

# The Malayic verbal phase and Cyclic Linearization<sup>1</sup>

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NELS 54, January 2024

## 1 Introduction

Standard Indonesian and Standard Malay (SI/SM) appear at first glance to exhibit a two-way active/passive voice alternation, with corresponding prefixes *meN*-<sup>4</sup> and *di*-.

### (1) Active/passive alternation:

a. <u>Active:</u>	b. <u>Passive:</u>
Fera (tidak) <b>men</b> -ulis buku ini.	Buku ini (tidak) <b>di</b> -tulis (oleh Fera).
Fera NEG ACT-write book DEM	book DEM NEG PASS-write by Fera
‘Fera {wrote / didn’t write} this book.’	‘This book was (not) written by Fera.’

In each case, the subject precedes auxiliaries and negation, if any.

There are, however, two wrinkles to this basic picture. First is the existence of a third clause type, the “bare passive,”<sup>5</sup> with the properties below:

### (2) Bare passive:

Surat itu (tidak) saya Ø-tulis.	
letter DEM NEG 1sg write	
‘I {wrote / didn’t write} the letter.’	(SI; based on Sneddon 1996: xxiii)

- No voice prefix (hence “bare”).
- The subject is an internal argument (hence “passive”), preceding aux and negation if any.
- Obligatory, immediately preverbal agent, with restrictions on nominal type; see Nomoto 2021 for an overview.

The second wrinkle involves *A'*-extraction:

- From each of the three clause types in (1–2), the only nominal that can be *A'*-extracted is the subject, with one exception:

### (3) Object extraction is possible across a verb without *meN*-:

baju-baju [RC yang Ali tidak { * <b>mem</b> -basuh / basuh } ___]	
shirt-RED C Ali NEG ACT-wash wash	
‘clothes that Ali isn’t washing’	(SM; Keenan 1972: 183–184)

- *Ali* precedes the negator *tidak*, so this isn’t extraction of the subject of a bare passive (2). Instead, it looks like extraction of an object from an active clause (1a) with “*meN*-deletion” (Keenan 1972; Chung 1976; Soh 1998; Cole and Hermon 1998, 2000, 2005; a.o.).
- Prior analyses simply stipulate that object extraction triggers a null voice allomorph; see e.g. Aldridge 2008; Cole, Hermon, and Yanti 2008; Sato 2012.

## Today

- §2 We offer a **new proposal for the syntax of voice in Malayic languages**, concentrating first on SI and SM but applicable to many related languages of the area.
- §3 Together with the Cyclic Linearization theory of phasehood (Fox and Pesetsky 2005), we derive a **new, explanatory account for the “*meN*-deletion” effect**.
- §4 Our analysis productively extends to — and is further motivated by — **observed variation in voice and extraction interactions in related languages of the area**.

## 2 Proposal for Malayic VoiceP

We start with our proposal for the three basic clause types.

- We make use of the notion of the **verbal phase** (Chomsky 2000, 2001). Higher syntactic operations can only access the “phase edge” (more below).
- Previous Minimalist proposals for SI and SM (Aldridge 2008; Cole et al. 2008; Sato 2012; Jeoung 2017, 2018a,b; Legate 2014) also make reference to the verbal phase. Following Chomsky, these works assume a **single head** (called Voice or *v*) which both introduces the external argument and serves as the phase head.

<sup>1</sup> For comments and discussion that informed this work, we thank Kenyon Branan, Nick Huang, Hadas Kotek, Keely New, Hiroki Nomoto, Zheng Shen, Alex Smith, Hooi Ling Soh, and audiences at WCCFL 38, AFLA 27 and 30.

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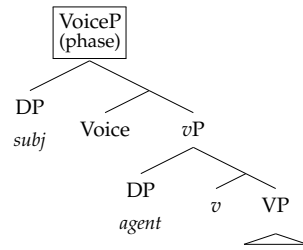
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<sup>4</sup> *N* is a homorganic nasal, which in some cases replaces the stem-initial consonant, as in (1a).

