Domain mismatches in syntax and morphophonology:
The case of Bosnian/Croatian/Serbian adjectives

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In a nutshell:

Using data from Bosnian/Croatian/Serbian (BCS), I show that the adoption of traditional Phase Theory leads to an irreconcilable conflict between syntactic phasehood and morphophonological phasehood:

→ BCS *a*P is not a Chomskyan phase—it does not allow movement through its specifier, though it allows subextraction

→ BCS *a*P is a DM phase—it blocks contextual allomorphy & mediates High tone placement via spell-out

Locality in syntax and in morphophonology

Phase: a portion of the syntactic derivation that is encapsulated; it is interpreted at the interfaces and impenetrable to further computation (Chomsky 2000, 2001)

Phases formalize locality domains in syntax in an attempt to derive the effects of successive-cyclic movement (analyzed previously in terms of bounding nodes/barriers; see Grohmann & Boeckx 2007 for a critical overview)

(1) **Phase Impenetrability Condition 2** (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.

Since Chomsky 2000, research in Distributed Morphology has 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)

Q: Do the same heads delimit locality domains in syntax and morphophonology?
A: Not if we adopt traditional Phase Theory.

There is also a tension (and often redundancy) between absolute locality domains (phases) and relative ones (minimality)

Q: Can we reanalyze the effects of successive-cyclic movement in terms of circumventing intervention (due to minimality)?
A: Possibly!

BCS *a*P is not a Chomskyan phase

A frequently used phasehood diagnostic is "reconstruction for binding" (Lebeaux 1988, Fox 2000, Legate 2003)

NB: This diagnostic does not test for what it claims to test, unless we can show that only phases allow (intermediate) stopping positions for movement (see Abels 2012); however, **failing this diagnostic is indicative of non-phasehood**, if subextraction is otherwise allowed.

Applied to BCS *a*P → spec *a*P cannot be an intermediate stop for *wh*-movement

In (2), there is a binding violation in the base position (Condition C), surface position (Condition Q) and in the potential stopping point in spec, *v*P of *smatran* 'considered' (Condition Q)

(2) *[Na kojoj svojoj$_i$ žurci na kojoj je bila Marija$_k$]$_1$ je (kasnije) ✗$_1$ smatran svaki čovek$_i$ ✔$_1$ vrednim njene$_k$ pažnje ✗$_1$?
at which self party at which AUX was Mary AUX later considered every man worth her attention
'At which of his parties Mary was at every man later considered worth her attention?'

The ungrammaticality of the string suggests that a stopping point is not available in spec, *a*P where there would be no binding violations (3)

(3) [CP[PP at which... self$_i$ ...Mary$_k$]... [*v*P ✗$_1$ considered [DP every man$_i$ [*a*P ✔$_1$ worth her$_k$ attention [PP✗$_1$]]]]]

Sanity check I: (4) with no extraction and binding-sensitive elements in acceptable positions (confirming the hypothesized structure of (2)/(3))

(4) Kasnije je smatran svaki čovek$_i$ vrednim Marijine$_k$ pažnje na svojoj$_i$ božičnoj žurci na kojoj je ona$_k$ bila.
later was considered every man worth Mary's attention at self Christmas party on which AUX she was
'Every man was later considered worthy of Mary's attention at his Christmas party that she was at.'

Sanity check II: (5) with extraction, but without the trouble-maker reflexive, the binding conditions are obeyed in the surface position

(5) [Na kojoj žurci na kojoj je bila Marija$_k$]$_1$ je (kasnije) ✗$_1$ smatran svaki čovek$_i$ ✔$_1$ vrednim njene$_k$ pažnje ✗$_1$?
at which party at which je bila AUX was Mary AUX later considered every man worth her attention
'At which party Mary was at was every man later considered worth her attention?'

Yet, (long-distance) A'-movement is possible out of *a*P (6)

(6) [Čij-e pažnj-e]$_1$ je (Jovan rekao da je) Marko vredan t$_1$?
whose-GEN attention-GEN AUX Jovan said DA AUX Marko worthy
'Whose attention (did Jovan say that) [is] Marko [is] worthy of?'

Case connectivity and the ungrammaticality of (7) 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) Marko vredan [t$_1$ i Marijin-e ljubav-i]?
whose-GEN attention-GEN AUX Jovan said DA AUX Marko worthy and Mary's-GEN love-GEN
'Whose attention (did Jovan say) is Marko worthy and Mary's love?'

