1 **Background: Second Position in Mandar**

1.1 **Second Position**

- **Definition:** *2P clitics* are *special clitics* which follow the first 'word' in the 'clause' (Wackernagel 1898).

- The proper analysis of their linear position & prosodic status raises several theoretical questions:
  
  - **The definition of the 'host':**
    - Often surface only loosely in 'second position'; frequent flexibility in linear position Taylor 1990
    - Halpern’s (1992) split: ‘first word’ vs ‘first daughter’ systems; some languages permit two patterns.
  
  - **The nature of the linearization operation:**
    1. One view: 2p order fundamentally syntactic; 2p clitics are like v2 verbs. Terzi 1999
    2. Another view: clitics move to c; PF figures out the rest. Halpern 1996, Bošković 2001
    3. Yet another: linear order determined by the phonology; clitics positioned outside the narrow syntax.
      - **The StrongStart analysis:** Anderson 1998
        - ALIGN constraints push clitics to the left; StrongStart bans clitic at the absolute edge.
        - **Result:** 2p the compromise position; clitics 'as left-aligned as they can be.'
      - **The Subcategorization approach** Chung 2003
        - Clitics subcategorize to surface in second position within a prosodic unit.
        - Disconnected from StrongStart; second position inherently the goal.
  
  - **The internal structure of the clitic cluster:**
    - Syntax: does the cluster form a complex x^0 or not? Bošković 2001
    - Prosody: does the cluster form a prosodic constituent independent of the host?

1.2 **Mandar Background**

- South Sulawesi (Austronesian); roughly 500,000 speakers; some work on related languages (Kaufman 2008).

- Word order: verb-initial; fairly free order of arguments postverbally; **clitic cluster appears in 2p**.

(1) **Verb-initial word order; clitics in 2P**

<table>
<thead>
<tr>
<th>a. Mappamula=i bunga i=Murni.</th>
<th>b. Pura=i nala bainena diqo bau.</th>
</tr>
</thead>
<tbody>
<tr>
<td>plant=3 flower NAME Murni.</td>
<td>already=3 she.took his.wife that fish</td>
</tr>
<tr>
<td>‘Murni is planting flowers.’</td>
<td>‘His wife had already taken that fish.’</td>
</tr>
<tr>
<td>Pelenkahu et al. 1983; 195</td>
<td>Pelenkahu et al. 1985; 155</td>
</tr>
</tbody>
</table>

1.3 **The Clitic Cluster**

- The Mandar 2p inventory: roughly 40 forms.
  
  - Agreement markers and Aspect
  - Force heads: question particles, optative marker (let it be that...)
  - Demonstratives, pronouns, floated quantifiers
  - vP-adverbs (very, exactly), tP-adverbs (now, later), cP adverbs (maybe, honestly).

- **Underlined** clitics alternate with independent forms possible outside of 2p.
The clitics form a cluster.

- The entire string of clitics surfaces after the first potential host: NEG > ASP > AIX > V.
- The cluster cannot split up or distribute across the clause. cf. appendix.

(2) a. Malai=bo=ma=i=tia. b. Indap=pa=i=tia malai.
   return=again=pfv=3.abs=emph 'He really came back again.' NEG=ipfv=3.abs=emph return
   'He really hasn’t come back yet.'

- Part of the cluster forms a domain for irregular phonology.

  - **Portmanteaux**: ASPECT clitics show vowel deletion/coalescence with adjacent agreement.
  - **Harmony**: two clitics which precede ASPECT show long-distance harmony with agreement.

<table>
<thead>
<tr>
<th>AGR</th>
<th>PFV</th>
<th>IPFV</th>
<th>JUST</th>
<th>SUCH (+ PFV)</th>
<th>Q (+ PFV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2/3</td>
<td>mo</td>
<td>pa</td>
<td>da</td>
<td>tenda</td>
<td>banda</td>
</tr>
<tr>
<td>aq</td>
<td>maq</td>
<td>paq</td>
<td>daq</td>
<td>tenda=maq</td>
<td>banda=maq</td>
</tr>
<tr>
<td>o</td>
<td>moqo</td>
<td>pao</td>
<td>doqo</td>
<td>tendo-moqo</td>
<td>bando-moqo</td>
</tr>
<tr>
<td>i</td>
<td>mi</td>
<td>pai</td>
<td>di</td>
<td>tendi=mi</td>
<td>bandi=mi</td>
</tr>
</tbody>
</table>

(3) **Portmanteaux**

   school=just=pfv.3 your.kid fut=bring.us where=just.2 i.hope one=just.3 his.wife
   'Is your child in school yet?' ‘Where are you bringing us?’ ‘I hope he only has one wife.’

