Narrow Presentational Focus in Mexican Spanish: Experimental Evidence

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Abstract

It is most often claimed that in Spanish constituents in narrow presentational or information focus appear rightmost, where they also receive main sentence stress, while shifting the stress to the focus in its canonical position is infelicitous. Some, however, claim that Spanish in fact has recourse to both strategies for making the focus prominent, and some recent quantitative work has shown support for this alternative view. The present paper contributes to this debate by experimentally testing the realization of presentational focus in Mexican Spanish using an acceptability judgment task. The results of the experiment reveal that, for these speakers, focused constituents need not be rightmost and can in fact be stressed in non-final position, contra the consensus view. These findings expand the database on focus in Spanish and indicate that theories of the prosody/syntax interface may need to be revised, especially those theories that motivate discourse-related syntactic movement based on the requirements of the prosody.

Keywords: focus, main sentence stress, prosody/syntax interface, p-movement, Mexican Spanish

1 Introduction

It is often claimed that in Spanish constituents in narrow presentational or information focus[1] appear rightmost, where they also receive main stress, as in (1).

(1)   Context: Who gave you the bottle of wine?[2]

    a. *Me   regaló la   botella   de vino [**María**]F.*

       to-me gave   the bottle   of wine María

       'María gave me the bottle of wine.'

    b. # *[**María**]F me regaló la botella de vino*.

A felicitous answer to the question in (1) requires focus on the subject, and many (e.g., Bolinger 1954; Büring & Gutiérrez-Bravo 2001; Contreras 1978; Costa 2001; Domínguez 2004a, 2004b; Gutiérrez-Bravo 2002, 2008; Ortega-Santos 2006; Samek-Lodovici 2001; Zubizarreta 1998) claim that this focusing of the subject is realized by the focused constituent appearing rightmost and receiving main stress (1a), while shifting the stress to the focus in its canonical position (1b) is infelicitous. Indeed, Zubizarreta's influential monograph, from which example (1) comes, is taken by many to represent the state of the facts for Spanish.

Others, however, such as Casielles (2004) and Olarrea (2012), claim that Spanish in fact has recourse to both strategies for making a focused element prominent. That is, some make the alternate claim that narrow presentational focus in Spanish can be marked either by putting the focused constituent rightmost (1a), or by shifting the stress to the focus in non-final position (1b). Further, some recent quantitative work (Gabriel 2007, 2010; Hoot 2012a; Leal Méndez & Shea 2012; Muntendam 2009, 2012) has shown support for this alternative view.

There remains, then, an open empirical question about the realization of narrow presentational focus in Spanish. This question is of import because it has implications for theories of the prosody/syntax interface more broadly. The present paper contributes to this debate by presenting the results of an experiment testing the acceptability of different strategies for realizing presentational focus in Mexican Spanish. The results of the experiment show that, for these speakers, focus need not be rightmost, thus calling into question the common view represented in (1). These results expand the available database for focus in Spanish by providing new quantitative evidence, and suggest that theories of the prosody/syntax interface may need to be revised, especially those theories that motivate discourse-related syntactic movement based on the requirements of the prosody.

This paper is laid out as follows. Section 2 presents the background and motivation of the study, leading to the research questions the experiment is designed to answer. Section 3 gives the details of the experiment's design and participants, Section 4 presents the results, and Section 4.4 discusses their implications.

2 Background and motivation

2.1 *Narrow presentational focus*

Crosslinguistically, sentences adapt to fit the discursive contexts in which they are uttered. The same sentence uttered in two different informational contexts may have two different forms while retaining the same truth-conditional meaning. One way in which this adaptation to the information structure of the discourse occurs is by making the constituent that is the *focus* of the sentence prominent in some way.

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The term *focus* has had many different definitions in the literature and has been approached from many different viewpoints. While the fact that many sentences are partitioned into more and less informative parts is generally shared across researchers, there are many different theories of how the focus of a sentence is determined, what kind of information a focused constituent expresses, and what different kinds of focus exist. Some (e.g., Vallduví 1992) do not employ the term at all. The theoretical issues raised by these different viewpoints, while interesting, are outside the scope of this paper (for an overview, see Casielles-Suárez 2004; Erteschik-Shir 2007; Krifka & Musan 2012; Krifka 2007; Lambrecht 1994). Instead, since my main interest here is in experimentally testing claims about the mechanisms by which focal prominence is realized in Spanish and their implications for theories of the prosody/syntax interface, I will adopt a basic definition of focus without going into too much detail.

I take the *focus* of a sentence to be that part of the sentence that (i) corresponds to the new information, as compared to information that is *given* (already present in the discourse or part of the common ground),[3] and (ii) receives prominence in some fashion. Any constituent may be the focus, as can the entire sentence. As examples, consider (2)-(5).

(2)   Context: I saw that shiny new Honda outside. Who bought a new car?   (Subject focus)

        *[My **mom**]_F bought a new car.*

(3)   Context: Your mom just made a major purchase? What did she buy?   (Object focus)

        *My mom bought [a new **car**]_F.*

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(4)   Context: I heard your mom bought a car. What kind of car did she buy? (Adjective focus)

*My mom bought a [**new**]*$_F$ *car.*

(5)   Context: What's new?   (Broad/sentence focus)

*Well, [my mom bought a new **car**]*$_F$.

In (2), that someone bought a car is given information available in the context, while the subject *my mom* is new information. In English, this constituent is made prominent by realizing it with main sentence stress. In (3) the new information is that it was a new car that she bought, since the fact that she bought something is given, and in (4) only the adjective *new* is in focus, while all the other elements are given. In all three of these cases, one could call this type of focus *narrow focus*, since the focused constituent is something less than the whole sentence. In contrast with narrow focus is *broad focus*, in which the entire sentence is in focus, as in (5). This is the case for a sentence uttered out of the blue, or in response to a question like *What's new?* or *What's up?*, in which the whole sentence is new information. Sentences in broad focus tend to maintain canonical word order and main sentence stress, as in (5). Cases of narrow focus, on the other hand, often require alteration of canonical word orders or stress patterns in order to make the focused constituent prominent. It is precisely these word order or stress alterations that are of particular interest to the present work, and so this paper concentrates on cases of narrow focus.

All the types of focus exemplified in (2)-(5), though they differ regarding which constituents are in focus, are cases of what É. Kiss (1998) calls *information focus* and Rochemont (1986) calls *presentational focus*, the term adopted here. As already

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mentioned, this type of focus generally presents new information, while the rest of the sentence is given. Presentational focus is distinct from *contrastive* or *correction focus*, which not only presents new information but contrasts it with previous information or contradicts some given information, as exemplified in (6) and (7).

