

*Distinct locality domains above and below the 'word' level:
Evidence from Bosnian/Croatian/Serbian adjectives*

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1. What this talk is about

- Chomsky (2000, 2001) proposes that syntactic derivations are cyclic:
 - A **phase** is a piece of structure whose derivation is encapsulated—it serves as a point at which an intermediate result of the derivation is *spelled out* and given an interpretation at both the PF and LF interfaces
 - For an element to move from inside a phase, it has to first move to the edge of the phase—postulating certain heads (e.g., C and *v*) to be phasal is an attempt to derive successive-cyclic movement
 - Since Chomsky 2000, 2001, research in the framework of Distributed Morphology (DM) has also discovered spell-out domains below the word level; they are hypothesized to be the same kind of entity as Chomskyan phases (e.g., Marantz 2001, 2007, Embick 2010, 2021)
- Using data from Bosnian/Croatian/Serbian (BCS), I'll show that:
 - (i) **BCS aP is a DM phase**—it blocks contextual allomorphy and mediates lexical stress via spell-out)
 - (ii) **BCS aP is not a Chomskyan phase**—it does not allow movement through its specifier, though it allows movement in general)
- * Taking (i)-(ii) together, we are left with two options: either we conclude that DM phases and Chomskyan phases are distinct entities (problematic), or we rethink the phenomena we are trying to explain with Phase Theory and look for alternatives

2. Roadmap

- §3: Phases in syntax and in DM; phasehood diagnostics
- §4: Some DM phases don't allow (intermediate) movement to their specifier
- §5: Discussion

3. Background

3.1. Chomskyan phases

- Chomsky identifies *v** (*v* with an external argument) and C as phasal heads, though proposals were subsequently made to both expand and reduce this inventory
 - The Phase Impenetrability Condition (PIC) demands that movement out of a phase can proceed only from its edge
- (1) **Phase Impenetrability Condition (PIC2)** (Chomsky 2001:14)
Given the structure [ZP Z . . . [HP α [H' H YP]]], where H and Z are phase heads, the domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.
 - Phases are taken to be potential targets for movement; C and *v** may have an EPP-feature, which provides a position for XP-movement
- A frequently used phasehood diagnostic is "reconstruction for binding" (see e.g., Lebeaux 1988, Fox 2000, Legate 2003, a.o.)

- For Chomsky, passive (and unaccusative) v are non-phasal; Legate 2003 argues, based on data like (2), that English passive v is a phase because reconstruction for binding purposes is allowed in its specifier
 - Assuming the wh -phrase to stop over in spec, vP is the only way to account for the acceptability of (2a), since a binding condition is violated in both the wh -'s base position and its surface position¹
 - (2b) is bad because there is a binding violation at every step of movement
- (2) a. [At which of the parties he_i invited Mary k to]₁ was every man _{i}
 ✓₁ introduced to her _{k} ✗₁?
- b. *[At which of the parties he_i invited Mary k to]₁ was she _{k}
 ✗₁ introduced to every man _{i} ✗₁?

NB: This diagnostic does not test for what it claims to test: Non-phasal elements can serve as intermediate stopping points for (A' -)movement, see Bešlin 2023; however, **failing this diagnostic is indicative of non-phasehood**, under specific circumstances I discuss in section 4.

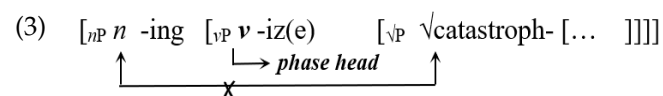
3.2. DM phases

- Since Chomsky 2000, there has been interest in finding spell-out domains below the 'word' level (e.g., Marantz 2001, 2007, Embick 2010, 2021)
- This body of research has identified a strict set of locality constraints on contextual allomorphy and allosemy
- Specifically, lexical heads (v , n , a) are argued to be phase heads; the merger of a phase head triggers spell-out when the next phase head is merged (see in particular Embick 2010)

¹This assumes a cascade structure in which at -phrases are merged as the lowest argument in the VP; see Pesetsky 1995 (cf. *Every man was introduced to Mary at the first party he invited her to.*)

- Given late insertion, phasal material merged above a phase head should not be able to influence the form or meaning of the material merged below the phase head and vice versa

→ This is essentially the idea expressed by the PIC2, and I illustrate it with a deverbal noun in (3)



- Lexical stress has also been argued to be mediated by spell-out (see Marvin 2002); we will make use of this diagnostic in section 4 as well

*** Q: Is the inventory of phase heads identical in the two domains?

→ A: No, BCS aP is a DM phase, but not a Chomskyan phase

4. DM phase head \neq movement through specifier

4.1. BCS aP is not a Chomskyan phase

- The reconstruction-for-binding diagnostic applied to BCS aP shows that spec aP cannot serve as an intermediate position for wh -movement
- In (4), there is a binding violation in the base position, surface position *and* in the potential stopping point in spec, vP of *viden* 'seen'
- The ungrammaticality of the string suggests that a stopping point is not available in spec, aP where there would be no binding violations

(4) *[Na kojoj svojoj_i žurci na kojoj je bila Marija_k]₁ je
at which self.M party at which AUX was Mary AUX
✗₁ viđen svaki čovek_i; ✓₁ izuzetno pijan sa njom_k ✗₁?
seen every man extremely drunk with her
'At which of his parties Mary was at was every man seen extremely drunk with her?'

