

The Distributed Morphology Perspective on Clitics

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Introduction

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- Clitics are typically treated as terminal nodes in the syntactic derivation.
 - ↪ A clitic and its host are not combined in the lexicon in the same way an affix and its host are.
- Rather, a clitic participates in syntax just like a regular word but, unlike independent elements, it eventually attaches to an adjacent word due to its *phonological deficiency*.

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- But unlike in lexicalist theories, they do share this property with all kinds of affixes.
- Thus, there is no need for a fundamental distinction and universally applicable diagnostics to distinguish affixes and clitics.

- Distributed Morphology still needs to model the empirical observations and the morphosyntactic morphophonological properties of clitics:
 - What they (do not) attach to
 - How they interact morphologically with their host
 - How they interact phonologically with their host

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 - What they (do not) attach to
 - How they interact morphologically with their host
 - How they interact phonologically with their host
- BUT: Since DM denies the existence of *clitic* as a valuable category of language, there is no theory-internal requirement that the behavior of clitics should be uniform across languages.

- Further, the question arises how the placement possibilities of clitics can be captured in the various theories.

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- In (most) lexicalist theories, all reordering of morphosyntactically independent elements is syntactic.
- Thus, in principle, the placement possibilities of clitics should follow from the same set of rules that regulates the placement possibilities of other morphosyntactically independent elements.
 - ↪ In other words, syntactic rules should govern the placement of clitics.

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- In many cases, the placement of clitics seems to be incompatible about what we know about syntax.
- In Bosnian/Serbian/Croatian (and more generally) determiners cannot move away from the head noun they modify.

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That=her=it=AUX man presented
'That man presented her with it.'

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(1) Taj=joj=ga=je čovek poklonio
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'That man presented her with it.'

- ↪ It should be noted that Bošković (2001) argues at length that examples of this sort are generated by means of syntactic movement after all.

- Similarly clear cases come from coordination where a clitic appears inside and as part of one of the conjuncts:

- Similarly clear cases come from coordination where a clitic appears inside and as part of one of the conjuncts:
- Such cases cannot plausibly be derived with syntactic rules as movement of one conjunct is banned by the Coordinate Structure Constraint.

(2) prohladna-**ta** i sveža večer
 cool-DEF and fresh evening
 'the cool and fresh evening' (Gribanova & Harizanov 2012)

- But even within languages, it is sometimes hard to motivate how well-established syntactic rules should give you the distribution of clitics (and the minimally different behavior of different clitics).

- (3) a. Ta peśanaj ug=kirža=**ni**.
 this grandma NEG.PRS.3=sing.CN.SG=anymore
- b. Ta peśanaj ug=**ni**=kirža.
 this grandma NEG.PRS.3=anymore=sing.CN.SG
 'This grandma does not sing anymore.'
- (4) a. *No tunne soje karta vjljś ud=**iñi**=adže
 but today 3SG.ACC map from NEG.2-anymore-see.CN.PL
- b. No tunne soje karta vjljś ud=adže=**iñi**
 but today 3SG.ACC map from NEG.2=see.CN.PL=anymore
 'But today you won't find (lit. see) it on the map anymore [...]'

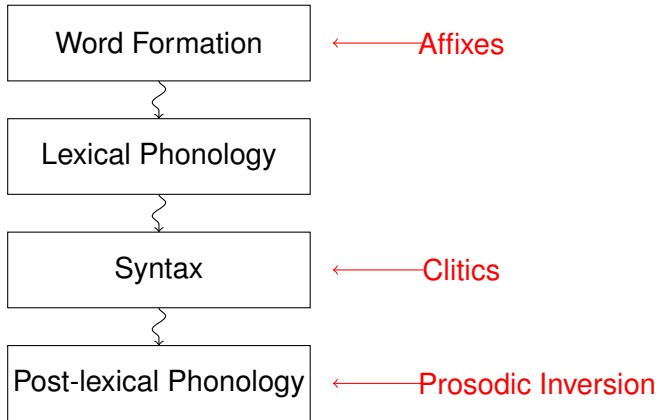
Udmurt

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- This is a problem for strong lexicalist accounts.
- And ultimately, the whole reason Halpern, who works in a lexicalist account (at least by name), invented Prosodic Inversion was because of this observation.

(5) A lexical model:



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- But the inclusion of a reordering operation that is non-syntactic weakens the lexicalist hypothesis significantly.
- And in a sense, the creation of Prosodic Inversion can be seen as a first move towards establishing a powerful postsyntactic module with rules of its own.
 - ↪ Note that the creation of Prosodic Inversion and a coherent framework of postsyntactic realization were parallel developments.