(6)   Context: I heard your mom bought a used car.   (Contrastive focus)

*No, my mom bought a [**new**]*$_{CF}$* car (not a used one).*

(7)   Context: I need some advice about cars. Hey, your dad bought a new car recently, right? (Contrastive focus)

*No, my [**mom**]*$_{CF}$* bought a new car (not my dad).*

Contrastive focus differs from presentational focus in crucial ways (but see Brunetti 2004 for a different view). Though the constituent in contrastive focus is also made prominent, this prominence is achieved differently. Contrastive focus and presentational focus are both stressed, but in many cases a different pitch accent is used for contrast (Belletti 2004; Selkirk 2002; Zubizarreta 1998). Contrastive focus also admits word orders that presentational focus does not. Of particular relevance is that in Spanish it is uncontroversially the case that contrastive focus allows the stress to be shifted to the focused constituent in any position, unlike the common view of presentational focus. That is, it is generally agreed that (8), with contrastive focus, is possible, whereas there is disagreement regarding presentational focus.

(8)   Context: Juan gave you the bottle of wine, right? (Contrastive focus)

*No, [**María**]*$_{CF}$* me   regaló la   botella   de vino.*

no   Maria   to-me gave   the bottle of wine

'No, María gave me the bottle of wine.'

In light of the fact that contrastive focus is a different phenomenon with different behavior, and because it does not enter into the debate that is relevant here, I will concentrate in what follows only on presentational focus, in particular, as already mentioned, narrow presentational focus, which I will sometimes simply call *focus*.

2.2   *Focus in Spanish*

As discussed in Section 1, there is some disagreement in the literature on focus in Spanish. The most common position, exemplified by Zubizarreta (1998), is that Spanish realizes focused constituents at the end of the sentence. Spanish thus uses syntactic resources to make a focused constituent prominent, but stress also plays an important role, since canonical main sentence stress occurs to the right in Spanish, meaning that a focused constituent also gets main stress. Shifting the stress to the focus, which is the strategy employed by, for example, English, is said to be infelicitous. In fact, Zubizarreta argues that, except in cases of contrastive or emphatic stress (in which, as we saw above, shifting the stress leftward is possible), the constituent that receives main stress in Spanish is always the rightmost one. Speaking specifically of sentences with nuclear stress on the preverbal subject, she writes that, without a contrastive or emphatic interpretation, such sentences "do not exist" (Zubizarreta 1998:76). For example, for Zubizarreta, the stress patterns indicated in (9) are impossible in both broad focus and narrow presentational focus, being possible only in cases of contrast.

(9)   Context: What's up? *or* Who phoned / ate the cake?

    a.   # ***Juan*** *llamó por teléfono*.

        Juan phoned

b. # ***María*** *se comió el   pastel.*

   María ate   the cake

(adapted from Zubizarreta 1998:76)

In this view, (9a) can only have the meaning that it was Juan who called, not Pedro (or someone else), but it could not answer the question *Who phoned?* Similarly, (9b) would be felicitous in a context in which the speaker was correcting someone who had claimed Marcos had eaten the cake, but it could not be a response to an information-seeking question about who ate the cake.

These claims are not unique to Zubizarreta. Others have also claimed that Spanish presentational focus must appear rightmost to be felicitous, as shown in examples (10)-(13).

(10)   Context: Who bought the newspaper?

   a. *Compró el   periódico [**Juan**]$_F$.*

      bought   the newspaper Juan

      'Juan bought the newspaper

   b. # *[**Juan**]$_F$ compró el periódico.*

   (adapted from Büring & Gutiérrez-Bravo 2001:42)

(11)   Context: Who bought the CDs?

   a. *Los   compró [una **muchacha**]$_F$.*

      them bought   a   girl

      'A girl bought them.'

   b. # *[Una **muchacha**]$_F$ los compró.*

   c. *Los discos los   compró [una   **muchacha**]$_F$.*

the CDs them bought a girl

'A girl bought the CDs.'

d. # *[Una **muchacha**]ꜰ compró los discos*.

(adapted from Gutiérrez-Bravo 2008:18)

(12)   Context: Who opened the book?

a. *Abrió el libro [**Susana**]ꜰ.*

Opened the book Susana

'Susana opened the book.'

b. # *[**Susana**]ꜰ abrió el libro*.

(adapted from Domínguez 2004b:18)

(13)   Context: Who gave a book to María?

a. *A María le dio un libro [**Pedro**]ꜰ.*

to María cl.dat gave a book Pedro

b. # *[**Pedro**]ꜰ le dio un libro a María*.[4]

(adapted from Ortega-Santos 2006:189)

In all these cases narrow presentational focus must be realized with the focused constituent rightmost and stressed, while shifting the stress to the pre-verbal focus is not felicitous. Stress in any position other than rightmost can only be used to mark contrastive focus and is otherwise not possible.

Though the perspective outlined above is often taken to be the state of the facts for Spanish and represents the most common understanding of the data, some make different claims. For example, Casielles-Suárez (2004:132–133) says that "Spanish tends to maintain sentence-final focus" but claims "that it is also possible in Spanish to have a

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non-dislocated unfocused element occurring to the right of a focused element, as in English." She gives both (14a) and (14b) as felicitous examples.

(14)   Context: Who called you this morning?

    a.   *Me   llamó   [**Mark**]*_F.

       me   called   Mark

       'Mark called me.'

    b.   *[**Mark**]*_F *me llamó*.

    (adapted from Casielles-Suárez 2004:132–133)

Similarly, Olarrea (2012:609) claims that though "predicates that appear in unmarked SVO orders in Spanish allow for postverbal subjects when these are focused," it is also possible to shift the main stress to the pre-verbal focused subject, while maintaining SVO order, such that both answers in (15) would be acceptable.

(15)   Context: Who bought the newspaper?

    a.   *Compró   el   periódico   [**Juan**]*_F.

       bought   the   newspaper   Juan

       'Juan bought the newspaper.'

    b.   *[**Juan**]*_F *compró el periódico*.

    (adapted from Olarrea 2012:605–608)

Though this may be the minority view, it has found support in recent years from a series of quantitative studies that have challenged the consensus on focus realization in Spanish (Gabriel 2007, 2010; Hoot 2012a; Leal Méndez & Shea 2012; Muntendam 2009, 2012). In experiments using both production and judgment tasks, and with a variety of dialects, these quantitative studies have found that speakers both accept and produce a

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variety of structures to realize focus, including focus-final word orders and stress shift to the non-final focus.

These studies clearly pose an empirical challenge to some accounts of focus in Spanish found in the literature. This challenge has been growing in recent years, but it remains the case that many are not aware of these facts. Furthermore, the data on focus in Spanish remains unclear, and no obvious consensus has emerged from these quantitative studies, and so more work is needed. The present paper contributes in this regard by providing additional evidence that expands the database about focus in Spanish and adds to the growing challenge to the consensus view.

Furthermore, much of the previous work on information structure in Spanish has been primarily in the theoretical literature, based on authors' intuitions. While, of course, much valuable work has been done in this tradition, it has been recognized that quantitative and experimental methods are needed alongside well-developed theoretical proposals in order to more the field forward (see, e.g., Featherston 2007). Quantitative studies like those just mentioned, and like the present study, serve to test theoretical arguments with new data, which can lead to the revision and improvement of our theories.