(4) **Harmony**

   what=q=pfv=even do.what=q=2 sing=q=pfv.2
   ‘What could it even be?’ ‘What are you doing?’ ‘Did you already sing?’

- Three factors govern cluster-internal order:
  1. **Weight**: disyllabic clitics strictly precede monosyllabic clitics.
2. **Scope**: structurally ‘higher’ clitics surface farther to the right.

3. **X-factor**: disyllabic clitics form two classes; pronouns surface at the right edge.

**• Schema**: disyllabic adverbs > monosyllabic adverbs > agreement > other adverbs > pronouns

5. **Syllable Count Matters**

   a. Maqua=**nasang**-bo=mi.  
   say=all=again=FFV.3  
   ‘They all said it again.’

   b. Masae=**dua**-di=tau  
   long=still=JUST.3=you here  
   ‘Will you be here for long?’

   c. "Masae=**di**-**dua**=tau dini?  
   Friberg & Jerniati 2000

   d. "Masae=**di**-**tau**-**dua** dini?

   e. "Masae=**da**-**tau**-**dua**=i dini?

6. **Height Matters**

   a. Marumbo=**sannal**-**dua**-**bandi**?
   chubby=very=still=q.3
   ‘Is he really still pretty fat?’

   b. Matindo=i=**poleq**-kapang=dioloq.
   sleep=3=again=maybe=now
   ‘Now maybe he’s sleeping again.’

7. **Linear Order mirrors Syntactic Height**

   a. sannal > leqbaq > bega > dua > memang > banda = bappa
   very exactly excessively still indeed Q let.it.be.that

   b. bo > mo = pa
   again already yet

   c. pissang = poleq > kapang = palakang = todiq > dioloq = manini
   once again maybe seems poor.thing now later

1.4 **Interim Summary 1**

- The Mandar clitic cluster:
  1. forms some type of phonological unit (for portmanteau formation, harmony...)
  2. shows linear order sensitive to both structural height and phonological weight.

- But probably does not form a complex x₀.
  * The cluster splits up when the left periphery gets complex.  
  * Result: requires excorporation (Roberts, Bošković) if a single x₀.
  * Moreover: postsyntactic reordering within the x₀ based on phonological weight?

2 **Clitic Placement is Postsyntactic**

2.1 **Family Precedent**

- Syntactic approaches to 2p: difficult in this neighborhood.
  
  - Slavic languages:  
    1. Progovac 1996, Terzi 1999,
    2. Story: 2p clitics like v2 verbs; move to c & something fronts above them.
    3. Independent properties make this seem reasonable: free word order + rampant subextraction.
    4. Result: basically any word order can be syntactified.
  
  - Philippine-type languages + Chamorro: much more difficult.
    1. Less flexible word order; drastically reduced possibilities for subextraction.
    2. Kaufman 2010 (on syntactic approaches to 2p): "A similar [syntactic] account for Austronesian lan-
        guages seems thoroughly hopeless, as there exists a massive gap between the types of elements
        which can serve as clitic hosts and those which can be extracted in the normal syntax." (p52)

- Result: postsyntactic approaches to 2p  
2.2 Non-Syntactic Placement

1. The cluster surfaces consistently in 2p regardless of the host.
   - Typically: follows the highest aux within the middle field.
   - Also: follows fronted locative adjuncts, temporal adjuncts, certain adverbs.
   - **Point**: the class of things which hosts the clitic does not form a natural syntactic class.

