Second Position Effects: Phonology and, if so, How?

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Two Questions on Second Position

1. **Modularity**: Where do Second Position Effects Arise?
   - **Definition**: linearization restrictions which force clitics to surface in second position (2P).
   - **Syntactic Approach**: 2P effects arise when elements attract to a c^0 which requires a(nother) filled specifier.
     - **Historical Parallel**: verb-second effects in Germanic, Medieval Romance, Kashmiri (Anderson 1993)
   - **Phonological Approaches**: second position effects arise postsyntactically.
     - **Postsyntactic Movement**: clitics do not move in the syntax; reach 2P only at PF.
     - **Postsyntactic Correction**: clitics move to C; undergo local relinearization to 2P at PF: Halpern 1995.
     - **Postsyntactic Filtering**: clitics move to C; PF determines where they get spelled out in a movement chain: Boskovic 2001.
2. **Method**: Theoretical Machinery behind 2P?
   - **Align + StrongStart**: 2P clitics move as far left as they can without violating prosodic well-formedness.
   - **Subcat**: 2P elements have a lexically idiosyncratic requirement to surface in second position.

- **Poster Summary**
  1. **Mandar** (South Sulawesi, Austronesian): 2P clitics placed at PF; follow the first word in their intonational phrase.
  2. **Against Strong Start**: 2P elements prosodically heavy; can surface initially.
  3. **Cyclicity**: mirrored order within the 2P cluster suggests strongly cyclic process of clitic linearization.

Mandar Clitics: Crash Course

1. Mandar Basics
   - Verb-initial word order; via predicate fronting.
   - Auxiliaries precede the verb; arguments follow.
   - Regular penultimate stress marked with L*.
   - Maximal prosodic words bear a right-edge H-.
   - **N.b.**: L*H- accent marked with underline.
2. The Second-Position Clitic System
   - Roughly forty 2P elements with similar distribution
   - Adverbs, aspectual markers, agreement, pronouns
3. The Clitic Cluster
   - Clitics form a rigidly-ordered cluster in 2P.
   - Prosodic factors determine order in the cluster.
   - Disyllabic unaccented clitics > monosyllabic clitics.
   - Monosyllabic clitics > multisyllabic accented clitics.

(1) *The Clitic Cluster appears in 2P*

a. Jari, guru=**i**=**tau**=**palakang**?
so, teacher=AGR=YOU=SEEMS
'So, seems like you're a teacher?'

b. Indang=**pa**=**i**=**tia** malai!
NEG=IPFV=3.AGR=ONLY go.home
'She just still hasn't come back yet!'

σσ		σ		σσ	
sannal	*very*	*bo*	*again*	*tia*	*only*
leqbaq	*just*	*pa*	*yet*	*kapang*	*maybe*
bandi	*really?*	*aq*	1.AGR	*yau*	1.SUBJ

Clitic Placement is Prosodic

1. The cluster splits.
   - The cluster surfaces together when the highest host is the verb or an auxiliary; resembles a complex x^0.
   - Certain complementizers break this pattern; attract only a subset of 2P elements and force others to surface lower.
   - *Mau* 'although': hosts clitics which originate at or above ASP: *dua* 'still,' but not *sannal* 'very' or *=i* 'AGR.'
   - POINT: the clitic cluster can split; does not form a syntactically indivisible unit (e.g. a complex x^0)

(2) *The Clitic Cluster splits up in the C-Domain*

a. Indang=**sannal**=**dua**=**i** meloq u-ita.
NEG=very=still=AGR want 1-see
I don't still really want to see her.'

b. Mau=**dua** meloq=**sannal**=**i** u-ita,...
although=still want=really=AGR 1-see
'Although I still want to see her,...

2. The cluster splits constituents.
   - Complex NP predicates: 2P elements split the linear string of possessed.NP-possessor.
   - Syntactic operations cannot separate these two elements; the possessor resists being moved independently.
   - Parallel patterns with complex PP predicates: 2P elements split locative prepositions and their complements.