- Sanity check I: (5) with no extraction and binding-sensitive elements in acceptable positions (confirming the hypothesized structure of (4))
- Sanity check II: (6) with extraction, but without the trouble-maker reflexive, the binding conditions are obeyed in the surface position

(5) Viđen je svaki čovek_i izuzetno pijan sa Marijom_k na
seen was every man extremely drunk with Mary at
svojoj_i božićnoj žurci na kojoj je ona_k bila.
self.M Christmas party on which AUX she was
'Every man was seen extremely drunk with Mary at his Christmas party that she was at.'

(6) [Na kojoj žurci na kojoj je bila Marija_k]₁ je
at which party at which AUX was Mary AUX
✗₁ viđen svaki čovek_i; ✓₁ izuzetno pijan sa njom_k ✗₁?
seen every man extremely drunk with her
'At which party Mary was at was every man seen extr. drunk with her?'

- ★ Importantly, (long-distance) A'-movement is possible out of *aP* (7)
- Case connectivity and the badness of (8) suggest that we are dealing with extraction and not base generation in the clause-initial position

(7) [Čij-e pažnj-e]₁ je (Jovan rekao da je)
whose-GEN attention-GEN AUX Jovan said DA AUX
Marko vredan t₁?
Marko worthy
'Whose attention (did Jovan say that) [is] Marko [is] worthy of?'

(8) *[Čij-e pažnj-e]₁ je (Jovan rekao da
whose-GEN attention-GEN AUX Jovan said DA
je) Marko vredan [t₁ i Marijin-e ljubav-i]?
AUX Marko worthy and Mary's-GEN love-GEN
'Whose attention (did Jovan say) is Marko worthy of and Mary's love?'

- INTERIM CONCLUSION I: BCS *aP* allows subextracton, but not through its specifier → BCS *aP* is not a Chomskyan phase

4.2. BCS *aP* is a DM phase

4.2.1. *aP* blocks root-conditioned allomorphy/allosemy

- Babić 2002 lists 91 productive nominal suffixes in BCS (Croatian), though a more conservative estimate might put that number at around 30
- There are no discernible differences in the meaning contributions of many of these nominalizing suffixes
- It is quite striking, however, how low the number of suffixes gets once we subtract those that only attach to roots and look at those cases where there are clear morphological (and semantic) indications that a derivation from another category has taken place
- Looking specifically at deadjectival nouns, we can observe that adjectives

in *-ljiv* only give rise to property-denoting nouns with the suffix *-ost* (9)²

- The form of the nominalizing suffix in (9) cannot be influenced by a particular root
- I argue that this is because BCS *a* is a DM phase—once the nominalizer merges, the complement of *a* is spelled-out
- This explains why the root cannot influence the form/meaning of the nominalizing suffix or vice-versa

- (9) a. *vid-ljiv-ost* ‘visibility’
 b. *pronic-ljiv-ost* ‘perceptiveness’
 c. *prilagod-ljiv-ost* ‘adaptiveness’
 d. *oset-ljiv-ost* ‘sensitiveness’
 e. *izdrž-ljiv-ost* ‘durability’

- Importantly, it is **not** the case that just any overt material blocks allomorphy—Bešlin 2023 shows that there is root conditioned allomorphy of *a* across overt passive *v* in BCS, see (10)
- Based on this and other tests, I argued that BCS passive *v* is not a phase
- *However*, once the adjectivizer is attached, higher affixes no longer have access to the root for the purpose of determining their form/meaning (10)
- I take this to further suggest *aP* serves as a point of spell-out in BCS

²Another nominalizing suffix *-ac* attaches to these adjectives semi-productively, but the meaning it produces (namely, an agentive nominal) is completely distinct. This is not a problem for the present analysis since the alternation would not count as an instance of allomorphy.