   (8) *Locative Adjuncts; Manner Adverbs*
   a. Andiang = i pura meloq lamba sumombal = Kacoq.
      neg=3 already want go sail name
      'Kacoq never wanted to go sail.' (Ba’dulu 1990)
   b. Ceh, kaqdo = aq mupipal e!
      prf, hard=1 you slapped prt
      'Hey, you hit me HARD!'
   c. Pirang = pai = tau sung?
      when=ipfv.3 = you hon go out
      'When are you leaving?'

2. The clitics surface in configurations which syntactic movement cannot create.
   - No Subextraction: complex dps and np predicates generally cannot split.
   - Nevertheless: agreement freely splits up the same constituents (though other clitics can’t).

   (9) *The Clitic Cluster splits up complex NP, PP Predicates*
   a. Guru-nna i = Majiq i = Dan.
      teacher-his name name
      Dan is Majid’s teacher.
   b. Guru-nna o i = Majiq a?
      teacher-his agr name prt
      ‘Are you Majid’s teacher?'

3. The clitics split up coordinate structures.
   - Mandar has a pseudo-incorporation construction; np objects group prosodically with v.
   - The clitics strictly follow the object in these configurations; we’ll see more of this later.
   - **Pattern**: clitics can split up coordinated sequences of fni object.

   (10) *Clitics follow incorporated objects; split coordinate objects.*
   a. Maqitai baine = dua = pa o a?
      look for wife = still = ipfv.2Q
      'You’re still looking for a wife, huh?'
   b. Maqalli doqayu a to manuq = o = iqo?
      sell vegetable or chicken = 2 = you
      'Are you selling vegetables or chicken?'
   c. Maqalli doqayu = o to manuq

   **Claim**: the clitics get linearized by non-syntactic operations.
   - Clitics follow a heterogeneous class of elements: verbs, auxiliaries, adverbs, adjuncts.
   - Clitics split syntactic constituents in ways which syntactic operations cannot.
   - Reasonable proposal: the clitics stay largely in-situ in the syntax; move only later on.
   - Two questions:
     - What makes the clitics move?
     - What’s the resultant structure of the host + clitics?
3 The Prosody of Second Position

3.1 Prosodic Categories in Mandar

- **Background**: Prosodic Hierarchy Theory
  - Prosodic structure: built from strictly layered but recursive prosodic categories
  - Three fundamental units: word \( \omega \), phonological phrase \( \phi \), intonational phrase

- **Goal**: identify prosodic categories and phonetic correlates in Mandar.

(11) *Sentence-Level Prosody: Some Examples*

a. Indang=aq mala mande lameayu.  
   NEG=1 can eat cassava  
   ‘I can’t eat cassava.’

b. Diang annang balao manarang.  
   there is six mouse clever  
   ‘There are six clever mice.’

c. *Pitch Track for (16a): indang ‘NEG’*

\[
\begin{array}{cccccccccc}
1.7970674 & nda & nam & lam & am & a & n & c & a & y & u \\
\end{array}
\]

\[
\begin{array}{cccccc}
indang & aq & mala & mande & lameayu \\
not & 1 & can & eat & cassava \\
\end{array}
\]

‘I can’t eat cassava’

\[
\begin{array}{c}
\text{Pitch (Hz)} \\
75 100 200 300 400 500 \\
\end{array}
\]

\[
\begin{array}{c}
\text{Time (s)} \\
0 1.836 \\
\end{array}
\]

d. *Pitch Track for (??): annang ‘six’*
• Some prosodic observations:
  – Most independent things bear a consistent  \( l^*h^- \) contour.
  – The entire string ends in final lengthening and a fall.

• Spoiler: some plausible conclusions:

3.1.1 The Word

• One type of prosodic unit shows three properties which pattern together:
  1. Stress: lengthening on the penultimate syllable.
  2. Pitch contour: \( l^* \) on penult; \( h^- \) at the right edge.

• Proposal: this thing looks like the prosodic word \( \omega \).

1. Word-level stress

• South Sulawesi languages generally show word-level stress Mills 1975; pace Himmelmann 2018
• Consistent lengthening on the penultimate syllable; secondary stress generally not detectable.
• Proposal: single right-aligned trochee/word (12c).