<sup>5</sup> The bare passive has also been called “passive type 2,” “object(ive) voice,” a.o. in prior literature; see Nomoto 2006.

In contrast to these prior works on SI/SM, we propose to **split these two functions across two different heads:**<sup>6</sup>

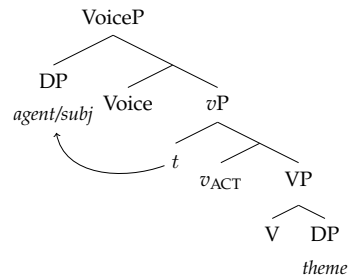
- $v$  introduces the external argument (agent); Voice is the phase head. ( $vP$  is not a phase.)
- VoiceP always hosts exactly one nominal specifier (normally the subject).
- The lexical verb head-moves to  $v$  and is pronounced there. We discuss the morphology of Voice and  $v$  below.



(4) **Malayic active VoiceP:**

Active clauses involve  $v_{ACT}$ .

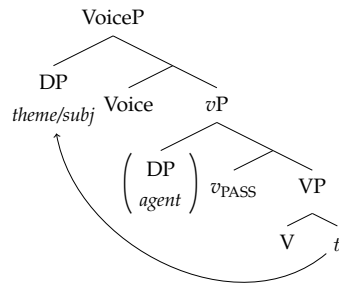
- $v_{ACT}$  licenses (assigns abstract Case to) a nominal that it c-commands, i.e. the object.
- The external argument moves to Spec, VoiceP.<sup>7</sup> T (above VoiceP) attracts a nominal to Spec, TP and licenses it there.



Both types of passives involve  $v_{PASS}$ :

- $v_{PASS}$  does *not* license any c-commanded nominal; it optionally projects an external argument.
- An internal argument moves to Spec, VoiceP; it is attracted to Spec, TP and licensed there.
- An external argument that stays in-situ in Spec,  $vP$  can be licensed under linear adjacency with the verb in  $v$  (see e.g. Levin 2015; Erlewine, Levin, and Van Urk 2020).<sup>8</sup>

(5) **Malayic passive VoiceP:**



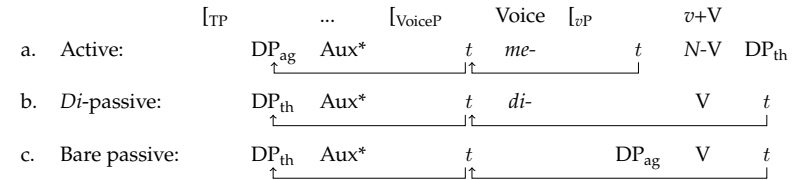
- We adopt the view suggested by Gil (2002), Benjamin (2009), and Kaufman 2009 that active voice *meN-* reflects two prefixes, *me-* and *N-*.<sup>9</sup>

In particular, we propose that *me-* and *N-* realize Voice and  $v$ , respectively.

- Voice and  $v_{ACT}$  are *me-* and *N-* iff they are linearly adjacent (written: \*) to each other.
- Voice is *di-* if linearly adjacent to  $v_{PASS}$ ; this ensures the complementary distribution of *di-* and the immediately preverbal agent in passives.  $v_{PASS}$  is always null.
- Overt Voice affixes to  $v$  via Local Dislocation (Embick and Noyer 2001), requiring linear adjacency.

- (6) a. Voice  $\leftrightarrow$  *me-* / \_\_\_\*  $v_{ACT}$                       (7) a.  $v_{ACT} \leftrightarrow$  *N-* / Voice\* \_\_\_  
 b. Voice  $\leftrightarrow$  *di-* / \_\_\_\*  $v_{PASS}$                       b.  $v_{ACT} \leftrightarrow \emptyset$  otherwise  
 c. Voice  $\leftrightarrow \emptyset$  / elsewhere                      c.  $v_{PASS} \leftrightarrow \emptyset$

(8) **TP clause structures for the three voice types in SI/SM:**



### 3 Object extraction and Cyclic Linearization

Our proposal for  $A'$ -extraction in Malayic languages relies on VoiceP (not  $vP$ ) being a phase. Phases delimit domains that are opaque for outside syntactic operations, except their “edge” (i.e. specifiers), as per Chomsky’s (2000) *Phase Impenetrability Condition* (PIC).

