

Phrasing unaccented words in a recursive prosodic structure in Basque

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Northern Bizkaian Basque (NBB) has accented and unaccented lexical words. Unlike accented words, unaccented words never constitute independent phonological phrases and have to group with the following word (cf. Elordieta 1997, 1998, 2007a, 2007b; Jun and Elordieta 1997; Gussenhoven 2004; Selkirk and Elordieta 2010; Elordieta and Hualde 2014, among others). Elordieta and Selkirk's (2018) analysis is that NBB unaccented words lack a prosodic head. This property induces a violation of a prosodic well-formedness constraint demanding prosodic words to have a head (i.e., PROSODICWORD:HEAD, or ω :HEAD), part of a general constraint that calls for every prosodic constituent to be headed (i.e., Π :HEAD). Assuming a Head Chain Condition (prosodic constituents are headed "all the way"), a phonological phrase composed only of one or more unaccented words would also lack a prosodic head. This implies the violation of a constraint that demands that every phonological phrase must be headed, i.e. a φ must have a prosodic word that is the head (i.e., PHONOLOGICALPHRASE:HEAD, or φ :HEAD). Another constraint calls for the head of a prosodic word and the head of a phonological phrase to bear a tone (i.e. that the head mora of the head syllable of the head foot of the head word of the phonological phrase bear a tone): HEAD- $\mu(\omega)$:TONE and HEAD- $\mu(\varphi)$:TONE, respectively. Epenthesizing a tone on an unaccented word in order to satisfy the constraints φ :HEAD and HEAD- $\mu(\varphi)$:TONE is not possible in NBB, as a higher ranked DEP-TONE prohibits the epenthesis of a tone on the surface. Thus, syntactic XPs containing exclusively one or more unaccented words cannot constitute well-formed, independent φ s. In other words, the prosodic well-formedness constraints φ :HEAD and HEAD- $\mu(\varphi)$:TONE dominate MATCHPHRASE which demands that syntactic maximal projections correspond to phonological phrases (XPs to φ s), creating recursive prosodic structure (within the framework of Match Theory, cf. Selkirk 2011; Elfner 2012, 2015; Elordieta 2015; Bennett et al. 2016, among others). The only way for XPs composed entirely of unaccented words to be parsed in the string of legitimate φ s is by grouping in a φ that contains an accented word, that is, a φ with a headed ω .

Here we report an experiment aiming to observe the prosodic behavior of unaccented words in syntactic XPs in different syntactic configurations (A = accented word; U = unaccented word; - = boundary between syntactic arguments): (a) AA-UA; (b) AA-U-A; (c) AAU-A and (d) AAUA (cf. (1)). The results show that U words group with the following A word systematically (i.e., φ (UA)), crossing boundaries between syntactic arguments, that is, in a pattern not isomorphic with syntax. In types (a)-(b), upstep is observed in the φ formed by (UA), whereas no upstep is observed in types (c)-(d). We can explain the asymmetry by assuming φ -level recursivity (Ito and Mester 2013) and following Elordieta's (2015) claim that upstep occurs on non-minimal φ s. Thus, φ (UA) in (a)-(b) is φ_{\max} OR φ_{nonmin} , whereas it would be φ_{\min} in (c)-(d). The difference has to do with the fact that the U word in (a)-(b) is syntactically in a separate XP from the preceding words, whereas in (c)-(d) the U word is within a more inclusive XP with the preceding A words. That is, in (a)-(b) there are more syntactic maximal projections intervening between the U word and the preceding A words than in (c)-(d), hence the U words are contained in non-minimal φ s in (a)-(b) but not in (c)-(d).

- (1) a. **[AA] [UA] verb**
 DP[DP/NP[Mirénen]] NP[lagúnak]] DP[DP/NP[alabien]] NP[medállak]] hartun dábez
 Miren-gen. friend-erg.pl. daughter-gen.sg. medal-abs.pl. take aux
 ‘Miren’s friends have taken the daughter’s medals’
- b. **[AA] [U] [A] verb**
 DP[DP/NP[[Iráiden]] NP[lagúnak]] DP[DP/NP[alabiari]] NP[bideúak]] erregala dótzez
 Iraide-gen. friend-abs.pl. daughter-gen.sg. video-abs.pl. give aux
 ‘Iraide’s friends have given videos to the daughter’
- c. **[AAU] [A] verb**
 DP[DP/NP[DP/NP[Amáien]] DP/NP[amúmen]] NP[ganadua]] DP[DP/NP[Malagára]] bialdu dábe
 Amaia- gen. grandma-gen.sg. cow-abs.sg. Malaga-allat. send aux
 ‘They have sent Amaia’s grandmother’s cow to Malaga’
- d. **[AAUA] verb**
 DP[DP/NP[DP/NP[Elénen]] DP/NP[mutíllen]] DP/NP[lagunen]] NP[madarídxak]] hartun dábez
 Elena-gen. boy-gen.pl. friend-gen.sg. pear-abs.pl. take aux
 ‘They have taken Elena’s boys’ friend’s pears’

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