(12) Regular Penultimate Stress

a. \( m\text{\text{\`a}n.dar} \) ‘Mandar’

b. \( t\text{\text{\`o}.m.p\text{\text{"o}.l\text{"e}.i} \) ‘visitors’

c. \( \sigma.\sigma.\sigma.(\dot{\sigma}.\sigma) \)

2. Two Segmental Processes

• The voiced stops /\( b d \)/ lenite to \( [w r] \) within what looks like the word.
• Nasals denasalize and assimilate completely to following \( p t k s r l \) within the word.
• These rules apply absolutely here; show variation at higher levels.
(13)  a. *dundu* 'drink'  \hspace{2cm} (14)  a. *bireq* 'hate'
   b. *dundu-ang* 'a drink' \hspace{2cm} b. *mam-bireq* 'to.hate'
   c. *mu-rundu* 'you drink' \hspace{2cm} c. *u-wireq* 'i hate'

(15)  \hspace{2cm} \omega

3. The \( l^*H \)- contour

- The things which bear stress and force lenition often show the same surface contour.
  - The right edge bears a distinct \( H^- \).
  - A separate \( L^* \) falls on the penultimate syllable.
- This same contour tends to appear on things which look like syntactic heads.

(16)  Preverbal Negation bears the \( H^- \):

a. **Indang**\(^m\)=aq mala\(^m\) mande\(^m\) lameayu\(^m\).  \hspace{2cm}  b. **Da**\(^m\) mu-ande\(^m\) iting\(^m\) kandekande=\( o^m! \)
   NEG=I can eat cassava  \hspace{2cm}  DON'T you-eat that snack=DEF
   'I can't eat cassava.'  \hspace{2cm}  'Don't eat that snack!'

   c. **Pitch Track for (16a): indang 'NEG'**

   d. **Pitch Track for (16b): da 'DON'T'**
(17) **Aspectsual Auxiliaries bear the \( \text{h-} \):**

a. **Pura**"=i maqbaluq" bayu".  
already=he sell shirt  
'He’s finished selling shirts.'

b. **Innai** biasa" maqbaluq" balenga"?  
who usually sell rice.cooker  
'Who usually sells rice.cookers?'

c. **Pitch Track for (17a): pura ‘ALREADY’**

```plaintext
pitch (Hz)
0.01272 1.716
0.0597081679 1.68155027

pura i maqbaluq_bayu_muanena_i_Nina

already 3 sell clothing
He’s finished selling clothing
```

d. **Pitch Track for (17b): biasa ‘USUALLY’**
who usually sells rice cookers?

(18) Directional Prepositions bear the ḥ-:

a. Na=tamaʰ=aq di Mandarʰ
FUT=INTO=I in Mandar
'I'll go up to Mandar country.'

b. U-bemmeanʰ=i naungʰ di litaqʰ.
I-drop=it down in ground
'I dropped it on the ground.'

c. Pitch Track for (18a): tama ‘INTO’

FUT go.upriver=1 in Mandar
I'm going up to Mandar country

d. Pitch Track for (18b): naung ‘DOWN’
I dropped my cellphone on the ground

(19) **Locative Prepositions bear the H-**:

a. Diang bau di lalang di balenga.
   "There are fish in the rice cooker.

b. Apa di uwai?
   "What’s down in the water?"

c. **Pitch Track for (19a): lalang ‘IN.THERE’**

   there are fish in inside in rice.cooker.

   "There are fish in the rice cooker."

d. **Pitch Track for (19b): diong ‘DOWN.THERE’**

   what down.there in water
   "What’s down in the water?"
(20) **Temporal Adverbs bear the H-:**

a. Maqbaluq=i balenga mariri digenaq.
   sell=he rice.cooker yellow earlier
   'He sold yellow rice cookers earlier.'

b. **Pitch Track for (20a): digenaq ‘earlier’**

- **Proposal:** The relevant unit here is the prosodic word $\omega$.
  - Other prosodic events: downstep in $\phi$; final lengthening in $\iota$; final fall in $\iota_{\text{MAX}}$
  - **Alternative:** the L*H- unit is the $\phi_{\text{MIN}}$.
- **Auxiliary System:** the agreement clitics strictly follow the first $\omega$. 
- The elements which host clitics all bear $l^*H$: NEG, AUX, V.
- Adverbs which surface linearly before NEG do not bear $l^*H$; cannot host clitics.