- (10) a. *reš-e-n-je* ‘solve-*V_{pass}*-A-N’ ‘solution’
 b. *prs-nu-t-je* ‘rupture-*V_{pass}*-A-N’ ‘(a) rupture’
 c. *prol-i-t-je* ‘spill-*V_{pass}*-A-N’ ‘spillage’

- Notice that, on my analysis, both (9) and (10) involve the addition of a nominalizing suffix onto an adjectivized structure, and yet the two nominalizers are distinct in form (while neither has a discernible meaning)
- This is expected however: once the nominalizer is merged, the *complement* of the lower phase—*aP*—is spelled out
- We then predict exactly what we observe: the identity of the adjectivizer, but not the identity of the root, may influence the form of the nominalizer

4.2.2. Stress-assignment is mediated by spell-out at *aP*

- In BCS, prominent syllables of prosodic words carry a tone, which can be rising [á] or falling [à]
- Inkelas & Zec (1988) argue that only High tones are represented in the BCS lexicon; a falling tone results from word-initial High tone and a rising tone from a non-word initial High tone that spreads to the preceding syllable
- BCS roots and affixes are lexically marked or unmarked for High tone; if no morphemes in a prosodic word carry a lexical High tone, a High tone is inserted on the first syllable as a default
- Marvin 2002 argues (for English and Slovenian) that lexical stress-assignment is mediated by syntactic structure and, in particular, by phasal spell-out domains below the word level

- In BCS, we can observe that the nominalizer *-ik*, which is lexically marked with a High tone, can influence the stress of a word if it attaches to a root (11), but not if it attaches to an already adjectivized stem (12)
- The adjectivizer *-n* blocks the subsequent addition of the nominalizer *-ik* from influencing the position of the lexical stress (12)

→ ROOT-N

- (11) a. bàgrem → bagrém-ik
 b. sòkrat → sokrát-ik
 c. pró:za → prozá-ik

→ ROOT-A-N

- (12) a. nèsreć(a) → nèsreć-n-ik
 b. bèstid → bèstid-n-ik
 c. ná:past → ná:pas-n-ik
 d. pró:met → pró:met-n-ik

- Equally, the nominalizer *-ac* can influence lexical stress if it attaches to a root (13); however, the adjectivizer *-ljiv* from (9) blocks the nominalizer *-ac* from influencing the lexical stress of the stem it attaches to (14)

→ ROOT-N

- (13) a. ̀zrael → Izraé:l-ac
 b. dùborez → duboré:z-ac
 c. tèkstil → tekstíl-ac

→ ROOT-A-N

- (14) a. gràb-ljiv → gràb-ljiv-ac
 b. kràd-ljiv → kràd-ljiv-ac
 c. `brb-ljiv → `brb-ljiv-ac

- I'd like to argue that the contrast in (11)-(12) and (13)-(14) arises because the adjectivizer in BCS is a phase, and the nominalizer is not able to see the root across it and influence its stress pattern
- INTERIM CONCLUSION II: BCS *aP* blocks root-conditioned allomorphy and mediates lexical stress via spell-out → BCS *aP* is a DM phase

5. Conclusions & future directions

- We have provided evidence that BCS *aP* behaves like a DM phase, but not like a Chomskyan phase
- So how do we reconcile these two notions of phasehood?

- Are there simply two distinct notions of phasehood? **Likely not.** Putting aside the conceptual argument against this solution, it is not at all clear how we would draw a line between domains subject to DM phasehood and those subject to Chomskyan phasehood, given the established problems with the notion of 'words' (e.g., Marantz 2001)
- But if DM phases and Chomskyan phases are equivalent, the evidence presented here would force us to say that a phase does not necessarily require movement to proceed through its specifier—but this is what Phase Theory was originally supposed to capture (SCM and islands)

NB: PIC2 or something like it seems to be necessary for empirical reasons (see Chomsky 2001, Sigurðsson 2002, Embick 2010), but PIC2 is problematic as a mechanism that drives SCM because **it does not actually force movement to proceed through a phasal specifier**—why?

- (15) **Phase Impenetrability Condition (PIC2)** (Chomsky 2001:14)
Given the structure [ZP Z . . . [HP α [H' H YP]]], where H and Z are phase heads, the domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.
- So should we rethink Phase Theory as an account of SCM/islands?
- For some island effects—e.g., subject islands, adjunct islands—Phase Theory has *nothing to say at all*
 - If we take a look at Murphy’s (2018) overview of Chomskyan phasehood diagnostics, which I sketch out in (16), they are pretty objectionable (as he himself notes), except the (intermediate) movement diagnostic, and that one only goes in one direction under specific circumstances (**no** stopping point but **yes** movement—not a phase)
- (16) a. **successive-cyclicity:** (a) intermediate pronunciation; (b) intermediate interpretation; (c) intermediate licensing
- b. **PF diagnostics:** no phonological interaction between items that are spelled-out separately (but see e.g., Bošković 2017 on tone sandhi in Taiwanese)
- c. **LF diagnostics:** QR targets phases. . . but why?
- But successive cyclic movement **is the explanandum**; we have no reliable independent ways of saying whether something is a phase (and, in fact, given that movement to spec of phase is not even forced on PIC2, Phase Theory does not seem to be a very good theory of SCM/islands)

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