The Malayic verbal phase and Cyclic Linearization¹

Michael Yoshitaka Erlewine² and Carly J. Sommerlot³ AFLA 30, October 2023

1 Introduction

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

(1) Active/passive alternation:

a. Active: b. Passive:

Fera (tidak) **men**-ulis buku ini.

Buku ini (tidak) **di**-tulis (oleh Fera).

Buku ini (tidak) **di**-tulis (oleh Fera).

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," 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)

- 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.
- No voice prefix (hence "bare").

For comments and discussion that informed this work, we thank Kenyon Branan, Nick Huang, Keely New, Hiroki Nomoto, Zheng Shen, Alex Smith, Hooi Ling Soh, and audiences at WCCFL 38 and AFLA 27. In addition, we have immense gratitude for consultants and friends in the field without whom our discussion of Suak Mansi Desa would not have been possible: namely, Mama Luki, as well as her sister and husband, Ressy Sagita, Fera Gustiana Simanjuntak, and Pak and Ibu Mardi.

² University of Helsinki / National University of Singapore, mitcho@nus.edu.sg

³ National University of Singapore, cjsomms@nus.edu.sg

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

⁵ The bare passive has also been called "passive type 2," "object(ive) voice," a.o. in prior literature; see Nomoto 2006.

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*-:

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baju-baju [RC yang Ali tidak { *mem-basuh / basuh } ___] shirt-red C Ali neg act-wash wash 'clothes that Ali isn't washing' (SM; Keenan 1972: 183–184)
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- 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 and nearby languages.
- §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 We discuss interactions of **voice and extraction in (Suak Mansi) Desa**, which illustrates an extension and further motivation for our approach.

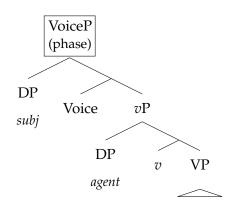
2 Proposal for Malayic VoiceP

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," due to *phase impenetrability* (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.

In contrast, we propose to **split these two functions** across two different heads:⁶

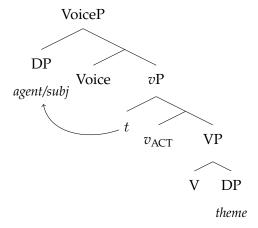
- *v* introduces the external argument (agent); Voice is the phase head. (*v*P is not a phase.)
- VoiceP always hosts exactly one nominal specifier (normally the subject).
- The lexical verb head-moves to v and is pronounced there. We discuss the morphology of Voice and v below.



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.⁷ T (above VoiceP) attracts a nominal to Spec, TP and licenses it there.

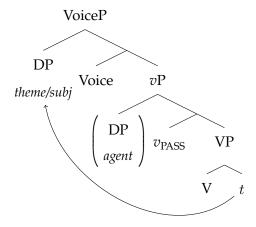
(4) Malayic active VoiceP:



Both types of passives involve v_{PASS} :

- v_{PASS} does not license any nominal; it optionally projects an agent.
- 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).8

(5) Malayic passive VoiceP:



⁶ 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 in Sommerlot 2020b).

⁷ 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 this anti-locality restriction applies specifically to A'-movement, as suggested in Erlewine 2016a, 2017.

⁸ "Licensing by adjacency" can impose restrictions on the size and shape of nominals (Levin 2015), subject to cross-

► Following suggestions by Gil (2002), Benjamin (2009), Kaufman (2009), we propose that active voice *meN*- **reflects two prefixes**, *me*- **and** *N*-. We propose that they realize Voice and *v*, respectively. (See Appendix A for some motivation.)

Concretely, we propose:

- Voice and v_{ACT} are me- and N- iff they are linearly adjacent (*) to each other.
- Voice is di- if linearly adjacent to v_{PASS} ; this ensures the complementary distribution of diand the immediately preverbal agent in passives. v_{PASS} is always null.
- Overt Voice affixes to v via Local Dislocation (Embick and Noyer 2001), under linear adjacency.
- (6) a. Voice \leftrightarrow me- / __* v_{ACT} (7) a. $v_{ACT} \leftrightarrow N$ / Voice * __
 b. Voice \leftrightarrow di- / __* v_{PASS} b. $v_{ACT} \leftrightarrow \varnothing$ otherwise
 c. Voice $\leftrightarrow \varnothing$ / elsewhere c. $v_{PASS} \leftrightarrow \varnothing$
- (8) TP clause structures for the three voice types in SI/SM:
 - Voice v+V $[_{vP}$ $[_{\mathrm{TP}}$ [VoiceP DP_{th} Active: DP_{ag} Aux* tN-V те-V *Di*-passive: DP_{th} Aux* tditb. $\mathrm{DP}_{\mathrm{ag}}$ DP_{th} Bare passive: Aux* t

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)'s *Phase Impenetrability Condition* (PIC).

- ► Our proposal for VoiceP, together with the PIC, entails 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 tells us that the contents of vP are inaccessible from above.