- If we were to assume Chomsky’s PIC, our proposal for VoiceP **would entail that only the subject nominal can be  $A'$ -extracted.**
  - VoiceP hosts exactly one nominal specifier: the subject, which moves to Spec, TP in the derivations above.
  - The PIC dictates that the contents of  $vP$  are inaccessible from outside the phase.

(But we assume that VoiceP can host additional non-nominal specifiers, and thereby correctly predict that non-nominals can  $A'$ -move through the phase edge.)

<sup>6</sup> Parallel structures for the verbal phase have been proposed for some other languages — see Gallego 2008, Richards 2010, 2023, Coon, Mateo Pedro, and Preminger 2014, Hsieh to appear, as well as Collins 2005 on passives — but not in previous work on Malayic languages (except Sommerlot 2020b). We are not attached to these particular labels.

<sup>7</sup> This movement might appear to violate an anti-locality constraint. But note that the nominal in this derivation will later receive licensing from T; this is an  $A$ -movement step. This may support the idea that Spec-to-Spec Anti-Localisity applies specifically to  $A'$ -movement, as suggested in Erlewine 2016a, but contra e.g. Deal 2019.

<sup>8</sup> “Licensing by adjacency” can impose restrictions on the size and shape of nominals (Levin 2015), subject to cross-linguistic variation. This may account for the fact that, in many languages with such bare passives, agents are limited to particular types of nominals (Nomoto 2021). The inventory of nominal licensing mechanisms that we propose here echo that in Aldridge 2008, who refers to (abstract) nominative, accusative, and ergative licensing, but we choose to avoid these terms.

<sup>9</sup> One argument comes from the behavior of *peN-* vs *pe-* nominalizations. (The surface realization of the nasal *N* in *peN-* and *meN-* are the same (Sneddon 1996: 9–14).) Broadly speaking, *peN-* nominalizations are external-argument-oriented; compare *pengasih* ‘one who is loving’ and *pekasih* ‘one who is loved’ from the stem *kasih* ‘love.’ As Benjamin (2009: 303–304) notes (in different terms), this suggests treating *N-* as a shared external-argument-introducing morpheme in both *meN-* and *peN-*. See Erlewine and Sommerlot 2023 for further arguments.

► But in object extractions (“*meN*-deletion” examples), **two nominals move out of VoiceP!**

(9) **Object extraction in SI/SM has high agent and no voice prefix:**

*Buku ini* Badu sudah { \***mem**-baca / baca } \_\_\_\_.  
 book this Badu ASP ACT-read read  
 ‘This book, Badu has read.’

(SI; Voskuil 2000: 199)

The subject (here: *Badu*) moves to Spec,TP and a non-subject (*buku ini*) moves to Spec,CP.

(10) [CP DP<sub>A'</sub> [TP DP<sub>ag</sub> ... Aux\* ... [VoiceP ...] ...] (requiring no voice prefix)

Our proposal — assuming the PIC — predicts this to be impossible, with or without *meN*-.

► We propose to adopt Fox and Pesetsky’s (2005) *Cyclic Linearization* theory of phasehood, instead of the PIC. (We maintain our proposal for the structure of VoiceP, above.)

After a phase is built, it undergoes *Spell-Out*, where its contents are linearized. Resulting relative ordering statements cannot be contradicted by later movement.

(11) **A few predictions of Cyclic Linearization:**

- a. ✓ [phase A ... B ... [phase t<sub>A</sub> t<sub>B</sub> ...] ]
- b. \* [phase B ... A ... [phase t<sub>A</sub> t<sub>B</sub> ...] ]      B < A contradicts A < B
- c. \* [phase A ... B ... [phase t<sub>A</sub> X t<sub>B</sub> ...] ]      B < X contradicts X < B

Cyclic Linearization predicts the grammaticality of object extraction, as well as its verb form. We first build a VoiceP with *v<sub>ACT</sub>* (to license the object) and then move the object to Spec,VoiceP.