(3) *The Clitic Cluster splits up complex NP, PP Predicates*

a. Guru-nna=**o** i=Majiq a?
teacher-his=AGR NAME PRT
'Are you Majid's teacher?

b. Diong=**i** di=litaq diqo tommuane.
there=AGR ON=floor that man
'That man was on the floor.'

3. Word accent matters.
   - Preverbal elements with word accent attract clitics; preverbal elements without accent do not.

(4) *Only Accented Preverbal Elements host Clitics*

a. Mane **sangnging** missung=**band**=**i**=**tuqu**.
then all go.out=really=AGR=EMPH
'And then they all went out?'

b. Mane **indang**=**band**=**i**=**tuqu** missung?
then NEG=really=AGR=EMPH go.out
'And then he didn't go out?'

4. Binarity Effects Adjust Clitic Placement.
   - SCHEMA: whatever their normal behavior, clitics strictly follow the first element in two-word utterances.
   - Complementizers: generally cannot host 2P elements like AGR; forced to do so in two-word utterances.
   - Complex VPs: 2P elements can follow V-O strings when they form a single word; impossible in two-word utterances.

(5) *Prosodic Rephrasing Influences Clitic Placement*

a. Mau=**aq** indini, indang=pa=i pole.
although=AGR here NEG=yet=AGR come.
'Although I'm here, he won't come.'

b. Maqalli bau=**bo**=**i**=**tia** *(dini di=Majene).
buy fish=again=AGR=only here in=PLACE
'He's (here in Majene) buying fish again.'

5. POINT: 2P placement depends on prosodic factors; 2P linearization occurs in the post-syntax.

The Strong Start Approach

1. STRONGSTART: a Formalization
   - DEFINITION
     - "Prosodic constituents above the level of the word should not have at their left edge an immediate subconstituent that is prosodically dependent... A "prosodically dependent" constituent is any prosodic unit smaller than the word." Bennett, Elfner, & McCloskey 2016:201
   - RESULT: prosodically deficient elements punished for appearing at the left edge of the intonational phrase.
     - Within OT: the constraint ranking STRONGSTART > ALIGN bans 1P clisis; demands avoidance of STRONGSTART violations.
     - TWO SOLUTIONS: 2P elements can postpose to 2P or strengthen in-situ to avoid the STRONGSTART violation.
   - DESIDERATA
     - STRONGSTART-style prohibitions should be visible elsewhere in the language.
     - 2P elements should look like prosodically deficient elements: should not be multisyllabic or bear accent.

Against Strong Start

1. No STRONGSTART Elsewhere
   - Unaccented adverbs: behave like phrasal proclitics but occur freely at the left edge of the intonational phrase.
   - High-ranked STRONGSTART should punish such elements in this position; no surface repair visible.

(6) *Phrasal Proclitics permitted at the Left Edge*

a. **Mane** **d**aiq=i di=uma.
Then go.up=AGR in=orchard
'He just went to the orchard.'

b. **Tulu** **b**emme=i di=litaq e!
always fall=3 in=floor PRT
'It always falls on the floor!'

c. */b, d/ lenite within the Word*
/na-di-bawa=i/ [na.ri.wá.wa.i]
'we will bring it.'

2. Prosodically Heavy Clitics
   - 'Outer' 2P clitics: bear accent; can be multisyllabic.
   - Resemble words; should not violate STRONGSTART.
   - Some alternate with strong forms that occur in 1P.