- In comparison, Distributed Morphology has a more straightforward way of accounting for the differences between clitic placement and the placement of other syntactic items.

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- As the existence of a powerful (postsyntactic) module including reordering operations is presupposed, it does not come as a surprise that syntactic and non-syntactic reordering rules are sensitive to different sets of features and obey different sets of constraints:
 - Syntactic reordering rules (i.e. syntactic movement) obey syntactic islands, constituency, etc.
 - Non-syntactic reordering rules do not.

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- This question has raised a long debate as well as a fair amount of criticism since the proposed mechanisms are clearly too unconstrained and often not well-defined in empirical coverage.
- Most people working in DM assume that spell out works cyclically in phases. This means that morphological operations are constrained by their locality.
 - ↪ In other words a morphological operation must be local in that its trigger/context and its target/domain of application must be in the same phase.

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- Marantz' 1984 *Morphological Merger* operation applies only under immediate locality, which can either be defined structurally or linearly.
- According to Marantz (1984) and Embick & Noyer (2001), Merger can apply before or after linearization.
 - If it applies before Linearization, it is referred to as *Lowering*.
 - If it applies after Linearization, it is referred to as *Local Dislocation*.

- Lowering adjoins a head X to the head Y if XP immediately dominates YP .

(6) Lowering:

$$[_{XP} X^0 \dots [_{YP} \dots Y^0 \dots]] \rightarrow [_{XP} \dots [_{YP} \dots Y^0 + X^0 \dots]]$$

- Local Dislocation adjoins a head X to a head Y if X and Y are linearly adjacent.

(7) Local Dislocation:

$$[X * [Y * Z]] \rightarrow [Y + X * Z]$$

- Furthermore, the architecture of the system in Embick & Noyer (2001) additionally imposes that Lowering can only be sensitive to morphosyntactic features and Local Dislocation can only be sensitive to phonological or prosodic features.

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- But nonetheless, in practice both operations are very hard to distinguish and in many cases, different analyses have been proposed for very similar phenomena
 - ↪ In the following, we will see a case study from Kramer (2010) and discuss the issue
- And the overlap between the two operations has received a lot of criticism and also suggests that a coherent theory with less machinery is yet to be proposed.

Kramer (2010)

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- Definiteness in Amharic is expressed by a suffix that also alternates for the gender of its head noun:

- (8)
- a. bet-u
house-DEF.MASC
'the house'
 - b. nigist-wa
queen-DEF.FEM
'the queen'

- In simple cases, the definite determiner attaches to the head noun.

- In cases with a complex noun phrases, the determiner attaches to the head of the modifier:

- (9)
- a. bet-u
house-DEF
 - b. t'illik'-u bet
big-DEF house
 - c. [bät'am t'illik'-u] bet
very big-DEF house
 - d. idʒdʒig bät'am t'illik'-u] bet
really very big-DEF house

- This observation also extends to non-adjectival modifiers such as relative clauses and prepositional possessors.
- (10) a. [lä-mist-u tammaññ-u] gäs'äbariy
to-wife-his faithful-DEF character
'the faithful-to-his-wife character'
- b. [ɪbab yägäddäl-ä-w] lidz
snake C-kill.PERF-3MSG-DEF boy
'the boy who killed a snake'
- c. yä-lidz-u däbtär
of-boy-DEF notebook
'the boy's notebook'
- Note that the definiteness marker in (10-c) does not modify the *boy* but rather the *notebook*.

- Crucially, if there are multiple modifiers, the definiteness marking is obligatory only on the first of these.

(11) [tɪnantɪnna yä-mät't'-a-w] t'-iru tämari
yesterday C-come.PERF-3MSG-DEF good student
'the good student who came yesterday.'

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- This leads Kramer to suggest that the phenomenon could maybe be analyzed as a second-position effect.

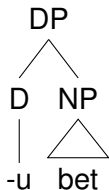
- She proposes a theory of the definiteness marker as a second position clitic that, in a sense, makes much more general use of Halpern's concept of *fortresses*.

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- The clitic attaches to the right of the first modifier if there is one but skips anything that is contained within that modifier (even if it is a complex relative clause plus embedding, etc.)

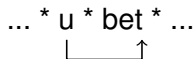
- She proposes a theory of the definiteness marker as a second position clitic that, in a sense, makes much more general use of Halpern's concept of *fortresses*.
- The clitic attaches to the right of the first modifier if there is one but skips anything that is contained within that modifier (even if it is a complex relative clause plus embedding, etc.)
- According to Kramer, all possible modifiers (APs, PPs, CPs) are fortresses/phases and therefore inaccessible due to cyclic spell-out.