(We correctly predict that non-nominals can A'-move through the phase edge.)

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).

But in object extraction clauses (the *meN*-deletion examples), **two nominals move out of VoiceP**!

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

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

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

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

(11) A few predictions of Cyclic Linearization:

a.
$$\int_{\text{phase}} A \dots B \dots \begin{bmatrix} \text{phase} & t_A & t_B & \dots \end{bmatrix}$$

b. *[
$$_{phase}$$
 B ... A ... [$_{phase}$ t_{A} t_{B} ... B < A contradicts A < B

c. *[
$$_{phase}$$
 A ... B ... [$_{phase}$ t_{A} X t_{B} ... 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 $v_{\rm ACT}$ (to license the object) and then move the object to Spec, VoiceP.

(12) Deriving object extraction in (9):

a. Structure at VoiceP Spell-Out:

$$\begin{bmatrix} \text{VoiceP} & \text{DP}_{\text{A}'} & \text{Voice} & \llbracket_{v\text{P}} & \text{DP}_{\text{ag}} & v_{\text{ACT}} + V & t_{\text{ag}} \\ & buku \ ini & \varnothing - & Badu & \varnothing -baca \end{bmatrix}$$

Vocabulary insertion occurs at phasal Spell-Out. At VoiceP, Voice and v are not linearly adjacent — $\mathrm{DP}_{\mathrm{ag}}$ intervenes, as in bare passives — so realize Ø (6–7). Null terminals are pruned (Embick 2003) and are not included in ordering statements.

b. Structure at CP Spell-Out:

These movements are ok as DP_A and DP_{ag} 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 DPA' [TP DPag ... Aux ... [VoiceP
$$t_{A'}$$
 Voice [v_{P} t_{ag} $v_{ACT}+V$ $t_{A'}$ buku ini Badu sudah **me-** m-baca

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

- ▶ We have derived the so-called "meN-deletion" effect: that a non-subject nominal can be A'-moved to Spec,CP together with the subject to Spec,TP with no voice prefix.
 - At VoiceP Spell-Out, Voice and v are not linearly adjacent because the agent is in-situ, just like in bare passives and therefore realize \emptyset ; see (6–7).
 - Previous accounts of "meN-deletion" all effectively stipulate that, when a non-subject A'-moves, the voice prefix realizes a null allomorph.⁹ In contrast, our Cyclic Linearization-based account offers a deeper explanation for why the voice prefix must be absent in such cases.

(This was illustrated here with A'-movement of a local internal argument, but this logic extends to A'-movement out of embedded clauses, as discussed in Saddy 1991.)

In addition, our Cyclic Linearization account predicts that non-subject *agents* can never be A'-extracted together with an internal argument subject in Spec,TP.

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

a. * Siapa_i yang pintu itu_j akan ___i buka ___j?
who C door that fut open

Intended: 'Who will the door be opened by?' (SI; based on Vamarasi 1999: 55)

b. *
$$[CP DP_{A'} C [TP DP_{th} ... Aux ... [VoiceP t_{th} Voice [vP t_{A'} v_{ACT} + V t_{th}]]$$

 $Siapa yang pintu itu akan$ \varnothing - \varnothing -buka

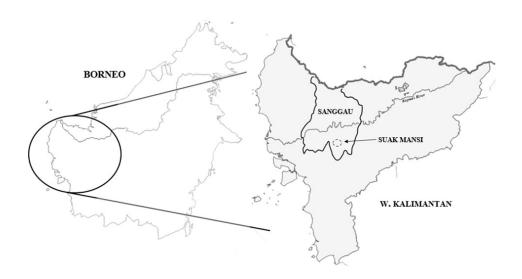
The two movements out of VoiceP are not order-preserving, leading to an ordering contradiction: see prediction (11b).

(We present further motivation for our approach in Appendix B.)

⁹ 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 Voice and extraction in Desa

Our proposal for Malayic voice and extraction allows us to account for their unique interaction in (Suak Mansi) Desa, a Malayic language of West Kalimantan, Borneo (Sommerlot 2020a,b). Desa is previously undescribed language spoken in the Sanggau Regency.¹⁰



Desa has three voices — active, *di*-passive, and bare passive — which pattern very closely to that in SI and SM. The only difference is that **active verbs bear** *N***- or** *meN***-** in free variation:

(15) Desa active voice:

- ▶ We propose to adopt the same proposal for Malayic clause structure, introduced above, with only minor adjustment to its vocabulary items:
 - Voice is optionally realized as *me* when linearly adjacent to v_{ACT} ;
 - v_{ACT} always realizes N-.

(16) a. Voice
$$\leftrightarrow$$
 (me-) / __* $_{ACT}$ replacing (6a) b. $v_{ACT} \leftrightarrow N$ - replacing (7a) ...plus all other vocabulary items from (6–7).

¹⁰ This data was collected through original fieldwork over the course of three summers from 2017-2019.