Of particular relevance for studies of focus in Spanish, several theories of the prosody/syntax share the view that prosodic requirements on well-formedness can affect the syntax, and that syntactic movement — in particular the discourse-related syntactic movement seen for information structure in many languages, including, in this view, Spanish — can be motivated by the requirements of the prosody. These approaches include Zubizarreta (1998), Büring and Gutiérrez-Bravo (2001), and Hoot (2012b) for Spanish; Samek-Lodovici (2005) for Italian; Szendrői (2001) for Hungarian; Alexiadou

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(1999) and Georgiafentis (2001) for Greek; Harford and Demuth (1999) for several Bantu languages; and Zimmerman (2006) for Tangale.

The basic argument is that (i) the prosodic structure of a language can require that the main sentence stress fall in a particular position; (ii) the focus and main stress must correspond; and so, (iii) movement takes place so that the focus is realized in the position where it can get stressed. This approach, put forward in its most well-known form by Zubizarreta (1998), where it is called *p-movement*, for prosodically-motivated movement, relies on the idea that Spanish stress is 'non-plastic' (Vallduví 1991) and must always be rightmost (except for any discourse-given constituents right-dislocated to a clause-final post-focal position (Samek-Lodovici 2006, 2009); I return to this point in section 4.4). If, however, it turns out to be true that Spanish stress need not be rightmost, a crucial plank for the argument for prosodically-motivated movement may be removed. Furthermore, if the Spanish case, which is one of the clearest cases of p-movement, is called into question, it could cast doubt on the same explanation applied to other languages. It is in this way that further experimental investigation of focus in Spanish is relevant and valuable, as a reevaluation of the database may lead to revisions in the theory more broadly. It is for this reason that the goal of the present study is to add to the empirical database on focus in Spanish; with this motivation in mind, let us turn now to the research questions.

2.3   *Research questions*

As previously mentioned, the purpose of this work is to empirically test prosody-based accounts of focus realization in Spanish using an experiment. Recall that these

approaches have as their base the claim that Spanish realizes focus sentence-finally, but that some have called this into question. This empirical debate gives rise to the following research questions:

(16)   Research questions

      RQ1. Must the constituent in narrow presentational focus in Spanish be stressed and sentence-final?

      RQ2. Can the constituent in narrow presentational focus in Spanish receive main stress in non-final position?

In light of the above discussion, especially the doubts raised by recent experimental studies, I make the following hypotheses based on the research questions.

(17)   Hypotheses

      H1. The constituent in narrow presentational focus in Spanish must be stressed but need not appear sentence-finally (though it may).

      H2. The constituent in narrow presentational focus in Spanish can receive main stress in non-final position.

The experiment tests these hypotheses using two focus structures. The design of the experiment is laid out in the next section, while Section 4 gives the results in light of the research questions, and Section 4.4 discusses their implications.

3 Methods

A contextualized acceptability judgment experiment was carried out with 56 monolingual native speakers of Mexican Spanish. This section lays out the specifics of

the experiment, including its design (Section 3.1), the procedures (Section 3.2), and the participants involved (Section 3.3).

3.1   *Experiment design*

3.1.1   *Stimuli.* The experiment tested two types of presentational focus: focus on the subject and focus on the direct object. For each, three structures were tested: one with focus-final order, one with stress shift to the focus in non-final position, and one with a stress-focus mismatch. This is exemplified in (18) and (19).

(18)   Subject focus condition

    Context: Who bought a car?

    a. *Compró   un carro [mi tío]*_F.   Focus Final

        bought   a   car   my uncle

        'My uncle bought a car.'

    b. *[Mi **tío**]*_F *compró un carro*.   Stress Shift

    c. *[Mi tío]*_F *compró un **carro***.   Mismatch

(19)   Object focus condition

    Context: What did your mom give to your nephew?

    a. *Mi   mamá le   dio   a mi sobrino [un **chocolate**]*_F.   Focus Final

        my   mom   cl.dat gave to my nephew   a   chocolate

        'My mom gave a chocolate to my nephew.'

    b. *Mi mamá le dio [un **chocolate**]*_F *a mi sobrino*.   Stress Shift

    c. *Mi mamá le dio [un chocolate]*_F *a mi **sobrino***.   Mismatch

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In (18a) and (19a), we see that the focused constituent, the subject and direct object, respectively, appear finally and stressed, so this type of stimulus has what I will call a *Focus Final* structure. In (18b) and (19b), the sentence maintains its canonical word order, while the main sentence stress is shifted leftward to fall on the focus in non-final position, which I will call the *Stress Shift* structure. Finally, in (18c) and (19a), both the canonical word order and canonical stress pattern are maintained, but the stress does not correspond to the focus, which I will call the *Mismatch* structure.

The three structures tested for each of these two focus types correspond to the research questions. If participants rate the Focus Final structure highly while rating the other structures low, Hypothesis 1 would be falsified. If participants rate the Focus Final structure low or rate it similarly to the Stress Shift structure, Hypothesis 1 would be supported. If participants rate the Stress Shift structure low, Hypothesis 2 would be falsified, while it would be supported if they rate it high. The Mismatch structure is included to serve as a baseline of infelicity; participants are expected to rate this structure low, as it is widely agreed that the stress and the focus must correspond to produce felicitous discourse.

In both conditions, there were five lexicalizations of each structure. So participants saw (18a-c), and then also saw the same structures repeated four more times with different base sentences (so instead of *My uncle bought a car* they might see *My friend got a job* or *My brother sold a house*.) Since there were three structures, there were 15 stimuli for each condition, or 30 critical stimuli total, plus 20 fillers.[5]

In all sentences, direct objects were always inanimate and indefinite, and subjects were always animate and definite. In the object condition the indirect objects were also

always animate and definite. Further, each argument in a given sentence had the same number of syllables, to avoid the potential confound of phonological weight affecting the acceptability of pre- or post-posing arguments. All words were taken from basic vocabulary, defined as being among the 5,000 most common Spanish words (Davies 2006), to ensure that participants understood them. To make sure all the stimuli were appropriate, clear, and comprehensible, an intelligibility pretest was conducted, in which two native speakers of Spanish listed to all stimuli under experimental conditions, and any stimuli that were found to be confusing were discarded.

Stimuli were recorded by a native speaker of Mexican Spanish. Recordings were made on a Zoom Handy H4 digital voice recorder, transferred to a computer as WAV files, and subsequently incorporated into the experimental software. All stimuli were recorded in isolation, and separately from the contexts (see Section 3.1.2) so that the stress patterns of the stimuli would not be influenced by a particular context. The native speaker making the recordings did not know which type of stimulus each sentence was intended to be, but he was instructed to stress a particular word in each sentence.[6] Many recordings of each sentence were made, to allow for the variable nature of speech production and for the fact that some of the sentences (those with non-final stress) were expected to be somewhat unnatural to produce; the final stimuli were selected from those recordings by using a series of pretests to control for the perception of main stress.

Main stress is a complex perceptual phenomenon. There is no single acoustic correlate to main stress in Spanish; changes in pitch, vowel duration, and intensity all play a role. Stressed words exhibit an increase in volume and a lengthening of the nuclear vowel in the tonic syllable of the word, but pitch accent is "the most powerful cue for the

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perception of main stress" (Gussenhoven 2004:17). The inventory of pitch accents in Spanish is not without debate, though this debate is beyond the scope of the present paper, and there is also inter- and intra-speaker variability in intonation patterns (Martín Butragueño 2005, 2006). Despite these caveats, certain patterns can be identified.

