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Adverbial Left-Branch Extraction and the Structure of AP in Slavic
This paper shows that adverb extraction (AdvE) out of traditional adjective phrases (TAPs) is sensitive to the amount of structure projected within the TAP, which I show follows from a contextual approach to phases; and that the amount of structure projected in the predicative and attributive position is different. My arguments are based on a cross-linguistic survey of a number of Slavic languages regarding this extraction, and on a case-study exploring phonological, morphological, and syntactic properties of Bosnian/Croatian/Serbian(BCS) short-form adjectives (SFAs) and long-form adjectives (LFAs).
AdvE. A survey of Slavic languages regarding examples like (1) reveals two new generalizations (2):
(1) a. TERRIBLY$_i$, HE WAS t$_i$ TIRED. (BCS, BG, POL, RUS, SLO)
   b. *EXTREMELY$_i$, THEY MET t$_i$ SMART STUDENTS. (BCS(long), BG, POL, RUS, SLO)
(2) a. Slavic languages allow AdvE out of predicative position.
   b. Slavic languages disallow AdvE out of attributive position.
In many languages the morphology of attributive adjectives differs from that of predicative adjectives: e.g. long form in BCS and Russian, definite form in Icelandic, agreeing form in Dutch and German. Bailyn (1993) argues attributive TAPs quite generally must have a functional projection above the AP. I show that this suggestion coupled with a contextual approach to phases straightforwardly captures (2). Parallel to (1), Bošković (2008) observes a correlation between the (un)availability of adjectival left-branch extraction (LBE) (3) and the presence of articles, stating a generalization that only article-less languages may allow LBE, while languages with articles never allow it.
(3) (*)SMART$_i$ THEY ARE t$_i$ STUDENTS.
Under a contextual approach to phases, Bošković (2013) argues that every lexical category projects a phase and that the highest projection in the extended domain of every lexical head is a phase. Concerning LBE, Bošković argues that the highest projection in the extended domain of N in all languages is a phase, and that the variation regarding LBE follows from the presence of the DP layer in languages with articles and the lack thereof in languages without articles (Corver 1992; Zlatić 1992; Bošković 2008), and an interaction of locality constraints: (i) the *PIC*, under which only the edge of a phase can be moved out of it; and (ii) *anti-locality*, a ban on movement that is too short which requires movement to cross at least one full phrase (not just a segment). Assuming adjectives are NP-adjoined (Corver 1992; Bošković 2008), the DP (phase) blocks adjectival LBE in languages with articles since such extraction violates either the PIC or anti-locality; LBE is not blocked in languages that lack DP, given that adjectives originate at the edge of the nominal phase. In sum, the amount of structure projected within the extended domain of a lexical category correlates with extraction possibilities of elements contained in it. Regarding (1-2), I suggest that the same interaction of locality constraints is at work. Parallel to N, A projects a phase in its extended domain. Assuming intensifying adverbs originate as AP-adjoined, attributive and predicative TAPs differ regarding the availability of AdvE due to the presence of a functional projection XP above AP in the attributive position, which is missing in the predicative position. In (1a), the Adv originates at the edge of the AP (phase), and can be extracted without violating the PIC/anti-locality (4a). (An account of unavailability of (1a) in English is also provided in the paper). In (1b), the XP layer is present above the AP to which the Adv is adjoined and functions as a phase as the highest projection in the domain of A (i.e. Adv is not at the edge of a phase). To move out of XP, the Adv has to stop in SpecXP (phasal edge), due to the PIC, but this step of movement is too short; it is ruled out by anti-locality (4b).

(4) a.   b.
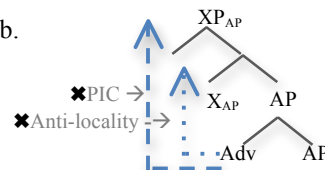
due to the PIC, but this step of movement is too short; it is ruled out by anti-locality (4b).
SFAs vs. LFAs. BCS long form adjectives can be used only attributively. Given that AdvE is disallowed out of TAPs with LFAs, it follows from above that the functional projection associated with the LFA inflection (XP) is within the TAP. In contrast, previous analyses of LFAs place XP outside of the TAP, i.e. within the traditional nominal phrase (TNP). However, I provide evidence that XP is indeed a part of the TAP, rather than TNP, based on prosodic differences between SFAs and LFAs. Contemporary SFA/LFA distinction is almost entirely prosodic (cf. 5&6) (see Aljović 2002). Out of forty-two pairs of

SFA/LFA forms resulting from seven Cases and three genders in singular and plural, only in NOM.SG.M an overt inflection [-i] occurs in LFA in addition to the prosodic contrast present in other pairs (glá:d**a**n – glà:dni 'hungry'). The prosodic differences between SFAs and LFAs at first glance do not look systematic, and have not yet received an account in the literature: (i) if SFA has a rising tone it becomes a falling tone in LFA (5a-6a; 5b-6b); or (ii) if SFA has a rising tone, it shifts one syllable to the left and remains a rising tone in LFA (5c-6c); or (iii) the accentual difference is neutralized (5d-6d). Falling and rising accents result from the following rules in BCS (e.g. Inkelas and Zec 1988): (i) In a word with multiple underlying High(H) tones, the leftmost H wins; (ii) In the absence of underlying H tones, a default Initial H is inserted; (iii) A syllable has a rising accent if it precedes a winning H (due to H-spreading); (iv) An initial H is realized as falling.

