Prosodic recursion and the Composite Group: can they reconcile?

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There are two conflicting views about the configuration of the prosodic hierarchy, namely, [1] that there is a Composite Group (CG, a modified version of the Clitic Group) between the Prosodic Word (PWd) and the Phonological Phrase (PPh) (Nespor & Vogel, 1986; Hayes, 1989; Vogel 2009), and [2] that prosodic domains admit recursion (Inkelas, 1990; Selkirk, 1996). This paper argues that these views are in fact compatible.

I show that pronominal clitics (object pronouns) in Brazilian Portuguese (BP) exhibit morpho-phonological behavior that can be identified neither with the PWd nor with the PPh. This supports the idea that a constituent between the PWd and the PPh is needed. Given that pronominal clitics differ from non-pronominal clitics (conjunctions, prepositions, articles) concerning morpho-phonological behavior, I suggest that these two types of clitics are not prosodized at the same domain: pronominal clitics at the CG, and non-pronominal clitics at the PPh. Additionally, internal relations observed in sequences of non-pronominal clitics seem to require recursion in the hierarchy.

Two assumptions regarding prosodic constituency are made: [i] prosodic domains are defined on the basis of phonological and mapping rules they present (Vogel, 2009), which implies that recursive levels cannot serve as domain of application of rules other than those verified in the lowest level of the constituent (cf. e.g. Peperkamp, 1997; Vigário, 2001); and [ii] recursion accounts solely for the mapping of dependency relations within a given constituent onto the prosodic hierarchy. Although recursive levels have been regarded as domain of certain phonological phenomena (e.g. Ito & Mester 2007, 2013; Elfner to appear), the processes that are attributed to recursive levels are usually related to prominence, which may indicate that recursive levels are subject not to specific segmental processes, but to boundary phenomena.

Regarding phonological behavior, vowel raising (VR; /e, o/ → [i, u]) is expected between a clitic (pronominal and non-pronominal) and its host (e.g. *s[i] chama* 'calls himself'; *s[i] quiser* 'if (he) wants') in most BP varieties. VR is *not* expected to apply word-internally (e.g. *c[o]nf[o]rtável*, not *c[u]nf[u]rtável 'comfortable'*), nor between a prefix and a stem (e.g. *r[e]-fazer*, not *r[i]-fazer* 're-do') (Bisol, 2000). Furthermore, VR does not seem to be morphologically conditioned: it applies regardless of whether the final vowel is a verbal or a nominal suffix. Thus, pronominal clitics are not prosodized at the PWd, but at a higher prosodic constituent – one that corresponds to the domain of VR.

Pronominal clitics differ from non-pronominal clitics primarily in three ways:

(a) while non-pronominal clitics undergo fusion in BP (e.g. *casa da* (de+a) *tia* 'the aunt's house'), pronominal clitics do not (e.g. **ele mo* (me+o) *deu* 'he gave it to me'. The 3 per direct object is usually omitted, or it appears after the verb as a full pronoun/NP.);

(b) while non-pronominal clitics can form strings in BP (e.g. *o de que falamos* 'that of which we-spoke'), pronominal clitics cannot (e.g. **te a comprei* 'I-bought it to you');

(c) in a BP variety in which VR is a variable phenomenon, VR is significantly more frequent in non-pronominal than in pronominal clitics (Guzzo, in prep).

This indicates that, although BP clitics in general are not prosodized at the PWd, they adjoin their hosts at two distinct domains, depending on their type: (i) pronominal clitics are prosodized at the CG, the first prosodic domain where VR applies (Fig. 1); and (ii) non-pronominal clitics are prosodized at the PPh, the domain where clitic fusion applies and clitic sequences are allowed (Fig. 2).

Regarding prosodic recursion, I suggest that it is a feature in the representation of sequences of non-pronominal clitics in BP. In the case of clitic sequences (e.g. *o de que falamos* 'that of which we-spoke'), two options for clitic adjunction seem possible: (a) as

clitics are always on the left side of the host, adjunction occurs from left to right; or (b) the clitic that is closer to the host adjoins it first.

Option (a) leads to a problem: the first clitic of the sequence should be able to predict that there is a host PWd after the string of clitics, or else it should be admitted that the host to the first clitic is the following clitic. In either case, the prosodic representation derived from option (a) is linear, in the sense that all elements of the structure are directly linked to the PPh (Fig. 3). Option (b), on the other hand, assumes that, as clitics depend on a host in order to be instantiated, the projection of the host is required first. Clitics are adjoined to the structure one at a time, with each clitic being able to access only the projection that is closer to them (Fig. 4). In fact, the recursive representation in Fig. 4 captures (a) the host-dependent relationship established by the host and the clitics that adjoin it and (b) the fact that prosodic structure has a relatively direct correspondence with syntactic structure, which suggests that syntactic boundaries are maintained in prosodic representation (Selkirk, 2011). In figures 3 and 4, the host is a PWd, and all clitics correspond to syllables.
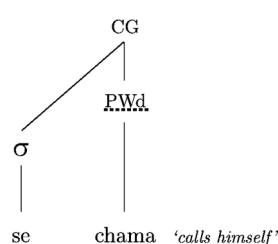
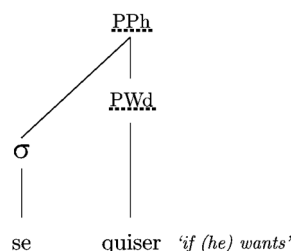Fig. 1: Prosodization of pronominal citics
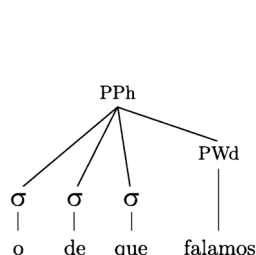
Fig. 2: Prosodization of non-pronominal clitics
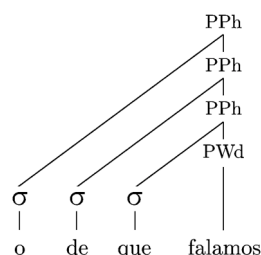
Fig. 3: Clitic sequences – non-recursive representation

Fig. 4: Clitic sequences – recursive representation

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