<table>
<thead>
<tr>
<th>Table 1: Strong and Weak Preverbal Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOSTS</td>
</tr>
<tr>
<td>neg</td>
</tr>
<tr>
<td>indang</td>
</tr>
<tr>
<td>da</td>
</tr>
<tr>
<td>non-hosts</td>
</tr>
<tr>
<td>MOD</td>
</tr>
<tr>
<td>maka</td>
</tr>
<tr>
<td>baraq</td>
</tr>
</tbody>
</table>

(21) **Strong Elements Attract Clitics**

a. **Ndan**=nasang$^H$=o mala$^H$ mangino$^H$

neg=all=you can play

'You all can’t play (here).'

b. **Mala**$^H$=i=tia$^H$=ia$^H$ malai$^H$!

can=he=only=him go.home

'Only he can go home!'

(22) **Weak Elements Never Attract Clitics**

a. **Mane** naun=nasang$^H$=i mameang$^H$.

then go.down=all=he fish

'Then they went down to fish.'

b. **Sata** indang$^H$=i mala$^H$!

always neg=she can

'She never can!'

(23) **Pitch Tracks: Auxiliary System**

(24) **Strong Preverbal Elements attract Clitics**

a. **Pitch Track for** (26a): You can’t all play here.

You guys can’t all mess around here.
b. **Pitch Track for (21b): Only he can go home.**

\[
\begin{array}{c}
\text{Pitch (Hz)} \\
\hline
0 & 1.712 \\
0.0911906583 & 1.47312362 \\
\end{array}
\]

(25) **Weak Preverbal Elements don’t attract Clitics**

a. **Pitch Track for (22a): They all went down to fish in the river.**

\[
\begin{array}{c}
\text{Pitch (Hz)} \\
\hline
0.04838 & 2.017 \\
1.92189323 & 2.017 \\
\end{array}
\]

b. **Pitch Track for (22b): My wife always can’t buy cassava in Balanipa.**
3.2 Prosodic Structure of the Cluster

- **Observation**: the string which precedes agreement looks like a minimal word
  - Contour shape: completely flat till two syllables away from the agreement.
  - Primary stress: apparently penultimate in the constituent before agreement.
  - No evidence for other stress; intonational events.

(26) *The Pre-Agreement String: Flat and Unaccented*

a. **Ndan**=nasang\textdegree o mala\textdegree mangino\textdegree
   \textsc{neg=all\textsc{-}you \textsc{can\textsc{-}play}}
   'You all can’t play (here).'

b. **Naun**=nasang\textdegree i=tau\textdegree di Majene\textdegree.
   \textsc{descend=all\textsc{-}AGR\textsc{-}we \textsc{-in\textsc{-}CITY}}
   'We’re all going to Majene.'

c. *Pitch Track for (26b): We’re all going to Majene.*
Pseudo-Incorporation: same pattern.

- Mandar permits NP objects and locative pps to follow the verb and precede clitics.
- This construction: absolutely everything before the agreement gets flattened out.

\[(27) \quad \text{Pseudo-Incorporation: Compression before Agreement}\]

a. Mandundu kopi di boyangu=nasam=bo"=i=tuqu=tau.
   drink coffee in my.house=all=again=AGR=EMPH=we
   'We’re ALL JUST DRINKING COFFEE IN MY HOUSE AGAIN!'
b. Maqbaluq *balenga mariri=nasam-bo=mo*=o a?
sell rice.cooker yellow=all=again=PFV=you Q

‘You’re all SELLING YELLOW RICE COOKERS AGAIN??’

c. Pitch Track for (27a): We’re all just drinking coffee in my house again.

```
<table>
<thead>
<tr>
<th>Pitch (Hz)</th>
<th>Time (s)</th>
</tr>
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<tbody>
<tr>
<td>0.24105516</td>
<td>3.313</td>
</tr>
<tr>
<td>0.03426</td>
<td>2.286</td>
</tr>
</tbody>
</table>
```

d. Pitch Track for (27b): You’re all selling yellow rice cookers again?

```
<table>
<thead>
<tr>
<th>Pitch (Hz)</th>
<th>Time (s)</th>
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</thead>
<tbody>
<tr>
<td>0.0620702482</td>
<td>2.286</td>
</tr>
</tbody>
</table>
```