> [´] rising accent
> [`] falling accent
> **bold** = locus of the winning H

(5) *SFA*: a. plá:v**o**:j   b. glá:dn**o**:j   c. visók**o**:j   d. l**à**bavo:j
(6) *LFA*: a. pl**à**:vo:j   b. gl**à**:dno:j   c. vísoko:j   d. l**à**bavo:j
          'blue.DAT.SG.F' 'hungry.DAT.SG.F' 'tall.DAT.SG.F' 'loose.DAT.SG.F'

The messy picture in (5-6), however, reveals what the actual LFA inflection is, which turns out to be different from the standard view under which LFA inflection is assumed to be added on top of SFA agreement morphemes, with exponents: [-i] for NOM.SG.M and -ø elsewhere. In particular, I propose that the only LFA inflection is a phonemically null morpheme with a H tone (i.e. X=ø^H). SFAs and LFAs have the following morpheme sequences, with the underlying H tones indicated by [^H]:

(7) *SFA*: a. plá:v-**o**^H:j   b. glá:dn-**o**^H:j   c. visók-**o**^H:j   d. l**à**^Hbav-o^H:j
          ADJ-DAT.SG.F   *ADJ-DAT.F*   *ADJ-DAT.SG.F*   *ADJ-DAT.SG.F*

(8) *LFA*: a. pl**à**:v-ø^H-o^H:j   b. gl**à**:dn-ø^H-o^H:j   c. vísok-ø^H-o^H:j   d. l**à**^Hbav-ø^H-o^H:j
          ADJ-X-DAT.SG.F   *ADJ-X-DAT.SG.F*   *ADJ-X-DAT.SG.F*   *ADJ-X-DAT.F*
          'blue'   *'hungry'*   *'tall'*   *'loose'*

In (7-8), the dative suffix [o^H:j] has an underlying H tone, which spreads to the preceding vowel of the toneless ADJ, giving it a rising accent in (7a-c). In contrast to (7a-c), in (8a-c) the H tone of the dative suffix [o^H:j] is not realized, which is indicated by the fact that the vowel preceding it does not have a rising accent. Instead, the vowel preceding [o^H:j] has its own H in (8a-c). Given that this H tone is missing from the SFAs in (7a-c), the question is where this H tone comes from. As suggested above, LFA inflection is a null morpheme with a H tone. Contrary to the standard analysis where LFA inflection is added on top of agreement (ADJ-DAT.SG.F-X order), I argue this morpheme is located between ADJ and agreement in (8) (ADJ-X-DAT.SG.F order). Not being underlyingly linked to a vowel, the H tone of the LFA inflection -ø^H links to the first vowel preceding it, i.e. the final vowel of ADJ. If ADJ is monosyllabic, this results in a falling accent (8a-b). If ADJ is polysyllabic, the H tone spreads to the vowel preceding it, giving it a rising accent (8c). SFA/LFA distinction is neutralized in (7d)-(8d) due to the underlying initial H tone of the ADJ, which wins in both SFA and LFA as the leftmost H in the sequence, regardless of the presence of other H tones, and is realized as falling. The sequences of morphemes in (7-8) represent what SFAs and LFAs look like in PF. The remaining question is which of these morphemes correspond to heads that project syntactic structure and which do not. Assuming syntax provides input to PF and LF, elements that are present in the syntax are expected to have semantic and/or syntactic reflexes. Elements that have neither syntactic nor semantic effect can be inserted in PF, as argued for agreement nodes (Embick and Noyer 2007). I suggest that ADJ projects AP in both SFAs and LFAs (4). The LFA inflection (X=ø^H) projects XP above AP (4b). The presence of XP in the syntax is supported by its blocking effect on AdvE with LFAs. X lowers to ADJ in PF by M-merger (Marantz 1984; Bobaljik 1995). The DAT.SG.F suffix realized as [o^H:j], marking agreement with the noun, is added in PF, hence has no semantic or syntactic effect. Finally, the ending [-i] that occurs only in NOM.SG.M (in addition to ø^H) is not LFA inflection. I argue there are two vocabulary items realizing agreement in NOM.SG.M: (i) [-i] is inserted in the context of X ([NOM.SG.M]→[-i]/X__); (ii) [-ø] is inserted everywhere else ([NOM.SG.M]→[-ø]/elsewhere). Their choice is determined by the Elsewhere Principle (Kiparsky 1973). The analysis of LFA inflection as ø^H rather than [-i] entirely captures the messy situation in (5-6).