

Daniel Greeson. NELS 54, 2023

Overview: This paper addresses a puzzle surrounding the distribution of case endings and case-like prepositions (e.g. English *of, to*) [henceforth referred to as K heads] on the complements of spatial prepositions. I present novel data from Kannada, Spanish, and English that motivate the following constraint:

- (1) **Constraint on null K:** (i) When a KP [e.g. *of the house* in *inside (of) the house*] is immediately dominated by and adjacent to the Place^o head [(Svenonius 2010)] that selects for it [e.g. *inside*], null K may be permitted. (ii) Non-adjacency of Place^o and KP makes K-deletion impossible.

I show that this constraint can be derived from two PF well-formedness conditions: (i) Richards’ (2016) Selectional Contiguity, and (ii) An’s (2007) Intonational Phrase Edge Generalization (IPEG).

Background: Syntactically conditioned silence poses an issue for syntactic theory: if the syntax is autonomous, why should it care about a phonological matter like covertness? While early formulations of syntactic principles such as the EPP and the ECP directly refer to phonological (non-)emptiness, much recent work has shown that constraints on null elements can be handled outside of the narrow syntax, at PF. For instance, An (2007) proposes the Intonational Phrase Edge Generalization (IPEG) as a way to handle the distribution of null complementizers in English: CPs that obligatorily map to intonational phrases at PF (e.g. extraposed CPs, CPs following a gap, etc.) must have something overt in their edge (= head and specifier) or else the edge of CP will be fatally misaligned with the I(ntonational)-Phrase it maps to at PF. Null C at the edge of the CP [*CP* \emptyset_C **the earth is flat**] creates such an IPEG-violating misalignment in the following example:

- (2) *I believe [*CP* \emptyset the earth is round] and Bill believes [*CP* \emptyset (*I-Phrase* the earth is flat)]. (An 2007)

The IPEG was later adapted by McFadden & Sundaesan (2018) to apply not only to displaced CPs as in (2), but also to potentially all TPs. Their logic is that TP has special status as the complement and spellout domain of C, so it maps by default to an I-Phrase at PF and becomes subject to the IPEG. For them, English TPs need overt subjects to avoid a PF/syntax mismatch under the IPEG that would arise in a configuration like (3).

- (3) * [*TP* *pro* (*I-Phrase* am happy)].

While M&S limit themselves to discussion of TP, the spirit of their phase-based analysis can be extended to any spellout domain. I suggest here that the IPEG also governs the distribution of null K on complements of Place^o, as in *I’m inside_{place} (of_K) the house*. I assume following Boskovic (2013), Griffiths et al. (2021) a.o. that, as the highest projection in the spatial PP domain, Place^o heads like *inside* are phase heads. Thus, the complement of Place^o, namely KP, is a spellout domain, which in turn maps to a P(honological)–Phrase at PF and is subject to the IPEG. This brings us to our first set of data, which concerns certain locative KPs that may not have a phonologically null K at their edge.

Core data:

- (4) **Kannada** (Dravidian) [Data come from two Kannada speakers from Bangalore]

- a. Niivu [*PlaceP* [*KP* mane-(**alli**)_K] **oLagaDe**_{Place}] iddira.
 you [*PlaceP* [*KP* house-(LOC)_K] *inside*_{Place}] are.
 “You are inside (of) the house.”
- b. Niivu mane*(-**alli**)_K eshtu **oLagaDe**_{Place} iddira?
 You house*(-LOC)_K how *inside*_{Place} are
 “How far inside the house are you?”

- (5) **Spanish** (Romance) [Data come from two Peninsular Spanish speakers]

- a. Está [*PlaceP* **cerca**_{Place} [*KP* (**de**)_K] la mesa].
 is [*PlaceP* near_{Place} [*KP* of_K] the table
 “It is near the table.”
- b. ¿Cómo de **cerca**_{Place} está *(**de**)_K la mesa?
 how of near is \emptyset the table
 “How near the table is it?”