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

(17) Desa object extraction requires N-:

```
Opai yang tongah inya { m-ilau / *mem-ilau } ___? (N-pilau > milau) what C PROG 3sg N-look.for MeN-look.for 'What is s/he looking for?'
```

(17) is clearly not extraction of a bare passive subject, because the bare passive cannot bear *N*-:

(18) Desa bare passive disallows active prefixes:

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Kayu inya { bewa' / *m-ewa' / *mem-ewa' }. wood 3sg bring N-bring меN-bring 'S/he brought the wood.'
```

Another difference in object extraction between Desa and SI/SM is that **the subject (agent)** stays low in Desa object extraction:

(19) Agents follow auxiliaries in Desa object extraction:

- ▶ Desa object extraction (17, 19) is derived straightforwardly from our independent proposals for Malayic VoiceP and object extraction, and for Desa voice morphology.
- (20) Derivation for Desa object extraction:

- Object extraction clauses involve $v_{\rm ACT}$, to license the object. In Desa, $v_{\rm ACT}$ always realizes N-. (In SI/SM, N- only cooccurs with me-, when the two heads are linearly adjacent.)
- We take (19) to indicate that the EPP can be violated (Spec,TP is left empty) in Desa object extraction, unlike in SI/SM object extraction.
- Voice is pronounced as it is not adjacent to v_{ACT} ; if me- were hypothetically pronounced, it would fail to prefix to the verb under linear adjacency.
- ► The behavior of Desa supports our two-head analysis for Malayic VoiceP:
 - In both Desa and SI/SM, it's the position of the agent between Voice and v that leads to the exceptional form of the verb in object extraction.

(The movement of the object itself is not a problem per se!)

- In Desa, the in-situ agent blocks Voice from being realized as me-, as it cannot affix to v. v_{ACT} realizes N-, distinguishing object extraction clauses from bare passives. (This supports our analysis of object extraction clauses involving v_{ACT} .)
- In SI/SM, the agent moves to Spec,TP to satisfy the EPP, which would lead to an ordering paradox if Voice were overt.

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 other Malayic languages such as Desa (and others), which have been largely ignored in the formal syntactic literature (except in a few works such as Cole, Hermon, and Yanti 2008).

Terima kasih! Manuscript: lingbuzz.net/007614

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Appendix A: Splitting meN-

A1. Evidence from SI/SM nominalizations

Nominalizations in SI/SM may involve peN- or pe-. The surface realization of the nasal N in peN- and meN- are the same (Sneddon 1996: 9–14). peN- nominalizations are agent-oriented:

(21) From stem kasih 'love':

(Hassan 1974, in Benjamin 2009: 304)

- a. pengasih 'one who is loving'
- b. *pekasih* 'one who is loved'

Such correspondences support parsing N- as a shared agent-introducing morpheme in both meN- and peN-. (See Benjamin 2009: 303–304 for a suggestion along these lines.)

A2. Evidence from di-N-V forms

In some non-Standard, regional varieties *di*- and *N*- can cooccur:

(22) "di-N-V" in Riau Indonesian:

(Gil 2002: 265)

- a. potong 'cut' > di-motong-nya
- b. pinjam 'borrow' > di-minjam
- (23) "di agent N-V" in Salako Kendayan (Malayic, West Kalimantan):

(Adelaar 2005: 218)

Aŋkoà-lah tuàkŋ kaleŋ **di**=kau **m**atàh-**m**atàh aŋkoà. DIST-ЕМРН bone catfish DI=2sg N-break-RED DIST

'That's the catfish-bone you've broken into many pieces.'

Such forms motivate the segmentation of *meN*- into *me*- and *N*-, with *me*- occupying the same position as *di*-, and the agent between *di*- and *N*-.

Appendix B: On the importance of null Voice

B1. "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.

(24) Extraction from *ber*-transitive clauses:

(Soh 2013: 169, Fortin and Soh 2014)

- a. Dia (ber-)main permainan komputer sampai larut malam.
 3sg MID-play game computer until midnight
 'S/he played computer games till midnight.'
- b. 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?'

In our manuscript (lingbuzz.net/007614), we show that the 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:

(25) 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.

B2. Madurese register variation

Although object extraction clauses are not bare passives (as emphasized in Soh 1998 and Cole and Hermon 2005), on our approach, there is no voice morphology (in SI/SM) because the external argument intervenes between Voice and v at VoiceP Spell-Out in both cases: see (12a).

▶ Madurese register variation provides support for this link.¹¹ Jeoung (2017) shows that familiar and polite Madurese differ in the voices/constructions available:

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

This correlates with the availability of object extraction! **Object extraction** — with high (preauxiliary) subject and the absence of any voice prefix — **is possible in polite Madurese but not in familiar Madurese!**

See manuscript (lingbuzz.net/007614) for details.

¹¹ Madurese is not genetically Malayic, 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.