, it provides a potential explanation for the SV/VS alternation in (27), where a subjunctive verb is not possible. The SV order would correspond to a [+specific] indefinite subject that qualifies as a topic, whereas the VS order would correspond to a [-specific] subject that does not. The absence of the SV/VS alternation in (28) and (30) would in turn follow from the observation that the discourse factors motivating topicalization are weak in certain kinds of subordinate clauses (see Belletti & Rizzi 1988), even if the relevant NPs are definite. Developing this solution in detail, however, must be left for future research.

Finally, relative clauses with unergative verbs behave fully as predicted by my analysis. In this case, there is a clear preference for the VS order even when the subject is definite, as shown in (30).

- (30) *Qué pasó?*
 what happened?
- a. *Estoy buscando la sala [en la que cantan los estudiantes].*
I-am looking-for the room in the which sing the students
 “I’m looking for the room where the students sing.”
- b. *#Estoy buscando la sala [en la que los estudiantes cantan].*
I-am looking-for the room in the which the students sing

Summing up these results, although the word order facts of unaccusative clauses and of unergative matrix clauses are such that they cannot be used to test the analysis developed in this paper, the word order of complement and relative clauses with unergative verbs is mostly consistent with the predictions made by the analysis. Clearly, there appears to be some other factor at play in matrix clauses that results in both the VS and the SV order being accepted as unmarked when the verb is unergative. Alternatively, it may ultimately be that inversion (or its absence) in matrix unergative clauses is a phenomenon unrelated to the one addressed in this paper. Given the large number of different kinds of subject inversion attested in French (Kampers-Manhe *et al.* 2004) and given the sensitivity of these different kinds of inversion to matrix vs. subordinate contexts, this would hardly be a surprising result. Settling this issue, though, goes beyond the scope of this paper and so I leave this question open for future research.

5. *Conclusions*

In this paper I have proposed an analysis where the VS order of relative clauses in Spanish is the result of intonational considerations related to the relative prosodic weight of different intonational constituents. Specifically, I proposed that just as there exists a distinction between heavy and light syllables, at the level of sentence prosody there exists a distinction between heavy and light Phonological Phrases. I then proposed that the prominence-prosodic weight correlation at the level of sentence prosody is regulated by the WEIGHT-TO-PROMINENCE constraint, an extension of the Weight-to-Stress

Principle of Prince (1990). From this I concluded that the VS inversion order results from the requirement that the head of the Intonational Phrase be a heavy Phonological Phrase. An OT analysis was developed that explains why this prosodic requirement has priority over the syntactic requirement that the subject occupy its canonical position. The analysis also explains why the unmarked word order of relative clauses is subject-initial in relative clauses with two complements. In these cases there is another heavy Phonological Phrase, the one that corresponds to the indirect object of the verb, that occupies the clause final position and so W-TO-P is independently satisfied. Lastly, it was argued that this prosodic requirement can in turn be overridden by the requirement that topics occupy a clause-initial position, which derives the SV order that is observed when the subject of the relative clause is a sentence topic.

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