Constituents with main sentence stress usually get a pitch accent that associates a high tone with the stressed syllable (Face 2003 for Peninsular Spanish; Kim & Avelino 2003 for Mexican Spanish). This pitch accent could be called L+H*, meaning that the pitch accent begins with a low tone near the beginning of the stressed syllable of the accented word and ends with a high tone within that same syllable (the H tone's association with the stressed syllable is indicated by the star). This correspondence between an L+H* pitch accent and the main sentence stress is not absolute. Kim and Avelino (2003) found that this pitch accent could be used in broad focus, narrow focus, and contrastive focus contexts, and Henriksen (2011) found in a production task that speakers could use other tones in addition to L+H* to signal narrow focus. However, both these studies also found that the most common pitch accent on constituents in narrow focus (which bear main stress) was one which associated the high tone to the stressed syllable, that is, L+H*. This pitch accent, then, is at the very least one of the pitch accents that marks main sentence stress in Spanish, and perhaps the most common, and is the pitch accent we would expect to fall on the focused constituent, since the stress and the focus must correspond. Unstressed words, on the other hand, commonly receive an L*+H pitch accent, where the low tone is associated with the stressed syllable while the tonal peak comes in the following syllable.

The first pretest, a pitch accent uniformity pretest, served to verify that in all stimuli the stressed word bore an L+H* pitch accent and that non-stressed words bore L*+H. Stimuli were examined in Praat (Boersma & Weenink 2012), and any sentence with a pitch accent on the stressed syllable other than L+H* were discarded, as were any stimuli in which a word other than the stressed word had an L+H* pattern. Stimuli were also checked to ensure that non-stressed words bore L*+H accents. Of course, as just pointed out, pitch accents other than L+H* can be used to signal stress, and L+H* can have more than one interpretation. Nonetheless, in order to perform the experiment, a single pitch accent needed to be chosen, since including the variation found in natural speech introduces the potential confound of participants perceiving the different pitch accents to represent different meanings. Since a single pitch accent needed to be chosen for all stimuli for the sake of uniformity, then, the pitch accent that was chosen was precisely the most common one: L+H*, on the assumption that because it is the most common pitch accent associated with nuclear stress (in Mexico and elsewhere), all speakers would perceive the word with the L+H* pitch accent as stressed, despite the fact that they may in fact produce a variety of pitch accents in natural speech.

The second pretest was a perceptual stress correspondence pretest. Three native speakers of Spanish, all of whom were linguists and one of whom was a phonologist, listened to all stimuli in isolation and identified the word in each sentence on which they perceived the main stress. Any stimuli for which all three consultants did not agree which constituent bore the main stress were discarded. As already noted, pitch accent is the most important signal of stress, but it is not the only one, and stress is ultimately a perceptual phenomenon. By relying on native speaker judgments, factors such as duration

and intensity could be controlled for, as could the perception of the pitch accent. This pretest thus helps ensure that participants hear the stress on the desired syllable.

As part of the second pretest, the same three speakers also flagged any stimulus that seemed unusual, anomalous, or emphatic. If any one of the consultants identified a stimulus as expressing excessive emphasis, contradiction, or sounding otherwise unusual, it was discarded. In this way, other factors, such as pauses, emphasis, or contrast can be controlled for as much as possible. This is of particular import because, as previously noted, the L+H* pitch accent chosen for the experiment can have other meanings, including expressing contrast. Obviously, one cannot control for the mental state of participants, and so it remains possible that the stimuli could be perceived to express contrast in context, but using the native speaker judgments to discard overly emphatic stimuli is one way to reduce the likelihood of this confound.

3.1.2 *Contexts.* All stimuli were presented in contexts that created the focus structure appropriate for that condition. The contexts were short stories that clearly established what information was given or known, and what information was new or unknown. Each context ended in a wh-question, to which the experimental stimuli were responses. The wh-word in the question always corresponded to the desired focus. No context could be construed to require an answer that expressed contrast or contradiction. A sample context from the subject focus condition is in (20).[7]

(20) *Tú y tu amiga Sara están en la casa de ella, haciendo algo de comer en la cocina. Ella va a buscar unos ingredientes que había dejado en el carro, cuando suena tu celular. Es tu tío, quien acaba de comprarse un carro nuevo. Cuando regresa*

Sara, estás hablando del color y el modelo del carro, y del precio de la gasolina,

y ella se da cuenta de que alguien que conoces acaba de comprar un carro.

Cuando cuelgas, Sara te pregunta: "¿Quién compró un carro?"

'You and your friend Sara are at her house, making something to eat in the

kitchen. She goes to get some ingredients she'd left in the car when your cell

phone rings. It's your uncle, who just bought a new car. When Sara comes back,

you're talking about the color and model of the car, and about the price of

gasoline, and she realizes that someone you know just bought a car. When you

hang up, Sara asks you: "Who bought a car?" '

Ten contexts were recorded, five for each condition, corresponding to the five

lexicalizations of the stimuli in each condition. Contexts were recorded by the same

native speaker of Mexican Spanish who recorded the stimuli, and in the same way, but in

a separate session.

3.2   *Procedure*

The experiment was conducted on computers using E-Prime experimental software

(Psychology Software Tools, Inc. 2012). Participants saw the contexts and stimuli on the

screen and also heard them via headphones. The experiment took place primarily in a

café in Guanajuato, Mexico or in another location convenient to the participants.

Participants completed an extensive training phase in E-Prime, which explained that

the purpose of the experiment was to test the appropriateness in context of sentences with

the same basic meaning but variable realizations, and which prepared them to do the

judgment task. It started with very simple examples and worked up to stimuli similar to

those used in the experiment, and it allowed participants to get used to judging sentences in context (rather than based on grammaticality) and to using the five-point Likert scale. The Likert scale went from 1, labeled *Muy raro* 'Very strange,' to 5, labeled *Perfecto* 'Perfect,' with no intervening labels, and it was presented on the screen during all trials. Participants recorded their judgments by pressing the appropriate number key on the keyboard. After the training phase, participants had the opportunity to take a break and then completed the judgment task that formed the main part of the experiment.

The judgment task consisted of 15 *trials*. There were five trials for each condition: subject focus, object focus, and fillers (modifier focus). There were five trials because, as mentioned above, there were five lexicalizations for each structure in the stimuli, so each trial consisted of one lexicalization. In each trial, participants heard and saw on the screen one context. They then heard and saw one of the stimuli that correspond to that context and recorded their judgment by pressing a key on the keyboard. After the stimulus was judged, it disappeared, the recording of the final question from the context (but not the whole context) was repeated, and then a second stimulus appeared and was heard and judged. The second stimulus disappeared, the question was repeated again, and then a third stimulus appeared and was heard and judged.[8] After judging the final stimulus, a new trial began with a new context story.

