

## Binarity at the left edge of Intonational Phrases

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In his analysis of the intonational structure of Lekeitio Basque, Elordieta (1997) distinguishes Accentual Phrases (APs), Intermediate Phrases (ips) and Intonational Phrases (IPs). Typically, APs are stretches of material characterized by an initial rise from a boundary Low tone to a phrasal High tone and a H\*+L pitch accent on the final or penultimate syllable. APs can only contain a maximum of one pitch accent, but they can include more than one word, as there are words which are lexically unaccented (i.e., they do not carry surface stress unless they occur immediately preceding the verb). The left edge of a syntactic maximal projection introduces or is aligned with the left edge of an ip. Downstep applies to accents within an ip but not to accents in different ips (cf. (1), where accented syllables bear an acute accent mark and are boldfaced). That is, ip-boundaries block downstep. However, in this paper we provide experimental evidence that when the first syntactic maximal projection in an IP contains only one AP (i.e., only one H\*+L accent), downstep affects the following H\*+L accent of the AP in the next maximal projection (cf. (2), a near-minimal pair with (1)). That is, downstep applies even though according to general principles of ip-formation in Lekeitio Basque there would be an ip-boundary intervening between the two APs and would thus be expected to block downstep. This behavior indicates that in Lekeitio Basque an ip starting an IP which contains only one AP (i.e., only one pitch accent) simply cannot be an independent ip and restructures into the following ip, as if it were the first AP of a more inclusive ip. Restructuring thus gives rise to a syntax-prosody mismatch, as it overrides a default mapping principle of Lekeitio Basque which assigns ip-boundaries to syntactic maximal projection boundaries.

This restructuring process is reminiscent of the kind discussed by Nespor and Vogel (1986) for Italian, namely single-word direct objects which instead of forming independent phonological phrases restructure into the preceding phonological phrase containing the verb. The difference with these cases is that the size restriction is not one of number of words but of number of pitch accents or APs that an ip must contain: a well-formed ip must contain at least two APs. Thus, in Lekeitio Basque there is a BINARITY constraint on ips, similar to the English cases discussed by Selkirk (2000). Nevertheless, not all single-accent ips restructure into following or preceding ips. Our experimental evidence shows that syntactic maximal projections containing a single AP but located IP-internally (i.e., not on the left edge of the IP) project their own independent ips, as shown by the absence of downstep on the accent in the second maximal projection in (1). Thus, the BINARITY constraint only applies to ips on the left edge of an IP. This asymmetry can be explained if the first IP in an utterance is a strong or prominent position (like the initial syllable of a word, but at a higher prosodic level), and the BINARITY constraint applies as a positional augmentation constraint (Smith 2002), seeking the enhancement of a prominent position. This positional augmentation constraint, which we can call BINARITY/IP<sub>1</sub>, would dominate ALIGN-XP.

- (1)            H\*+L        !H\*+L                    H\*+L  
              NP[**Amáien**    amumári]        NP[liburúa] emon dotzo        **Two NPs, two ips.**  
              Amaia-gen grandma-dat    book-abs give aux  
              ‘(s)he has given the book to Amaia’s grandma’
- (2)            H\*+L        !H\*+L                    !H\*+L  
              NP[**amáiári**]    NP[**amúmen**    liburúa]    emon dotzo        **Two NPs but one**  
              Amaia-dat    grandma-gen book-abs give aux        **(restructured) ip.**  
              ‘(s)he has given grandma’s book to Amaia’

## References

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