- By assumption, the determiner starts out as the highest head in the nominal projection and then encliticizes to whatever is adjacent.

(12) Syntax:

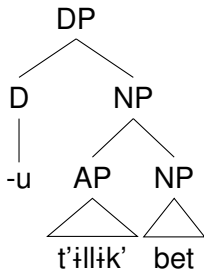


(13) Postsyntax:



- With simplex modifiers, the derivation simply proceeds just as above

(14) Syntax:

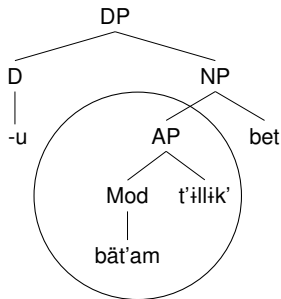


(15) Postsyntax:

... * u * t'illik' * bet * ...
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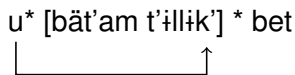
- Crucially, since APs, CPs, and PPs are phases (i.e. fortresses) the postsyntactic operation will not see their internal structure and treat them as one unit.

(16) Syntax:



(17)

Postsyntax:

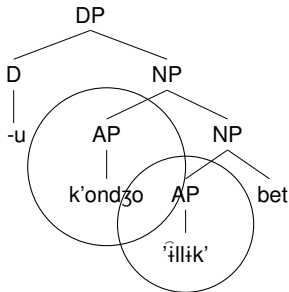


- ▶ The assumption is that due to cyclic spell-out, the internal structure of the phase itself is not accessible but the spelled out phase itself counts as a morphological item which the determiner can adjoin to.

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- The same derivation is proposed for CP-modifiers and PP-modifiers.
 - ↪ The internal material inside a relative clause CP is inaccessible regardless of how complex it is to due the CP being a phase.

- Crucially, with multiple modifiers only the first one is targeted by encliticization:

(18) Syntax:



(19) Postsyntax:

u * k'ondzo * t'illik' * bet
└──────────┬──────────┘
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- She further argues that the process of inversion is based on linear order rather than on hierarchical structure
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- Kramer's analysis formalizes Halpern's intuitive notion of fortresses as syntactic phases and marries the system of prosodic inversion with cyclic spell-out.
- She further argues that the process of inversion is based on linear order rather than on hierarchical structure
 - ↪ Thus, she dubs the process of inversion *Local Dislocation*.
 - ↪ She uses Local Dislocation rather than Lowering mainly for theory-internal reasons (as she does not want to adopt the AP-over-NP assumption).

- But upon closer inspection, the inversion process seems to see syntactic structure to a certain extent after all.

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- With conjoined modifiers, each conjunct bears the definiteness marker.

- (20)
- a. t'ik'ur-u inna sämayawi-w kwas
 black-DEF and blue-DEF ball
 'the black and blue ball'
- b. bira yä-t'ätt'a-w inna wät'-u-n yä-bälla-w tämari
 beer C-drank-DEF and stew-DEF-ACC C-ate-DEF student
 'the student who drank beer and ate the stew'

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- This is unexpected given an inversion operation that solely sees linear order (plus cyclic spell-out).

- Kramer (2010) provides some adhoc solution for the coordination data but I think the problem generally more severe than she makes it out to be.
 - ↪ It does not seem to be the case that clitics are either prosodic or morphosyntactic. Rather, it seems that clitic dislocation operations tend to be more or less sensitive to hierarchy or linear order.

- ▶ Kramer (2010) provides some adhoc solution for the coordination data but I think the problem generally more severe than she makes it out to be.
 - ↪ It does not seem to be the case that clitics are either prosodic or morphosyntactic. Rather, it seems that clitic dislocation operations tend to be more or less sensitive to hierarchy or linear order.
 - ↪ In many cases, it seems to be that 2W-clitics ignore constituency but still are sensitive to coordination structures, proper names etc.
 - ↪ It would be interesting to see whether there are implicational hierarchies and if they can somehow be derived.

Conclusion:

- Kramer's combination of Prosodic Inversion and cyclic spell-out is a step forward as it makes an attempt to formalize Halpern's notion of *fortress* and ultimately provides an argument that something like cyclic spell-out can be helpful in deriving clitic placement patterns.

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- In doing so, the case study opens the door to deriving other instances of unusual clitic placement as second-position effects.

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- In doing so, the case study opens the door to deriving other instances of unusual clitic placement as second-position effects.
- However, it still faces some problems as the Amharic clitics are not generally ignoring constituency (modulo cyclic spell-out).