As an example, consider a trial based around the context story in (20) above. The final sentence of the story, which is the *wh*-question *¿Quién compró un carro?*, along with the information provided in the preceding context, requires as its answer a sentence with focus on the subject. After hearing this context and its question, one possible stimulus, say, *Mi tío compró un **carro*** 'My uncle bought a **car**,' would appear and be

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heard. Participants would judge this stimulus, which then would disappear. They would hear the question, but not the whole story, repeated, and then get a new stimulus, perhaps *Compró un carro mi **tío*** 'Bought a car my **uncle**.' After participants recorded their judgment, the final stimulus, *Mi **tío** compró un carro* 'My **uncle** bought a car' would appear and be judged. Once the final stimulus for this context was judged, a new trial would begin with a new context story and set of stimuli. This procedure repeated for all 15 trials.

The order in which the stimuli appeared after the context for each trial in a given condition was set using a pseudo-Latin square designed to control for ordering effects, so that the same structure did not always appear first or last. Also, the 15 trials were pseudo-randomized in three blocks, with no trial repeating the same condition as the trial before it. The blocks were also rotated to control for ordering effects. Participants had the opportunity to take a break between the blocks.

After completing the judgment task, participants completed two background questionnaires; a proficiency measure in Spanish, a modified version of the Diploma del Español como Lengua Extranjera (DELE), used by Montrul (2002, 2004); and an English proficiency test, a cloze test used in previous studies (Ionin, Montrul & Crivos 2013; Ionin & Montrul 2009, 2010; Montrul 2001).

3.3 *Participants*

There were 56 monolingual native speakers of Mexican Spanish who participated in this study. Participants were recruited in Guanajuato, Mexico and were speakers of the Bajío variety of central Mexican Spanish. All participants were born and raised in the

Bajío region of Mexico and had not lived for any significant time in another country or dialect area. They had no significant exposure to any language other than Spanish before the age of 14. All participants were adults who reported no linguistic or cognitive impairments and who were at least moderately familiar with the use of computers. Participants were naïve, in that they were neither linguists nor advanced students of linguistics, though some had taken undergraduate linguistics courses. All participants had graduated from *preparatoria*, which is equivalent to U.S. high school.

Table 1 gives the details of some relevant characteristics of the participants. As one can see, their ages ranged from 18 to 29, with a mean age of 21.7. There were 40 females and 16 males.

Table 1. Participant Characteristics

Age range	18-29
Mean age	21.7
Gender (# male / # female)	16M / 40F
Mean age of acquisition of Spanish	0.2
Mean age of acquisition of English	11.6
Mean Spanish proficiency test score (out of 50)	45.6
Mean English proficiency test score (out of 40)	13.6
Mean daily English use (as percentage of typical day)	3.6
Mean daily Spanish use	96.9
Mean years of formal study of Spanish	13.4
Mean years of formal study of English	5.0
Mean self-reported English proficiency (1-5)	1.8
Mean self-reported Spanish proficiency (1-5)	4.5

While most participants had some exposure to English, as it is commonly taught in Mexican schools and it is present in popular culture, all participants were effectively monolingual, with limited knowledge of English as second language learners. In order to control for exposure to English, participants who reported significant daily use of English or who had significant exposure to English before age 14 were excluded.

4 Results

4.1 *Analysis*

Two repeated-measures ANOVAs were conducted, one for each condition. Each condition was analyzed separately because there is no meaningful comparison to be made between the conditions; rather, the goal of the analysis was to determine the acceptability of each structure for a given type of focus. For significant main effects, pairwise post hoc tests were conducted, with the Sidak correction[9] for multiple comparisons.

4.2 *Subject focus condition*

The subject focus condition compared the acceptability of three structures in contexts requiring focus on the subject. A repeated-measures ANOVA revealed that the acceptability of the three structures differed ($F_{1.7,96} = 47.2$, $p < .001$), and post hoc pairwise comparisons revealed that one structure, the Stress Shift structure, with canonical word order and stress on the focus in non-final position, was rated significantly higher than the other two structures, which did not differ.

Table 2 shows the mean rating for each structure on the five-point Likert scale.

Table 2. Subject condition results

Structure	Example	Mean rating
Stress Shift	My [**uncle**]$_F$ bought a car.	**4.43** (σ=0.7)
Focus Final	Bought a car my [**uncle**]$_F$.	**2.83** (σ=1.0)
Mismatch	My [uncle]$_F$ bought a **car**.	**3.29** (σ=1.0)

The same data is represented in Figure 1. This figure also shows the results of the post hoc tests, indicating via the brackets with stars those comparisons that were significant ($p < .001$ for both). As one can see from the figure, the Stress Shift structure was found to be rated significantly higher than the Focus Final structure and the Mismatch structure, while the latter two did not differ from each other.
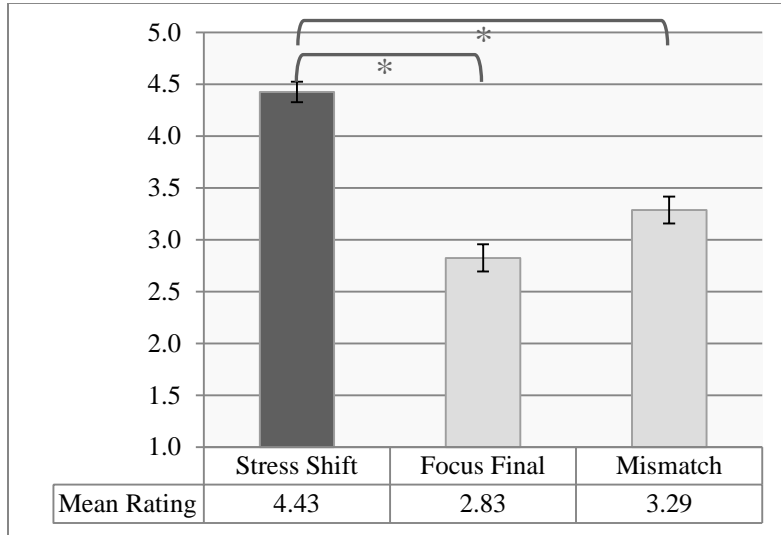

	Stress Shift	Focus Final	Mismatch
Mean Rating	4.43	2.83	3.29

Figure 1. Subject condition results

4.3   *Object focus condition*

The object focus condition compared the acceptability of three structures in contexts requiring focus on the direct object. A repeated-measures ANOVA revealed that the acceptability of the three structures differed ($F_{1.6,90} = 31.0$, $p < .001$). Unlike the subject condition, though, post hoc pairwise comparisons revealed that two structures, the Stress Shift structure and the Focus Final structure, were rated higher than the other (Mismatch) structure, but did not differ from each other. Table 3 shows the mean rating for each structure on the five-point Likert scale.

