

Identity and precedence

Introduction: Precedence relation among complex linguistic objects is usually explicitly or implicitly taken to be strict (universal and irreflexive) (Bird and Klein, 1990):

- (1) Strict Precedence(SP):
 $X \text{ precedes } Y \Rightarrow \forall x \in X \text{ and } \forall y \in Y x < y$

In this paper we argue for a weaker view of precedence. We allow for reflexive precedence (Raimy, 2000) and replace the two universal statements with existential statements, one for the minimal elements (Left edge) and one for the maximal elements (Right edge) :

- (2) Reflexive Relative Precedence (RRP):
 $X \text{ precedes } Y \Rightarrow \text{LeftEdge}(X) \leq \text{LeftEdge}(Y) \text{ and } \text{RightEdge}(X) \leq \text{RightEdge}(Y)$

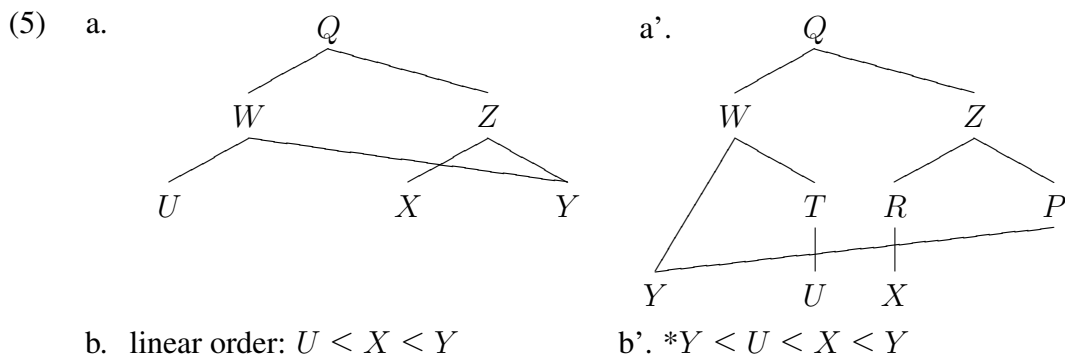
Following Chomsky (2001), we assume that phonological spellout maps the terminals dominated by the node at which spellout takes place onto a string. As a consequence, in most cases of linearization , RRP would mimic SP, making the latter unnecessarily strong. The central empirical motivation for this new definition comes from cases of syntactic sharing where Strict Precedence fails. In this paper we will discuss two such cases, Right Node Raising (RNR) and reduplication.

Right Node Raising:

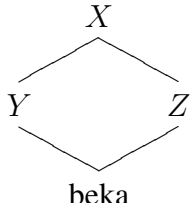
RNR(3) has been mostly analyzed as either the consequence of rightward movement (Ross, 1967) or phonological ellipsis (Abbott, 1976). Neither approach fully accounts for this phenomenon (cf. Bachrach and Katzir 2006 for a fuller discussion). In particular, both fail to provide a principled explanation for the Right Edge Restriction (RER), the fact that the gap associated with the ‘raised’ material must be rightmost in all conjuncts (4):

- (3) [The man who danced loves__], and [the woman who went home hates__] **the new headmaster.**
- (4) * [A man who loves__ danced], and [a woman who hates__ went home] **the new headmaster.**

We follow Wilder (1999)’s intuition that an analysis of RNR in terms of syntactic sharing (McCawley, 1982) can derive the RER as well as a number of other properties of this construction. The problem, already observed by Wilder, is that syntactic sharing is not compatible with SP (as, for example, in Kayne 1994). If W strictly precedes Z in (5) then Y , which is contained in both W and Z would be ordered to both precede and follow X as well as precede itself. Unlike SP, RRP is compatible with the structure in (5). The left edge of W (U) precedes the left edge of Z and the right edge of W reflexively precedes the right edge of Z (as Y can reflexively precede itself). RRP still rules out RER violations. In (5.a’), Y , the left edge of W , is ordered before and after X , the left edge of Z :



Reduplication: Our proposal is inspired by two recent accounts (Raimy, 2000; Inkelas and Zoll, 2005) which offer an alternative to the dominant view of reduplication as affixation+phonological copying. In line with Inkelas and Zoll (2005), we assume that certain cases of reduplication (their *morphological reduplication*) reflect the presence of two syntactic instances of the same morpheme. As with RNR, we formalize syntactic identity as sharing, or multidominance (6a). In line with Raimy (2000), we attempt to derive the phonological shape of the reduplicated form from general principles of linearization of directed graphs. Shared material can be optionally linearized twice (as in total reduplication, 6c) or, as in RNR, appear only once (6d) as long as it does not violate (2) and as long as the presence of two syntactic instances remains recoverable (6e):

- (6) a. 
- b. $[beka] \leq [beka]$
 c. $[bekabeka]$
 d. $[bebeka]$ or $[bekaka]$
 e. $*[beka]$

Two apparent reduplication puzzles receive an elegant solution in our framework:

Hungarian preverb reduplication In Hungarian, the preverb (similar to the Germanic verb particle) can be reduplicated (7) to “denote irregular iteration of the event denoted by the *verb*.” (Piñón, 1991). This is a bracketing paradox; the reduplication seems to have semantic scope over the entire verb but phonological scope over the preverb alone. Generally, preverbs and even compounded preverbs can appear post verbally, which Piñón explains as movement of the verb across the preverb. He observes that reduplicated preverbs can only appear pre-verbally. We propose that in preverb reduplication the entire preverb+verb structure is syntactically doubled (8), with RNR like linearization of the verb (9):

- (7) meg meg-álit (from meg-álit) ‘stop occasionally’
 (8) $[meg-álit] \leq [meg-álit]$
 (9) meg meg-álit

This analysis resolves the scope puzzle and also explains the lack of inverse order since the double prefix is not a true syntactic unit across which the verb can move.

Double Reduplication: A number of languages present a form of reduplication where a prefix and the stem (10), or two syllables (11) of the stem seem to go through independent reduplications (corresponding to a single semantic operation):

- (10) bala-bala-du-du-e? (from bala-du) ‘to tear it repeatedly’ (Amele, Roberts 1991, cited in Inkelas and Zoll 2005)
 (11) papayayáso (from payáaso) ‘clowns’ (Oodham, Miyashita 2004)

In our account this pattern can be accounted for with a single doubling operation (12). The linearization in (13) is permissible by RRP as the edges are properly aligned:

- (12) $[bala \leq du] \leq [bala \leq du]$
 (13) bala bala du du

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