σσ		σσ		σσ	
poleq	*again*	*kapang*	*maybe*	*iting*	*that*
pissang	*once*	*palakang*	*seems*	*dioloq*	*now*
tuqu	*even*	*todiq*	*poor*	*manini*	*later*

(7) *Heavy Clitic Distribution: some strict 2P, others can be clause-initial topics, foci, or regular adverbs*

a. Meloq=bo=i=**palakang** lao.
want=again=AGR=seems go
'He'll likely go again.'
b. *__Palakang__ meloq=bo=i lao.
c. *Meloq=bo=i lao **palakang**.

d. Indang=pa=i=**todiq** likka.
NEG=yet=AGR=sad marry
'He's still not married, sadly'
e. **Todiq**, indang=pa=i likka.
f. *Indang=pa=i likka **todiq**.

g. Mala=dua=o=**manini** lao.
can=still=AGR=later go
'You can still go later.'
h. **Manini**=dua=o mala lao.
i. Mala=dua=o lao **manini**.

Prosodic Subcategorization

1. Alternative: 2P elements subcategorize for a particular position within a prosodic unit (Chung 2003).
   - Subcategorization: morphemes come lexically specified with information about their prosodic behavior (Inkelas 1989)
   - DEFINITION: *clitics* are elements which subcategorize for certain types of host (and potentially, for positions)
   - FRAME: Mandar 2P elements subcategorize to follow the first word in an intonational phrase: [ι [ϕ [ω ω __]]].
2. IMPLEMENTATION: SUBCAT constraints (Bennett et al. 2018; Tyler 2019) over STAY (Grimshaw 1997)
   - SUBCAT: "AOV for every instance of morpheme X whose prosodic subcategorization frame is not satisfied." Tyler 2019:9
   - NOSHIFT: "If a terminal element α is linearly ordered before a terminal element β in the syntactic representation of an expression *E*, then the phonological exponent of α should precede the phonological exponent of β in the phonological representation of *E*." Bennett, Elfner, & McCloskey 2016:202
3. ADVANTAGES
   - Captures 2P placement effects without reference to STRONGSTART; avoids the pitfalls above.
   - Helps explain an independent puzzle: strict mirrored order of 2P elements in the clitic cluster.

Mirroring and Antisymmetry

1. Mirror Order in the Clitic Cluster
   - SCOPE: structurally lower clitics precede structurally higher ones: a puzzle on theories which encode order in the syntax.

(8) *Linear Order mirrors Syntactic Height*

a. *sannal* (very) > *leqbaq* (exactly) > *bega* (excessively) > *dua* (still) > *tappaq* (only) > *memang* (indeed) > *banda* (really?) > *bappa* (let.it.be.that

b. *pissang* (once) = *poleq* (again) > *kapang* (maybe) = *palakang* (seems) > *todiq* (poor.thing) > *dioloq* (now) = *manini* (later)

2. Mirror Order on the LCA: derived within the syntax through canonical movement operations.
   - ONE VIEW: mirrored order arises via iterative head-adjunction of clitics into a complex x^0
     - PROBLEM: Mandar 2P elements seem not to form a complex x^0: the cluster splits up across the C-domain (2).
   - ANOTHER: mirrored order arises via iterative fronting of phrases over their own specifiers; 'snowball' movement.
     - MECHANISM: each time a clitic merges in, some lower projection fronts around it.
     - PRECEDENT: this 'snowball' derivation employed to derive parallel mirroring facts in Malagasy (Rackowski 1998)
     - PROBLEMS: unclear triggers for movement; violations of COMP-TO-SPEC ANTILOCALITY (Abels 2003)
3. Alternative: clitics base-generated in the mirrored order in the syntax.
   - MECHANISM: every projection which hosts a clitic requires it to merge on/adjoin to the right.
   - PRECEDENT: parameterized linearization of the specifiers of lexical and functional projections (Aissen 1992)
   - PROBLEM: ad-hoc stipulation that all clitics merge/adjoin to the right when nothing else does.

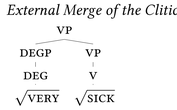
Derivational Linearization

1. Mirror order falls out on a strongly cyclic model where linearization follows each round of merge.
   - Each round of external merge triggers transfer to PF (Epstein & Seely 2002) or lexical access (Starke 2009b, Caha 2011)
   - Interface transfer in steps: vocabulary insertion follows linearization, prosodification (Arregi & Nevins 2012)
   - Subcategorization frames force 2P elements to displace immediately for vocabulary insertion to succeed (Chung 2003).
   - RESULT: the clitic cluster starts being linearized upon merge of the first clitic; expands through the derivation.