Table 3. Object condition results

Structure	Example	Mean rating
Stress Shift	My mom gave a [**chocolate**]$_F$ to my nephew.	**4.23** (σ=0.6)
Focus Final	My mom gave to my nephew a [**chocolate**]$_F$.	**4.08** (σ=0.6)
Mismatch	My mom gave a [chocolate]$_F$ to my **nephew**.	**3.26** (σ=0.9)

The same data is represented in Figure 2. This figure also shows the results of the post hoc tests, indicating via the brackets those comparisons that were significant ($p <$ .001 for both). As one can see from the figure, both the Stress Shift and Focus Final structures were found to be rated significantly higher than the Mismatch structure, while the two higher-rated structures did not differ from each other.
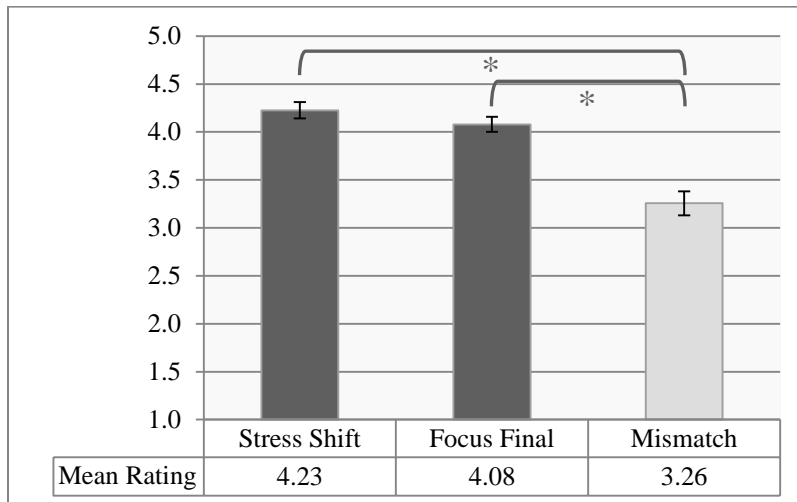

	Stress Shift	Focus Final	Mismatch
Mean Rating	4.23	4.08	3.26

Figure 2. Object condition results

4.4   *Summary of results*

Before summarizing the results, three comments should be made regarding their interpretation. First, it is noteworthy that even the Mismatch structure, which is agreed to be infelicitous, did not elicit mean ratings at the bottom of the scale. There were no mean ratings at or near 1, and in fact mean ratings for the Mismatch structure were near the middle of the scale. I take this to be because of the fact that none of these sentences were ungrammatical. All were possible Spanish sentences, which differed only in their contextual felicity, violations of which are less deviant than truly impossible sentences. Though some participants used the whole scale, giving ratings near or at 1 to some Mismatch sentences, it is possible that many participants reserved the bottom of the scale for truly unacceptable cases, whereas even the lowest-rated stimuli used in the experiment at the worst sound somewhat 'off.'

The second comment is related to the first, and that is that I have interpreted these results in light of the scale used, and in comparison with each other. The marking of some sentences in (21) and (22) below as infelicitous is based on whether or not a given sentence differed from the Mismatch condition. Since we know stress-focus mismatch is infelicitous, those sentences in a given condition that were rated significantly higher than the Mismatch structure were interpreted as felicitous and those that did not differ from the Mismatch condition were interpreted as infelicitous.

The third comment concerns a potential confound due the order in which the stimuli were presented. Though a pseudo-Latin square design was employed (as mentioned in Section 3.2) which rotated the order in which the different stimulus types appeared across trials so that no stimulus type always appeared first or last, an anonymous reviewer points

out that the order in which the items appeared could nevertheless have affected the results. Because participants saw all stimuli together, perhaps by the time they arrived at the third stimulus in any given trial the distinctions between given information and the focus had become blurred by repetition. If that is true, one might expect different results when looking only at those stimuli that appeared first and those that appeared last. In order to determine whether this was the case, a repeated-measures ANOVA was conducted for each condition with stimulus type and presentation order as independent variables. The results[10] for each condition reveal the same thing: while the order in which stimuli appeared does seem to affect their ratings, with later stimuli getting higher ratings (at least for some stimulus types), the essential *patterns* of acceptability do not change across orders. The patterns of which sentences are felicitous and which are not — indicated in (21) and (22), below — are the same if one looks only at those stimuli that appeared first, only those that appeared second, only those that appeared third, or all of them together. I take this result to indicate that repetition has some effect (which is not surprising), but that it was successfully controlled (as much as possible) by rotating the stimuli, and that the results thus produced are valid. Nonetheless, it is worth noting that some effects of order were attested, though this potential drawback of how the stimuli were presented should be weighed against potential advantages[11] of this method as well as the consistency of the pattern across orders.

With these three notes on the interpretation of the data in mind, let us turn to the summary of the results.

In the subject focus condition, these speakers rated the Stress Shift structure, with canonical word order and stress on the focus in pre-verbal position, the highest. They

rated the Focus Final order lower, similarly to the Mismatch structure. Example (21) represents the data for these speakers, for whom (21b) is the most acceptable structure, while the other two are infelicitous in this context.

(21) Subject focus condition results

Context: Who bought a car?

a. # *Compró un carro [mi **tío**]_F.*   Focus Final

    bought   a   car   my uncle

    'My uncle bought a car.'

b. *[Mi **tío**]_F compró un carro.*   Stress shift

c. # *[Mi tío]_F compró un **carro**.*   Mismatch

For these speakers, then, when the focus is on the subject, it appears to be more acceptable to shift the stress to the pre-verbal focus than to move the focused constituent to the right periphery. In fact, these speakers rated the Focus Final order as low as the Mismatch structure, which was expected to be entirely infelicitous.

The object focus condition was slightly different. In this condition, two structures were rated equally highly. Both the Stress Shift and Focus Final structures received ratings that were significantly higher than the infelicitous Mismatch structure, and they did not differ from each other, as exemplified in (22).

(22) Object focus condition results

Context: What did your mom give to your nephew?

a. *Mi mamá le   dio   a mi sobrino [un **chocolate**]_F.*   Focus Final

    my mom   cl.dat gave to my nephew a   chocolate

    'My mom gave a chocolate to my nephew.'

b. *Mi mamá le dio [un **chocolate**]$_F$ a mi sobrino.*   Stress shift

c. # *Mi mamá le dio [un chocolate]$_F$ a mi **sobrino**.*   Mismatch

The object focus condition thus appears to admit some optionality, such that both the Focus Final structure and the Stress Shift structure are acceptable, while the stress-focus mismatch is, as expected, infelicitous.

Returning to the research questions and hypotheses, we can summarize these results as follows:

(23)   Research question 1 results

   RQ1. Must the constituent in narrow presentational focus in Spanish be stressed and sentence-final?

   H1. The constituent in narrow presentational focus in Spanish must be stressed but need not appear sentence-finally (though it may).

   Hypothesis supported: Participants rate structures with the focus in non-final position as high as or higher than those with the focus in sentence-final position.

(24)   Research question 2 results

   RQ2. Can the constituent in narrow presentational focus in Spanish receive main stress in non-final position?

   H2. The constituent in narrow presentational focus in Spanish can receive main stress in non-final position.

   Hypothesis supported: Participants rate structures with the focused constituent stressed in non-final position highly.

The next section discusses the implications of these results.