- (6) **English** *outside* [Author’s judgments]

- a. I'm outside (of) my comfort zone.
 - b. How far outside are you *(of) your comfort zone?
- (7) **English *near*** [Author's judgments]
- a. I live near_{Place} [_{KP} (to)_K the store].
 - b. As near_{Place} as I live *(to)_K the store, I hardly go.

In each language presented, the (b) examples show that an empty KP edge is illicit when KP and Place^o are non-adjacent, supporting the generalization in (1). However, the (a) examples show that null K is not generally illicit, as it's clearly allowed in those cases where Place^o and KP are adjacent. Since I have posited that KP is the spellout domain of the Place^o phase, this raises the following questions:

1. If KP is a spellout domain that maps to a P-Phrase at PF, **why is null K ever allowed?**
2. **What is it about non-adjacency** that prevents KPs from skirting the IPEG?

Regarding Q1: a promising explanation for the possibility of null K is the possibility of prosodic restructuring after the initial syntax–PF mapping takes place. Prosodic restructuring such that a potential prosodic constituent is absorbed into the surrounding phonological material is known to occur widely across languages, subject to factors like speech rate, register, and syntactic context (Nespor & Vogel 1986). If the following restructuring takes place, then KP no longer maps to a P-Phrase and is not subject to the IPEG:

- (8) Prosodic restructuring (a -> b)
- a. (*I-Phrase* I live near_{Place} (*P-Phrase* [_{KP} (to)_K the store]))
 - b. (*I-Phrase* I live near_{Place} [_{KP} (to)_K the store])

If (a) is able to restructure to (b), then null K becomes possible because KP no longer corresponds to a prosodic constituent and the IPEG does not apply.

Regarding Q2, I turn to Richards' (2016) notion of Selectional Contiguity:

- (9) **Selectional Contiguity:** If a head X selects a head Y, X and Y must be linearly adjacent.

Crucially, Richards takes Selectional Contiguity to apply within a single prosodic domain at PF. (**N.B.** If we want to avoid PF having access to selectional relationships from the syntax, we might replace selectional contiguity with a constraint in which a node X looks up to the next highest node Y in the same prosodic domain and assigns a violation if Y is not overtly realized). In either case, if X and Y occupy distinct prosodic constituents, Contiguity does not apply. Consider how this works for cases where Place^o and KP (bolded) are non-adjacent:

- (10) Attempted restructuring (a -> b)
- a. *(*I-pbr* As **near** near as I live (*P-pbr* [_{KP} **Ø_K** **the store**]))
 - b. *(*I-pbr* As **near** as I live [_{KP} **Ø_K** **the store**])

In (10a), KP corresponds to a P-Phrase and is subject to the IPEG, so the string is illicit because of a null KP edge. In (10b), KP is not subject to the IPEG, but Place^o and KP now occupy the same single prosodic domain, and Contiguity is violated due to their non-adjacency within this domain. The dual application of the IPEG and Contiguity thus renders null K illicit whenever KP is non-adjacent to its selecting head.

Discussion: I've shown that the distribution of null K/case on prepositional complements cross-linguistically can be accounted for entirely outside of the narrow syntax. What constrains null K is not whether an empty K head is licensed in the syntactic derivation, but rather whether a derivation with null-headed KP maps to a well-formed prosodic constituent at PF w.r.t. the IPEG and Selectional Contiguity. The deep motivation for such well-formedness conditions may be attributable to both phonological and 'third factor' considerations. On the phonological side, An (2007)'s IPEG might be assimilated to familiar constraints like ONSET which require the edge of a phonological constituent to be fortified. In terms of third factor pressures, it is well established that children rely on prosodic structure early on in language development to make inferences about syntactic structure (e.g. Christophe et al. 2003). It reasonably follows, then, that significant syntax–PF misalignment is a disfavored outcome of language development.