(12) **Deriving object extraction in (9):**

a. Structure at VoiceP Spell-Out:

[VoiceP DP<sub>A'</sub> Voice [vP DP<sub>ag</sub> v<sub>ACT+V</sub> t<sub>A'</sub>]  
*buku ini* ∅-      *Badu* ∅-*baca*

Vocabulary insertion occurs at phasal Spell-Out. At VoiceP, Voice and *v* are not linearly adjacent — DP<sub>ag</sub> intervenes, as in bare passives — so realize ∅ (6–7). Null terminals are pruned (Embick 2003 a.o.) and are not included in ordering statements.

b. Structure at CP Spell-Out:

[CP DP<sub>A'</sub> [TP DP<sub>ag</sub> ... Aux ... [VoiceP t<sub>A'</sub> Voice [vP t<sub>ag</sub> v<sub>ACT+V</sub> t<sub>A'</sub>]  
*buku ini*      *Badu*      *sudah*      ∅-      ∅-*baca*

These movements are ok as DP<sub>A'</sub> and DP<sub>ag</sub> were leftmost in the VoiceP phase: (11a).

If Voice *were* hypothetically pronounced, this derivation becomes ungrammatical:

(13) **Ungrammatical object extraction with overt Voice in (9):**

\* [CP DP<sub>A'</sub> [TP DP<sub>ag</sub> ... Aux ... [VoiceP t<sub>A'</sub> Voice [vP t<sub>ag</sub> v<sub>ACT+V</sub> t<sub>A'</sub>]  
*buku ini*      *Badu*      *sudah*      *me-*      *m-baca*

Subject movement crosses Voice (*me-*), leading to an ordering contradiction: (11c).

In addition, our Cyclic Linearization account accurately predicts **the impossibility of A'-extracting a non-subject agent DP, from a bare passive:**

(14) **Ungrammatical bare passive agent A'-extraction:**

- a. \* *Siapa*<sub>i</sub> yang pintu itu<sub>j</sub> akan \_\_\_\_<sub>i</sub> buka \_\_\_\_<sub>j</sub>?  
 who C door that FUT open  
 Intended: ‘Who will the door be opened by?’ (SI; based on Vamarasi 1999: 55)
- b. \* [CP DP<sub>A'</sub> C [TP DP<sub>th</sub> ... Aux ... [VoiceP t<sub>th</sub> Voice [vP t<sub>A'</sub> v<sub>ACT+V</sub> t<sub>th</sub>]  
*Siapa yang*      *pintu itu*      *akan*      ∅-      ∅-*buka*

The two movements out of VoiceP are not order-preserving; see prediction (11b).

**Interim summary**

While previous accounts simply stipulate that voice is null when a non-subject nominal A'-moves,<sup>10</sup> our proposal offers a deeper explanation for *why* the voice prefix must be null:

- The basic subject-only extraction restriction and its “*meN*-deletion exception” in SI/SM are all consequences of **the geometry of the verbal phase, and in particular the positions of Voice and the external argument.**
  - A'-movement of a non-subject nominal from an active clause leaves the external argument in Spec,vP at VoiceP Spell-Out, with “Voice < DP<sub>ag</sub>” order. If Voice is then pronounced, movement of DP<sub>ag</sub> becomes impossible. (See also Appendix A on *ber-*.)
  - There is not a problem with A'-extracting non-subject nominals per se!
- Our proposal involves the idea that **null terminals are ignored** for the purposes of Cyclic Linearization (as in Erlewine 2017), but **null phrases are not ignored.**
  - See Davis 2020: 339–343 for evidence that null operators in English relative clauses *do* count for Cyclic Linearization ordering statements.
  - Malayic also provides evidence for Davis’s conclusion, from the behavior of null objects in Standard Malay, which arguably involve null operator topicalization (Nomoto and Matsuura 2023). See Appendix B.