Harizanov (2014)

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- Halpern originally envisaged Prosodic Inversion as a Last-Resort mechanism that repairs syntactic structures to accommodate the prosodic requirements of the clitics.
- This intuition can be translated into an optimality-theoretic framework that reformulates the requirements of the clitics as constraints about the well-formedness of the underlying structure.

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- This idea has been used by various researchers including (Selkirk 2010, Elfner 2011, Bennett et al. 2011, Harizanov 2014).
- Harizanov (2014) derives the placement of pronominal clitics in Bulgarian and Macedonian as well as the internal alternation of clitics in Macedonian by means an OT-calculus.
- The underlying idea is that a well-known constraint from the literature on the syntax-prosody interface **STRONG START** penalizes clitics in a position initial of their intonational phrase.

- (21) **STRONG START:**
The leftmost constituent of a maximal Intonational Phrase should not be a prosodically deficient element (i.e. such an element must be parsed inside a Prosodic Word).

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The leftmost constituent of a maximal Intonational Phrase should not be a prosodically deficient element (i.e. such an element must be parsed inside a Prosodic Word).
- One potential repair to fulfill this constraint is inversion of the prosodically deficient element and its host.
 - ↪ And crosslinguistic variation has various sources: (i) the constraint ranking and (ii) the prosodic category, a clitic attaches to (as in Selkirk 1995, Ito & Mester 2009).

- Pronominal clitics in Bulgarian and Macedonian are identical in form, function and almost identical in distribution.
- In a regular tensed clause they precede the verb:

(22) Maria dade mu ja.
Maria gave.3SG 3SG.MASC.DAT 3SG.FEM.ACC
'Maria gave it to him.'

Bulgarian/Macedonian

- One major difference arises when the verb is clause-initial due to pro-drop or absence of topic/focus:

(23) a. dade mu ja.
 gave.3SG 3SG.MASC.DAT 3SG.FEM.ACC
 'She gave it to him.'

✓Bulgarian/✗Macedonian

b. mu ja dade.
 3SG.MASC.DAT 3SG.FEM.ACC gave.3SG
 'She gave it to him.'

✗Bulgarian/✓Macedonian

- Then Bulgarian resorts to postverbal placement of clitics but Macedonian does not.

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- In Macedonian, clitics participate in stress assignment (for the calculation of the antepenult) and vowel deletion:

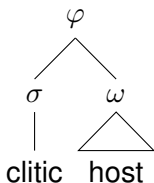
- (24) a. doNEsi go
bring.IMP 3SG.MASC.ACC
'Bring it!'
- b. doneSI mi go
bring.IMP 1SG.DAT 3SG.MASC.ACC
'Bring it to me!'

- (25) se utepa /sutepa/
self hurt.PAST.3SG.FEM
'She hurt herself.'

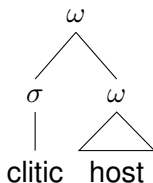
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- Harizanov (2014) therefore argues that Bulgarian clitics are outside of the prosodic word while Macedonian clitics are attached inside:

(26) Bulgarian:

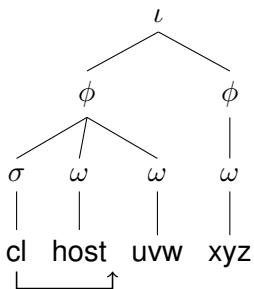


(27) Macedonian:



- As a result, only Bulgarian clitics violate STRONG START. Macedonian clitics are parsed in a phonological word and therefore are not seen by the constraint.
- In Bulgarian, however, prosodic reordering is triggered to remedy the violation of STRONG START
 - ↪ The clitics in Macedonian are dominated by a phonological word node and are not dominated by an intonational phrase.

(28)



- Harizanov notes that he does not want to commit to whether the actual inversion is literal inversion, re-linearization, copy pronunciation.

- Harizanov further provides evidence that the variation between Macedonian and Bulgarian is not to be derived with a reranking of the STRONG START constraint.

- And as predicted, even though other clitics in Macedonian affect stress assignment, *li* never does:

- (30)
- a. doNEsuvaš
bring.2SG
 - b. doNEsuvaš li
bring.2SG Q
'Are you bringing?'

- This suggests that even Macedonian has clitics that do invert to a second position clitic. This can very simply be derived by adopting that the *li*-clitic exceptionally attaches to a higher node in the prosodic hierarchy.

Conclusion:

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Conclusion:

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- He further enhances the theory by the assumption that clitics can attach to different nodes in the prosodic hierarchy which makes them sensitive to (a) reordering constraints and (b) phonological properties.
- The analysis derives the tendency that the more phonological properties a clitic undergoes, the less likely it is in a sense to undergo Prosodic Inversion.
 - ↪ Elements lower in the prosodic hierarchy are not visible to STRONG START.