The origins, syntax, and prosody of the subordinator in Paraguayan Guaraní and its effect on linear order. A Case Study on the effects of Prosody in Linearization.

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While syntactic structure and parsing considerations can determine the linearization of words and morphemes, it is also the case that prosody can play a significant role (see also Ackema & Neeleman 2006, Richards 2016, Zubizarreta 1998 for arguments along the same lines). We illustrate this point with a case study on the syntax and prosody of Paraguayan Guarani (PG) predicate phrases in declarative complement clauses headed by the subordinator *ha*.

We argue that to gain an understanding of such structures, we must have an understanding of the origins of such subordinator. More specifically, we suggest that in PG the subordinator *ha* has its origins in the coordinating conjunction of sequential verbal events, via reanalysis of the coordinator as prosodically and syntactically parsed with the verbal material on its left (1a). This reanalysed structure is embedded under an attitude matrix verb (1b) and is generalized across complement types such that all kinds of arguments can appear to the right of the subordinator (1c), (possibly interspersed with adverbs and freely ordered); see (2). Comp can be reliably located at the left edge of the subordinate clause, as shown by the fact that in matrix and embedded *wh*-constructions, the *wh*-phrase appears at the left edge of the clause. We suggest that *Comp ....ha* form a discontinuous Complementizer whereby Comp marks the scope of the force of the sentence, and *ha* encodes the assertive or declarative nature of the propositional content.

(1) a. [VP [*ha* VP]] → [[VP *ha*] VP]

   b. [V [Comp [.... [[VP *ha*] VP]]]

   c. [V [**Comp** [.... [[VP *ha*] XP]]] (generalized subordinate structure)

(2) a. He'i o-ho_**ha** o-guahẽ (ko asaje) (hikuái) yvyra-gúy-pe (ko asaje) (hikuái)
      3.say 3-go_Sub 3-arrive (this noon) (they) tree-under-loc (this noon) (they)
      'They went and arrived under a tree at noon'

   b. He'i o-maña-porã-ta_**ha**   (Luisa) i-membý-re   (Luisa)
      3.say 3-watch-well-Prosp_Sub (Luisa) 3.Pos-child-Obl (Luisa)
      'She said Luisa will watch the children well'.

The structure in (1c) has the peculiarity that no argument (nor temporal or high adverb) may appear between the verb and *ha* (3a). These must appear to the right of *ha* (1c). Only the verb and low Adverbs that form a small predicate, which we will refer to as V*, may appear to the immediate left of *ha* (3b), as well as some unstressed (to be discussed) functional morphemes.

(3) a. [SUB [VP V XP] *ha*]   XP = argument, temporal & high adverbs   (*not attested*)

   b. [SUB [v* V (Low Adv)] *ha*] (XP)] XP = argument, temporal & high adverbs (*attested*)

The impossibility of the structure in (3a) is reminiscent of the structures excluded by the *Final-over-Final Condition* (FOFC) put forth by Biberauer, Holmberg & Roberts 2014, which states that a head final phrase may not dominate a head initial phrase within the same extended projection, as

in (4). If the subordinator and V in (3a) are part of the same extended projection, then (3a) may be assumed to be a particular instantiation of (4).

(4)   [$_{XP}$ [$_{YP}$ Y ZP] X]

On the other hand, it appears that the FOFC (or whatever mechanism it is derived from) must allow for (3b). Importantly, we will show that in (3b), V* and the subordinator *ha* form one accentual phrase or AP, a small prosodic unit which in PG is defined by the tonal melody, HLH* (Zubizarreta & Jun, in progress). An AP may be (slightly) larger than a word but contains a single Pitch Accent or PA (Beckman, M. & J. Pierrehumbert 1986, Jun 2005).

Bibauer et al. op.cit. and subsequent papers have attempted to derive the FOFC from the *Linear Correspondence Axiom* (Kayne 1994), which maps words (or morphemes) contained contained within an asymmetric hierarchical structures into a left-to-right linearized output. More recently, Hedde 2020 has put forth an analysis of the FOFC based on parsing constraints that aims to account for the cases that obey it, as well as for apparent counterexamples. Hedde argues that the cases where (4) is ruled out are those in which there is a morphological dependency between heads X and Y. The cases that are ruled out are those where head-movement of Y to X is required for licensing purposes, but since rightward movement is independently ruled out (due to parsing considerations, according to Hedde's proposal), such structures are unattested. If X is not an inflectional head, as is the case with freestanding particles, then no rightward movement is required for licensing purposes and the structure in (4) is well formed. In cases where X is an inflectional head and X and Y are linearly adjacent, the morphological licensing is readily satisfied without any need for vacuous rightward movement, and the output is also well-formed and attested.

In the case under consideration, the stressed subordinator *ha*, which is best analyzed as a particle, does not need to be morphologically related to V in order to be licensed. On the other hand, subordinator *ha* is prosodically dependent on the V* to its left. More specifically, a requirement of subordinator *ha* is that it must be must be *prosodically close* to the V* in (3b).   *Prosodic closeness* is defined as in (5b).

(5) a. Subordinator *ha* must be *prosodically close* to V* in (3b).
   b. Prosodic closeness is satisfied if V* and *ha* form one AP (the most common case) or if the AP headed by *ha* is adjacent to the AP formed by V* (in specific cases).

The above prosodic property distinguishes subordinator *ha* from coordinator *ha*. The latter can be prosodically parsed with the constituent to its right, or form its own prosodic unit (as when a pause is introduced after it), but it is never parsed with the constituent to its left.

The constraint in (5) excludes the structure in (3a) because XP forms its own AP. More generally, in PG, as in other AP languages, in a sequence 'X YP' (or 'YP X'), X and YP each constitutes an AP. On the other hand, all the material within V* does form a single AP and when combined with the particle *ha*, the output is one single AP as well, with the pitch accent on the rightmost syllable, namely on *ha*, satisfying the requirement in (5). Thus, in the face of considerable free word order,

prosody appears to provide a robust cue for identifying the right edge of the verbal predicate V*
in Paraguayan Guaraní.