<sup>10</sup> See proposals to this effect in Aldridge 2008: 1456, Cole et al. 2008: 1535, Sato 2012: 41–42, Georgi 2014: 151–156, Erlewine 2016b: 304–305, Jeoung 2017: 31, 2018a: 95–96, 2018b: 25, and Keine and Zeijlstra to appear.

## 4 Variation in voice and extraction

We turn now from the well-studied standard languages (SI/SM) to non-standard languages and dialects of the region.<sup>11</sup>

- **Our proposal above extends to other Malayic languages and dialects**, as well as some nearby non-Malayic languages, productively explaining attested patterns in their voice and extraction behaviors.

### 4.1 *di*-*N*-*V* forms

Some Malayic varieties of the region allow *di*- and *N*- to co-occur:

- (15) “*di*-*N*-*V*” in Riau Indonesian: (Gil 2002: 265)
- potong* ‘cut’ > *di-motong-nya*
  - pinjam* ‘borrow’ > *di-minjam*
- (16) “*di* agent *N*-*V*” in Salako Kendayan (Malayic, West Kalimantan): (Adelaar 2005: 218)
- ʌŋkoà-lah tuàŋŋ kalɛŋ **di=kau** matàh-matàh ʌŋkoà.  
DIST-EMPH bone catfish DI=2sg N-break-RED DIST  
 ‘That’s the catfish-bone you’ve broken into many pieces.’

- **Our two-head proposal for the verbal phase can more easily account for such patterns.**
  - *di*- (and *me*-) realize Voice, whereas *N*- realizes the lower head *v*.
  - The “*di* agent *N*-*V*” order in (16) directly reflects the “Voice < DP<sub>ag</sub> < *v*+*V*” structure we propose.

### 4.2 Object extraction in Desa

Suak Mansi Desa (henceforth, Desa) is a previously undescribed Malayic language of West Kalimantan, Borneo (Sommerlot 2020a,b).<sup>12</sup> Its basic clausal syntax very closely follows that of SI/SM, with the only difference being that **active verbs bear *N*- or *meN*-** in free variation:

- (17) **Desa active voice:**
- Aku (tongah) { **ny**-apah / **meny**-apah } kawan-ku. (*N-sapah* > *nyapah*)  
1sg PROG N-call ME<sub>N</sub>-call friend-1sg  
 ‘I [am calling / call] my friend.’

<sup>11</sup> Prior theoretical work in the “*meN*-deletion” literature has overwhelmingly concentrated on the behavior of the standard languages (SI/SM), with very few exceptions (e.g. Cole, Hermon, and Tjung 2006; Cole, Hermon, and Yanti 2008; Jeoung 2016, 2017).

<sup>12</sup> This data was collected by the second author through original fieldwork over the course of three summers from 2017–2019. We thank the consultants and friends in the field without whom our discussion of Suak Mansi Desa would not be possible: namely, Mama Luki, as well as her sister and husband, Ressay Sagita, Fera Gustiana Simanjuntak, and Pak and Ibu Mardi.

- *v*<sub>ACT</sub> always realizes *N*-. Voice optionally realizes *me*- in the context of *v*<sub>ACT</sub>.

Desa also allows **object extraction, but only with the short *N*- active prefix:**

- (18) **Desa object extraction requires *N*-:**

*Opai* yang tongah inya { **m**-ilau / \***mem**-ilau } \_\_\_? (*N-pilau* > *milau*)  
what C PROG 3sg N-look.for ME<sub>N</sub>-look.for  
 ‘What is s/he looking for?’

- The *N*- prefix reflects *v*<sub>ACT</sub>; this is not a bare passive.
- Unlike object extraction in SI/SM (3, 9), **the agent stays in-situ** in Desa object extraction: *inya* ‘him/her’ must follow the auxiliary *tongah* in (18).
- **The in-situ agent in Spec,*v*P blocks Voice from realizing *me*-**, explaining the strict unavailability of *me*- in this one environment.