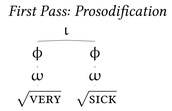
(9) *Cyclic transfer: Linearization upon External Merge*

a. mongeq=sannal
sick=very
'very sick'

b. *External Merge of the Clitic*



c. *First Pass: Prosodification*



a. *Linearization*

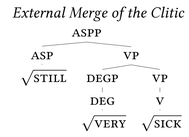
/(ι (ϕ (ω √very))(ϕ (ω √sick)))/	SUB	NOSHIFT
☞ a. (ι(ϕ(ω mongeq) sannal))		*
b. (ι sannal (ϕ(ω mongeq)))	*!	

2. Faithfulness forces later rounds of linearization to append clitics to the right edge of the cluster.
   - Later rounds of linearization cannot disrupt 2P relationships established in earlier rounds of the derivation.
   - Once a clitic gets linearized into the cluster, the SUBCAT frame of another clitic cannot force it to be displaced.
   - FAITH.CLUSTER: AOV for every linearization of a 2P element before a previously placed 2P element.

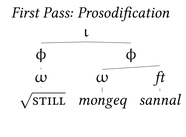
(10) *Multiple Clitic Linearization: Mirror Order*

a. mongeq=sannal=dua
sick=very=still
'still very sick'

b. *External Merge of the Clitic*



c. *First Pass: Prosodification*



a. *Linearization*

/(ι (ϕ (ω √still)) (ϕ (ω (ω mongeq) sannal)))/	FAITH.CL	SUB	NOSHIFT
☞ a. (ι(ϕ (ω (ω (ω mongeq) sannal) dua)))			**
b. (ι (ϕ (ω (ω (ω mongeq) dua) sannal)))	*!		**
c. (ι (ϕ (ω dua) (ϕ(ω sannal) (ω mongeq))))		*!	*

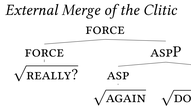
Prosodic Reordering

1. Prosodic shape: unaccented disyllabic clitics > unaccented monosyllabic clitics > accented clitics.
2. REORDERING CONSTRAINTS: *e.g.* HEAVY.LAST: AOV for every clitic before an accented clitic.

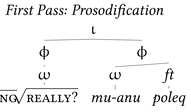
(11) *Prosodic Reordering: Multi-Step Derivation*

a. mu-anu=bandi=poleq?
2-do.something=really?=again
'Did you do it to him again?'

b. *External Merge of the Clitic*



c. *First Pass: Prosodification*



a. *Linearization*

/(ι (ϕ (ω √really?)) (ϕ (ω (ω muanu) poleq)))/	HEAVY.LAST	FAITH.CL	SUB	NOSHIFT
☞ a. (ι(ϕ (ω (ω (ω muanu) bandi) poleq)))		*		**
b. (ι (ϕ (ω (ω (ω muanu) poleq) bandi)))	*!			**

Conclusions and Standing Questions

1. This account derives 2P placement and mirror order through a highly-cyclic approach to spell-out.
2. 2P effects arise through subcategorization requirements enforced throughout the derivation.
3. Nevertheless: several questions remain open.
   - SUBCAT restriction: 2P clitics can be spelled out only when adjoined immediately within the first word.
   - RESULT: the SUBCAT approach struggles to derive the prosodically-heterogenous shape of the cluster; potentially requires a multi-step derivation or a gradient view of SUBCAT (which renders it indistinguishable from ALIGN-2P).
   - Continuous Relinearization into 2P: requires either trans-derivational view of SUBCAT or nanosyntactic assumptions about iterative vocabulary insertion; comes for free on an approach which posits single-cycle linearization.
   - Why do only certain 2P elements climb into the C domain?

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