An Interpretive Approach to Phonological Phrasing and its Implications for Recursive Phrasing

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Recent research has suggested that Spell-Out should be eliminated from the architecture of grammar (Chomsky et al. 2019; Boeckx 2003/2007), indicating that phase-by-phase Spell-Out approach to phonological phrasing is no longer tenable. Incorporating some insights from Match Theory MT and the Labeling Algorithm LA, I suggest an alternative approach and discuss some implications for recursive phonological phrasing.

LA determines how syntactic objects SOs are interpreted at the conceptual-intentional system in terms of minimal search (Chomsky 2013, 2015). Thus, in the SO K = {H, XP}, where H is a simple lexical item and XP is a phrase, H is the label of K since it can be detected with minimal search within K. As Chomsky argues, only functional elements such as C or a categorizer v can be a label, and lexical elements such as a verbal root R cannot. He also argues that T in English is too weak to serve as a label since it does not show rich subject agreement. Notice that in the syntax-phonology interface, it is lexical elements, but not functional elements, that are visible in the formation of prosodic domains (e.g., Selkirk's (1984) *Principle of the Categorial Invisibility of Function Words*). Given these (and other) considerations, I suggest the following process of phonological interpretation of syntactic objects (PISO): *An SO is interpreted as a phonological phrase if an unlabelable element is detectable with minimal search within the SO*. With this in mind, let us consider (1a), whose syntactic structure is (1b). Here v*P-internal subject is omitted, and R raises to v*, leaving a copy of R (indicated by t_R). (1) predicts that the syntactic objects α, γ, ζ, and θ are interpreted as phonological phrases: T is detectable with minimal search within γ and θ, and (a copy of) R is detectable with minimal search within α and ζ. Then PISO generates recursive phonological structure as in (1c). This phrasing is similar to the one predicted by Nespor and Vogel's (1986) theory, shown in (1d). A difference is that the apparent mismatch between syntactic and phonological structures is captured as reflecting recursive phonological structure. (e.g., "can eat" is a phonological, but not syntactic, constituent in (1d)). Another difference is that PISO predicts that there is no phonological phrase boundary between the subject and a following element in the languages with rich subject agreement since T is labelable, unlike in English. In fact, this is borne out (see Cheng and Downing 2009 for Zulu and Chichewa, and Shaked 2007 for Hebrew, among others).

Unlike MT, PISO correctly predicts that the SOs γ and θ (which are T-bar, but not TP, level SOs) correspond to phonological phrases in (1c).

Moreover, Chomsky (2013) argues that conjunctions are unlabelable, and Saito (2019) argues that Case particles in Japanese are unlabelable (see also Saito 2016). Then, for (2a), adapted from Ito and Mester (2013), PISO gives the recursive phonological phrasing (2b): The unlabelable Case particle *-no* GEN and conjunction *-to* 'and' are detected with minimal search within α and β, respectively. (2b) serves as an input structure for further phonological computation that determines the final output structure (see Ito and Mester 2013 for details).

Examples:

(1) a. Bill thinks that John can eat fish.

b. [$_{\kappa}$ C [$_{\iota}$ [$_{DP}$ Bill] [$_{\theta}$ T [$_{\eta}$ R_{think}-v* [$_{\zeta}$ t_R [$_{\varepsilon}$ C_{that} [$_{\delta}$ [$_{DP}$ John] [$_{\gamma}$ T_{can} [$_{\beta}$ R_{eat}-v* [$_{\alpha}$ t_R fish]]]]]]]]]

c. . . . Bill ($_{\varphi}$ thinks ($_{\varphi}$ that John ($_{\varphi}$ can eat ($_{\varphi}$ fish))))

d. (Bill)($_{\varphi}$ thinks)($_{\varphi}$ that John) ($_{\varphi}$ can eat)($_{\varphi}$ fish)

(2) a. [$_{\beta}$ [$_{\alpha}$ hiroshima no] sakana to]
Hiroshima GEN fish and Ito and Mester (2013: 26)

b. ($_{\varphi}$ ($_{\varphi}$ hiroshima no) sakana to) Cf. Ito and Mester (2013: 28, (17))

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