### 4.3 Madurese register variation

Although object extraction clauses are not bare passives (as emphasized in Soh 1998 and Cole and Hermon 2005), on our approach for SI/SM, there is no verbal morphology in both of these cases because the external argument intervenes between Voice and *v* at VoiceP Spell-Out (12a). **Madurese register variation (Jeoung 2017) provides support for this link:**<sup>13</sup>

- Familiar and polite Madurese differ in the voices/clause types available:

	familiar	polite
Active	✓	✓
Passive	✓	✓
Bare passive	×	✓

- **Object extraction** — with high (pre-auxiliary) subject and the absence of any voice prefix, like in SI/SM — **is possible in polite Madurese but not in familiar Madurese!**
- The absence of a null allomorph for Voice in the familiar register — unlike in the polite register — explains the lack of both bare passives and object extractions, even though the two clause types have distinct syntax.

<sup>13</sup> Madurese is not Malayic (as determined by lexical and phonological innovations), but the relevant properties of its voices parallel that of SI and SM, allowing us to apply and extend our proposal for Malayic clausal syntax.

## 5 Conclusion

- We developed a **new proposal for the clausal syntax** of SI and SM, with a novel **two-head organization for the verbal phase**.
- Adopting the Cyclic Linearization theory of phasehood (Fox and Pesetsky 2005), **we derive a deeper explanation for the “meN-deletion” effect**: Object extraction is possible if Voice is null, so that subject movement does not trigger a word order contradiction.
- Our proposal **productively extends to voice and extraction interactions in many related languages and dialects of the region**, which have been largely undiscussed in the formal syntactic literature.

Terima kasih! Manuscript: [lingbuzz.net/007614](http://lingbuzz.net/007614)

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## Appendix A: “ber-deletion” and prefixless psych verbs

Certain SI/SM transitive stems can bear an optional *ber-* (middle) prefix. Soh (1998, 2013) and Fortin and Soh (2014) show that their objects can A'-move, but only if the *ber-* prefix is absent.

- (19) **Extraction from *ber-* transitive clauses:** (Soh 2013: 169, Fortin and Soh 2014)
- Dia (**ber-**)main permainan komputer sampai larut malam.  
3sg MID-play game computer until midnight  
'S/he played computer games till midnight.'
  - Apa-kah* yang dia { \***ber-**main / main } \_\_\_ sampai larut malam?  
who-Q C 3sg BER-play play until midnight  
'What did s/he play till midnight?'

Subjects in such object extractions precede auxiliaries; i.e. they move to Spec,TP.

Similarly, certain psych verbs in SI/SM can appear without any voice prefix. Their objects can be extracted, again with a high (pre-auxiliary) subject:

- (20) **Object extraction from psych verb with high subject:**
- Ini* yang saya akan suka \_\_.  
this C 1sg FUT like  
'This is the one that I will like.'  
(SI; Stevens 1970: 71)

- The “*meN-* deletion” interaction is not specifically about verbs that bear *meN-*. It is about Voice being null, so that the agent can move to Spec,TP.

## Appendix B: Standard Malay object drop

Nomoto and Matsuura (2023) discuss the distribution and nature of null arguments in Standard Malay. They argue that null pronouns (pro-drop) are only possible in subject position; apparent null objects must be null topics that must move to the clause periphery (as in e.g. Huang 1984, 1991). As evidence for this account, Nomoto and Matsuura observe that transitive verbs with apparent null objects cannot bear their voice prefix:

- (21) **Apparent object drop requires prefixless transitive verb:**
- Nadiah men-ulis surat kepada Siti dan Siti sudah { \***men-**erima / terima }.  
Nadiah ACT-write letter to Siti and Siti ASP ACT-receive receive  
'Nadiah wrote a letter to Siti and Siti has already received it.'  
(SM; Nomoto and Matsuura 2023)

- If null phrases did not participate in ordering statements, we would predict a null topic object to be able to move freely to the clause periphery (in “one-fell-swoop”) and therefore not affect voice morphology at the phase edge.