5 Discussion

As seen in (23) and (24), both hypotheses were supported by the experiment results. This has several implications. First, these results show that stress in Spanish is considerably more 'plastic' than it is commonly thought to be, and so future theories of the prosody/syntax interface in Spanish should include a mechanism accounting for non-rightmost stress. Second, since it appears that stressing the focus in non-final position is acceptable for these speakers, theories motivating discourse-related movement with the needs of the prosody, which rely on the claim that Spanish has obligatory rightmost stress, may need to be revised. Third, these results seem to indicate that analyses of focus in Spanish should take into account its variability, because focus on different constituents may be realized differently. This section discusses each of these implications in turn, and it also points out some limitations of the present study.

Beginning with the first implication, future theories of the prosody/syntax interface in Spanish should include a mechanism that gives rise to the non-rightmost stress patterns observed in this experiment. This feature is easier to incorporate into some analyses of focus in Spanish than others. For instance, the analysis given by Zubizarreta (1998) in which stress in Spanish is the result of a Nuclear Stress Rule (NSR) that stresses the lowest constituent in the asymmetric c-command chain is harder to reconcile with the data found here than an analysis using violable constraints, like in the Optimality-Theoretic (OT) approach of Büring and Gutiérrez-Bravo (2001). Whereas a derivational rule like the NSR would need to be changed significantly in order to be able to give rise to stresses in other than rightmost position, the constraints in an OT model are presumed

to be universal and so the non-rightmost stress could be generated via constraint re-ranking.

Turning to the second implication, these results pose a challenge to any theory that motivates discourse related movement with the needs of the prosody, including both Zubizarreta (1998) and Büring and Gutiérrez-Bravo (2001), regardless of the form of the argument. These results indicate that, for at least some speakers, one of the premises of the prosody-motivated approach, that stress must be rightmost, and its conclusion, that focus must be rightmost, do not always hold. If stress need not be rightmost, if the focus can be felicitously stressed in non-final position, this removes an integral piece of the argument for prosody-based approaches. In light of the data presented here, it appears that in some cases these approaches do not capture the empirical facts, and thus may need to be revised or reconsidered in light of this new data.

It is important to note that the results found here are in line with several other recent quantitative studies (Gabriel 2007, 2010; Hoot 2012a; Leal Méndez & Shea 2012; Muntendam 2009, 2012) that find similar results. There appears to be a significant growing challenge to the consensus view on focus in Spanish, and this challenge not only indicates that the most common understanding of the facts may need to be changed, but also that perhaps the most common theoretical explanation of these facts, namely, prosody-based approaches like p-movement, may need to be revised as well.

I am not making the argument that these findings necessarily represent a conclusive piece of evidence against prosody-based theories, but rather I am arguing that they should be revised in light of new data. One can certainly conceive of a theory that retains the central insight of the prosody-based approaches, namely that the prosodic structure of

Spanish is part of the reason that focus can appear finally, while still accounting for the results of this and other studies. For instance, an OT model with the appropriate constraints could certainly account for the apparent fact that stress shift is possible or preferred for focus on a subject, but in other contexts, like with focus on an object, focus final orders are possible. Beyond this, though, it should be pointed out that the present study covers a limited set of contexts. For instance, sentences with intransitive verbs and sentences with arguments replaced by pronouns were not included, and it may well be the case that these sentences are more likely to have focus-final orders. So an OT model can be imagined in which some syntactic constraints requiring SVO order in sentences like those presented here are ranked higher than constraints on prosodic structure, allowing stress shift, while prosodic constraints in turn outrank other syntactic constraints, allowing for *some cases* of focus-final orders motivated by the needs of the prosody, while still including a mechanism for non-final focus. This more fine-grained prosodic approach could still be promising in light of the data presented here, and so the present work does not necessarily mean that prosody-based approaches are without promise.

It is not only an OT model which could be compatible with these results. Something like what Reinhart (2006) proposes for English, in which stress shift is an available but relatively costly operation for the grammar, to be employed only as a Last Resort, could also be compatible. So a derivational model could also be applied, but it would nonetheless need to undergo some revision in light of the present work. Perhaps the most well-known derivational approach, though, namely Zubizarreta's p-movement, does seem to be the approach that would be hardest to adapt to the present results, since one of its major components, the NSR, does not seem to hold.

However, an anonymous reviewer points out that there is an alternative analysis which would allow Zubizarreta's claim of obligatory rightmost stress in Spanish to be maintained: perhaps the material following non-final focus is right dislocated. This is the analysis Samek-Lodovici (2006, 2009) gives of non-final focus [12] in Italian, as "consist[ing] of a phrase with clause-final focus followed by one or more right dislocated constituents" (Samek-Lodovici 2006:848). Under such an analysis, the apparently non-final focus is in fact stressed in rightmost position, as expected by Zubizarreta, while the apparently de-stressed post-focal material is right dislocated. In other words, a possible explanation for the data presented here is that the apparently non-final foci were in fact interpreted as being clause-final but with the post-focal discourse-given constituents right dislocated rather than de-stressed. The experiment did not explicitly control for this possibility (although right dislocations can be preceded by an optional pause before the dislocated constituent, and there were no pauses in the stimuli), which leaves open this alternative explanation. Since right dislocations have particular syntactic and prosodic properties, ultimately this is an empirical question that can be tested and is certainly worth exploring in future research.

These results may also have implications beyond Spanish. Though obviously they have the most direct impact on those approaches that include or are based on Spanish, prosody-based approaches are not unique to this language. Indeed, as previously mentioned, there have been influential proposals of similar approaches to Italian, Hungarian, Greek, and other languages. If, however, one of the clearest examples of movement motivated by prosody, Spanish, is called into question, it removes a plank of support for the idea crosslinguistically. The fact that a similar approach of appealing to

the prosody appeared to apply to many languages bolstered the argument that in general the requirements of the prosody could affect the syntax. However, if it is not clear whether that approach indeed applies in the well-known case of Spanish, it is possible that in fact the grammar does not work this way, and that prosody cannot affect syntax. Though it would be hasty to make such a conclusion definitively, prosody-based approaches to discourse related movement are common crosslinguistically, and they may be worth revisiting if we do indeed conclude that they do not work for Spanish, which seemed to be a clear case.

Turning to the third implication of the present study, the variation shown in these results does not appear to be compatible with a theory that postulates a single mechanism that realizes focus across contexts. For Zubizarreta, all cases of the focus appearing finally are achieved via p-movement. This is true whether the focus is an object, a subject, an indirect object, an adjunct, and so on. However, for the speakers examined here, different structures are felicitous in different contexts: they accept only stress shift when the focus is on the subject, but they additionally accept focus-final orders when the focus is on the direct object. This difference is not represented in most theories of focus realization, be they prosody-based or otherwise. Again, this new evidence could be incorporated into some theories, along the same lines as pointed out previously, but it requires that the theory be revised in light of the growing evidence that the data is more complicated than it is usually thought to be.

Finally, the limitations of the present study should be pointed out, several of which have already been mentioned in the relevant sections, but which deserve to be contextualized alongside the results so that the findings can be interpreted appropriately.