CONCLUSION I: BCS *a*P does not delimit the domain for syntactic operations such as movement → BCS *a*P is not a Chomskyan phase

BCS *a*P is a DM phase

NB: BCS has grammatical Tone, and the position of the High Tone is determined within the first phase. Phase-mediated Tone insertion also provides evidence that BCS *a*P counts as a domain delimiter for the morphophonology; see Bešlin 2023 for details.

Broad consensus in the DM literature: categorizers (*v, n, a*) are phase heads which delimit locality domains for morphophonological operations

Evidence that BCS *a*P acts as a domain delimiter for the morphophonology comes from **allomorphy patterns**

BCS has rich derivational morphology; the broadly agentive (person-denoting) nominalizing suffixes in BCS are at least -*aš, -ar, -er, -ac, -ač, -ic(a)*, and -*ik*

In line with DM phase-theoretic predictions, a root may only influence the choice of nominalizing suffix if there is no intervening categorizers between the two

For example, root-derived nouns may be derived with any of the *n* allomorphs on offer; the choice of nominalizer (*n*) is determined by the particular root (8)

(8) a. batin-aš b. kormil-ar c. poz-er d. pis-ac e. voz-ač f. izdaj-ic(a) g. proza-ik
'beater' 'helmsman' 'poser' 'writer' 'driver' 'traitor' 'prose writer'

However, if another categorizer—in our case *a*—intervenes between the root and *n*, the root can no longer determine *n*'s form (as predicted by PIC2)

Instead, the *a* in question may impose a restriction on the choice of *n*:

Adjectives derived with -*ljiv* give rise to person-denoting nouns with –*ac* (9)

(9) boleš-ljiv-ac, plaš-ljiv-ac, smrd-ljiv-ac, razmet-ljiv-ac… (*-aš, *-ar, *-er, *-ač, *-ik)

Adjectives derived with -*n* give rise to person-denoting nouns with -*ik* (10)

(10) izlet-n-ik, besmrt-n-ik, put-n-ik, boles-n-ik, držav-n-ik… (*-aš, *-ar, *-er, *-ac, *-ač)

In case the insertion context is not met for any of the specified allomorphs, -*ar* is inserted

(Support for -*ar* as the elsewhere allomorph comes from its appearance in the most diverse set of contexts and its use in nonce-words, e.g., *zaves-ar* 'curtain-maker')

(11) n[+HUMAN] ⟷ /ac/, // ***a$_1$*** √*pis*, √*škrt*, √*drip*, √*alžir*, √*festival*, …
⟷ /ik/ // ***a$_2$*** √*proza*, √*sokrat*, √*alkohol*, √*žen*, …
...
⟷ /ar/ // elsewhere

CONCLUSION II: BCS *a*P delimits the domain for morphophonological operations such as allomorph selection (and High tone placement) → BCS *a*P is a DM phase

CONCLUSION III: Given I and II, accounting for both successive-cyclicity and morphophonological locality restrictions in terms of Phase Theory is difficult—we would require at least two different sets of elements that the PIC operates on for different purposes

Intervention → successive-cyclicity?

Absolute and relative locality conditions—exemplified by Phases and Minimality — stand in tension, since they often produce overlapping restrictions (e.g., Müller 2011)

If we can reinterpret 'big syntax' phase effects in terms of minimality/circumventing intervention, we escape the uncomfortable position of having two incompatible phase theories

We can then also make sense of the BCS data: the *a*P does not behave like a domain delimiter for syntactic operations (e.g., movement) because it does not host a potential intervener between the [+wh] probe and the DP goal in the domain of *a*.

I. Diagnostics that deal with optional phenomena are **not** phasehood diagnostics

(a) ability to reconstruct for binding purposes; (b) QR in antecedent contained deletion; (c) parasitic gap licensing; (d) quantifier float; (e) optional agreement marking à la Passamaquoddy, (f) intermediate copies

II. Reinterpreting phasehood in terms of intervention (minimality) or otherwise:

→ Long distance agreement (see Bhatt 2005, Bošković 2007, Bešlin in progress)
→ Inversion in Belfast English and Spanish (den Dikken 2017, Bešlin in progress)
→ Complementizer agreement in Irish and Kinande (den Dikken 2017, Bešlin in progress)
→ Dinka/Defaka/Indonesian extraction-marking patterns (Keine & Zeijlstra in press)
→ Dinka cyclic "phi-agreement" at *v*P edge (Keine & Zeijlstra in press)
→ V2 satisfaction by intermediate copies of movement (Keine & Zeijlstra in press)
→ *Čto* vs. *čtoby* extraction patterns in Russian (Bailyn 2020)

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