Focus in Spanish: a processing perspective

Introduction. This paper investigates focus in Spanish, bringing to bear experimental data from the processing of reduced clauses. In Spanish, focus has mainly been investigated in terms of word order and prosody (a.o. [10]). This paper will argue for an additional refinement: the pro-drop hypothesis in (1).

The argumentation will be made on the basis of experimental results that show that the language processor (LP) treats overt subjects as focused for the purpose of resolving ambiguous ellipsis (AE).

Background. Descriptively, a distinction can be made between informational focus (IF) (new information in the common ground) and contrastive focus (CF) (contrast with given information). Question-answer pairs are often used to identify IF, whereas corrective responses are often used to identify CF. In English, the effect of focus in processing has been studied in various aspects ([2,3,4,6]). A L+H* pitch accent is used to signal focus and focus parallelism has been shown to affect the resolution of AE structures (and reduced clauses more generally). (2) is an example with replacives: depending on the assignment of focus in the first clause, the replacive can be understood either as (2)a (subject reading) or as (2)b (object reading). English Object Bias. [5] have shown that in English listeners do not rely only on pitch accent to determine new information, and, therefore, focus structure. The LP also relies on regularities of the language. In English: the tendency of new (focused) information to be in object position ([1]). This regularity determines a bias for object readings in English AE resolution.

Focus in Spanish. [10] has argued that focus structure in Spanish results from the interaction between word order and prosody. The basic word order in Spanish is SVO and with neutral intonation (NI), stress always falls on the last element of the intonational phrase. [10]’s prediction is that with NI, (3) can have three different focus-structure interpretations, (4)a-(4)c. [10]’s theory makes the following two predictions: (i) with NI, narrow focus on the object can be either CF or IF, and (ii) narrow IF on the subject is not possible. [10] also argues that narrow CF on the subject requires contrastive intonation. One goal of this paper is to discuss experimental results which disconfirm these predictions, indicating the need to refine the theory of focus (Experiment 1). Processing focus in Spanish. Experimental results will be presented that make reference to two types of reduced clauses: replacives (which contrast with a focused element in the previous clause), (5), and bare-argument ellipsis (which introduce new information), (6). Both (5)a/(6)a are ambiguous between a subject and an object reading. Following [2,3,4], [6] and [7], I assume that the correlate of the DP (la puerta) in the previous clause needs to be focused (it will be either the subject or the object). Experiment 1: Following the two conditions (5) and (6), 16 completely ambiguous sentence pairs were designed; counterbalanced questionnaires were built and 16 subjects from Castile (central Spain) were tested. Discussion: The results, (10), went against predictions made on the basis of [10] (and, as opposed to English, there was a subject bias): (i) the DP-Neg results show that the subject can bear narrow IF (since it was chosen as correlate most of the times); and (ii) the Neg-DP results indicate that narrow CF on the subject does not require contrastive intonation (assuming default prosody for silent reading). Proposal: The experimental results follow from the interaction between structural preferences and the pro-drop hypothesis, (1) (a language regularity). For the DP-Neg cases, the structure in (7) is preferred, leading to a subject reading. An object reading would require movement, which is disfavored by the LP ([12]). Thus, structural simplicity and the possibility of focus parallelism (see (1)) predicts a subject preference. For the Neg-DP examples, the structure is as in (8) (it permits both an object and a subject reading). This structure, together with the pro-drop hypothesis and the proposal in [10], explains the Neg-DP results: both the subject and the object can be focused. A second goal of this paper is to test the pro-drop hypothesis. Experiment 2: To test (1) a written questionnaire was designed with 18 completely ambiguous sentences. It included examples with pro (null) subjects like (9). Discussion: The results in (11) confirmed (1): in the absence of an overt subject, the subject readings disappear, even though there is a contextually given subject.

Conclusion: The experimental results show the need to refine theories of focus, making focus sensitive to multiple sources. For the case of Spanish, we have seen that pro-drop plays an important and so-far unrecognized role. We have shown that language regularities are used by the processor to unpack information structure and can explain crosslinguistic biases in ellipsis resolution. Finally, experimental techniques have proven crucial in pointing to the need to refine theoretical discussions.
(1) **pro-drop hypothesis**: in pro-drop languages there is a tendency for overt full DPs in subject position to be focused (a language regularity at play during processing).

(2) Dr. Waters saved Maria from drowning, not Dr Green  
   
   a. **Subject reading** (obtained when L+H* is placed on Dr Waters in (2))  
      ... not [Dr Green (saved Maria from drowning)]
   
   b. **Object reading** (obtained when L+H* is placed on Maria in (2))  
      ... not [(Dr. Waters saved) Dr. Green (from drowning)]

(3) La rama golpeó la ventana.
   
   the branch hit the window

(4) Possible (Information) focus structures for (3) depending on the projection of focus from the object position. (Always with NI)
   
   a. **What happened?**
      i. [La rama golpeó la ventana]_f (broad focus)
   
   b. **What did the branch do?**
      i. La rama [golpeó la ventana]_f (VP focus)
   
   c. **What did the branch hit?**
      i. La rama golpeó [la ventana]_f (narrow object focus)

(5) SVO + Neg-DP
   
   a. La rama golpeó la ventana, no la puerta. (Replacive)
      the branch hit the window neg the door
      i. … the door did not hit the window (subject reading)
      ii. … the branch did not hit the door (object reading)

(6) SVO + DP-Neg
   
   a. La rama golpeó la ventana, la puerta no. (Bare argument ellipsis)
      the branch hit the window the door neg
      i. … the door did not hit the window (subject reading)
      ii. … the branch did not hit the door (object reading)

(7) [TP[TP[DP la rama] [vpgolpeó [DP la ventana]]]conj[TP[DP la puerta]no[vpgolpeó[DP la ventana]]] ]

(8) [TP[TP[DP la rama] [vpgolpeó [DP la ventana]]] [Replacive,no [DP la puerta]] ]

(9) (Había una rama en el suelo). pro golpeó la ventana, no la puerta.
   
   There was a branch on the floor hit the window neg the door

(10) **Experiment 1 Results**: (16 subjects from Castile)
   
   a. For Neg-DP sentences, there was a no significant difference between the subject and the object readings (50% each);
   
   b. For DP-Neg sentences there was a significant difference (p-value<0.001) in favor of the subject reading.

(11) **Experiment 2 Results**: (18 subjects from Castile)
   
   a. In sentences like (9) the object readings were chosen 95% of the times.