First, as mentioned in Section 3.1, significant effort was made to control for the form of the stimuli and the contexts, but it is impossible to know exactly what influences participant behavior. It is thus possible, despite the controls put in place via the non-contrastive and non-emphatic contexts and the careful selection of the stimuli's intonational contours, that participants interpreted the stimuli as emphatic, which could skew the results (toward higher ratings of stress shift), since emphatic utterances in Spanish generally accept stress shift. Furthermore, these sentences are necessarily somewhat unnatural. The most natural response to a question like *Who bought a car?* is just *My uncle*, rather than a full sentence, which could also skew the results (toward lower ratings across the board). Both of these possibilities were controlled for as much as possible, but they exist as potential confounds. These possible problems are offset by some advantages to this method, though, that other methods such as collecting natural speech data or using a production task do not have, including the ability to collect negative evidence (evidence of what structures are not possible), and the ability to tightly control the contexts and stimuli, including controlling the intonation patterns, definiteness/indefiniteness of arguments, and phonological weight of arguments.

Another limitation of the present study is that it necessarily gives an incomplete picture of the puzzle, since it investigated only a limited number of types of focus. As mentioned above, in order to get a more complete evaluation of prosody-based approaches and focus in Spanish, structures with intransitives and with direct object pronouns, among others, should also be included. These are fruitful avenues for future work.

Despite these limitations, the experimental results observed in this study offer new data that bear on some open theoretical questions, contributing in this way to moving the field forward.

6 Conclusion

I have presented the results of an acceptability judgment experiment on the realization of narrow presentational focus in Mexican Spanish, the results of which challenge both the empirical and theoretical consensus on focus in Spanish. As other recent studies have also shown, I found that these speakers accept structures in which the main sentence stress is shifted to the focused constituent in non-final position, rather than moving the focus to the right edge of the sentence, which is contrary to the most common view of presentational focus in Spanish. I have argued that this new evidence indicates that theories of the prosody/syntax interface, both for Spanish and crosslinguistically, may need to be revised, especially those theories that motivated discourse-related syntactic movement based on the requirements of the prosody.

Notes

[1] Generally the constituent that presents new information, called "information focus" by É. Kiss (1998) and "presentational focus" by Rochemont (1986). This is distinct from contrastive or corrective focus, which need not appear rightmost in Spanish. Section 2.1 discusses this in more detail.

[2] Here and subsequently, the focused constituent is indicated with brackets and the subscript 'F' and the main sentence stress is indicated with boldface. The hash symbol '#' indicates contextual infelicity.

[3] In fact, it is not always the case that there is a direct correspondence between new information and focus, or between old/given information and lack of focus (Schwarzschild 1999). However, in the cases examined here and used in the experiment, the narrow presentational focus always contains the new information of the sentence, while all non-focused constituents are old information that is given in the discourse.

[4] Ortega-Santos gives (13a) as an example of a felicitous structure but does not include (13b) to exemplify an infelicitous structure; however, he says in the text preceding the example that "new information consistently comes last in the sentence and bears sentence stress," which indicates that he would take (13b) to be an impossible counterpart to (13a).

[5] All filler stimuli were sentences with a pre-nominal modifier to the subject, such as *Tres chicos agarraron un libro* 'Three boys took a book.' As with the experimental stimuli, they were manipulated to have different word orders and stress patterns, and they were embedded in contexts that put the focus on the pre-nominal modifier, which ended in questions such as *How many boys took a book?*. These stimuli are obviously not unrelated to the experimental stimuli presented here, but they serve to answer a different research question that is not the focus of the present paper. In particular, these sentences do not directly address whether focus must be rightmost, as there is no grammatical sentence without ellipsis in Spanish that leaves the pre-nominal modifier rightmost (**Chicos agarraron un libro [tres]$_F$*). See (Hoot 2012a) for an explanation of the purpose of these modifier stimuli in another similar study. As with the subject and object focus conditions, there were five lexicalizations of each modifier focus structure, but there were four, rather than three structures, for a total of 20 stimuli.

[6] Specifically, he read the sentences from a list in which the stressed word appeared in bold. He was also asked to do multiple recordings of each sentence, sometimes being asked by the experimenter to give greater or lesser emphasis on a given take, in order to get a variety of readings from which the best examples, as determined by the pretests discussed below, could be taken.

[7] An anonymous reviewer points out that the fact that the contexts address the participant in the second person could perhaps have influenced the judgments, due to the fictitious nature of the scenarios and replies or the cognitive effort of identifying with a participant in the story. The second person was chosen out of a concern that making everything third person could introduce potential for confusion among the characters (which itself might influence their judgments), but I acknowledge the possibility the reviewer mentions.

[8] If this trial belonged to the filler (modifier focus) condition, this process was repeated once more for the fourth stimulus.

[9] Similar to the more common Bonferroni correction, the Sidak correction controls the family-wise error rate with multiple comparisons (that is, it avoids the inflated chance of a false positive created by performing a series of tests).

[10] For the object condition, the ANOVA revealed a main effect for presentation order ($F_{1.7,92} = 11.4$, $p < .001$), and a post hoc test revealed that sentences in the first position were rated worse than later sentences regardless of sentence type. An interaction ($F_{3.4,184} = 3.2$, $p < .05$) of stimulus type by presentation order was also found, though post hoc tests of the interaction by presentation order revealed that for each presentation position the pattern was exactly the same as the one presented in the main text in (22).

For the subject condition, the ANOVA revealed an interaction ($F_{3.3,184} = 5.5$, $p < .01$) of stimulus type by presentation order. Post hoc tests revealed that the first and second positions in the ordering presented exactly the same pattern outlined in the main text — namely, Stress Shift was better than Focus Final or Mismatch, which did not differ from each other — as in (21), while in the third position Mismatch was rated higher than Focus Final, but still below Stress Shift. Despite this difference in the third position, I maintain that this should be considered the same pattern as for the other positions for three reasons: (i) the

central finding, that Stress Shift is felicitous and Focus Final is infelicitous in this context, is maintained if Focus Final is rated lower than Mismatch — in other words, nothing changes about the conclusions that can be drawn, since the Focus Final order will still be deemed infelicitous, and the Stress Shift order felicitous, by comparing them to the Mismatch structure; (ii) though Mismatch is rated higher than Focus Final in the third position, it is still lower than Stress Shift, showing that participants are still able to distinguish it from other structures, so it does not seem to be the case that the distinction between given and focused material has been erased completely; (iii) though Mismatch is rated higher than Focus Final in the third position, a post hoc test comparing the ratings of the Mismatch structure across presentation orders does not show a significant difference between mismatch structures in first position and in third position. For these reasons, I make the claim in the main text that the same pattern is attested in all three ordering positions, while nonetheless acknowledging that the order of presentation had some effects.

[11] For example, since there is no absolute scale of acceptability and sentence judgments necessarily reflect the background against which they are presented, including the surrounding sentences (Cowart 1997), it is possible that this design produced more valid results than judging the sentences in isolation would have. In fact, this appears to be the case here, in that a pilot study conducted to test the design of this experiment revealed that participants were not able to distinguish as readily between stimulus types when the stimuli were given in isolation (see Hoot 2012a for full details on the pilot study).

[12] His paper primarily concerns contrastive focus, but he claims that "most of the arguments … also apply to … presentational focus, strongly suggesting that the proposed analysis applies to both focus types" (Samek-Lodovici 2006:838).

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