- Proposal: the host=agr string forms a minimal prosodic word.
  - 2p elements which precede agreement adjoin as feet or stray syllables.
  - Single L’H- contour and penultimate stress because the host is an \( \omega_{MIN} \).
- Observation: the 2p clitics which follow agr bear L’H- contours.
(28) Clitics which follow Agreement: Independent Contours

a. Mala\textsuperscript{H}=i=tia\textsuperscript{H} ia\textsuperscript{H} malai\textsuperscript{H}.
   'Only he can go home.'

b. Pitch Track for (28a): Only he can go home.

- **Claim**: these elements adjoin as independent words.

### 3.3 Brief Summary

- Mandar 2p elements placed prosodically.
- The 2p elements form a cluster organized by:
  - Syllable count: disyllabic > monosyllabic > agreement > disyllabic again > pronouns.
  - Scope: structurally 'higher' clitics surface farther to the right in the cluster.
- The internal prosodic structure of the cluster:
  - Everything up to agreement forms a minimal $\omega$: single L*H- contour and stress.
  - The clitics which follow agreement: apparently adjoin as independent $\omega$s as well.

### 4 Appendix: Outstanding Issues

#### 4.1 The Status of the L*H- Constituent

- Certain phrasal categories form a single L*H- constituent.
  - Nouns and adjectives can form independent L*H- domains or form a single one together.
  - Noun-adjective sequences must form L*H- domains when the DP contains a D.
  - Complexpps: also form single L*H- units when preceded by the preposition di.

(29) Noun and Adjective bear Independent L*H-
a. Maiqdi⁸ naqibaine⁸ malolo⁸ dio⁸ di Malang⁸.
   Many girl pretty there in city
   'There are lots of pretty girls in Malang'
b. Diang⁸ annang⁸ balao⁸ manarang⁸.
   there are six mouse clever
   'There are six clever mice.'
c. Pitch Track for (29a): There are lots of pretty girls in Malang.

<table>
<thead>
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<th>Time (s)</th>
</tr>
</thead>
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</tr>
<tr>
<td>500</td>
<td>2.67470498</td>
</tr>
<tr>
<td>200</td>
<td>0.0501405472</td>
</tr>
<tr>
<td>300</td>
<td>1.63778788</td>
</tr>
<tr>
<td>400</td>
<td>0.051405472</td>
</tr>
</tbody>
</table>

   There are lots of pretty girls in Malang

   Noun and Adjective bear a single L°H- with overt D

(30) Noun and Adjective bear a single L°H- with overt D
a. Mambaluq\[i\] balenga mariri\[i\] i balao manarang\[i\].
  sell\[=\]he rice.cooker yellow THE mouse clever
  'The clever mouse is selling yellow bowls.'

b. Annang\[i\] ular manaran-na\[i\] i=Nabila\[i\].
  six snake clever-her NAME
  'Nabila's six clever snakes.'

c. Pitch Track for (30a): The clever mouse is selling yellow bowls.

(31) Complex PPs form a single L^H- Domain
a. Na=naung=nasam=mi mameang di biring uwai
FUT=descent=all=Pfv.HE fish in edge water
'They’ll all go down to fish at the water’s edge.'

b. Diang boe manarang dio di pongo boyang.
there is pig clever there in back house
'There’s a smart pig out behind the house.'

c. Pitch Track for (31a): They’ll all go down to fish at the water’s edge.

- **Claim**: this structure involves prosodic smothering.
  - Overt d and p force complex NPs to phrase as single ωS.
– Alternative: the $l^*n$- accent actually associated with $ϕ$; makes everything more tricky.

### 4.2 Syntactic Height Matters

- The clitics show different behavior when the left periphery gets complex.
  - Some clitics raise to overt c: $mau$ ‘although’ hosts 2p elements.
  - Some clitics raise to follow clause-initial foci; an even bigger problem.

- Problem: not clear how a prosodic account of clitic placement can get these effects.