

TWO SIDES TO THE SAME COIN: REAPPRAISING INDONESIAN-TYPE ‘PASSIVE’ AND OBJECT VOICE IN JAVANESE*

Hero Patrianto
Victoria University of Wellington
patriahero@myvuw.ac.nz

Victoria Chen
Victoria University of Wellington
victoria.chen@vuw.ac.nz

Although Javanese is traditionally considered a split ergative language wherein an ergative-aligned object voice construction co-occurs with Indo-European-style passive voice and an accusative-aligned active voice construction, a closer look at this voice system suggests that Javanese is not as typologically unique as previously thought. We demonstrate that Javanese is best analyzed as possessing a run-of-the-mill accusative case system wherein the so-called “active vs. object voice alternation” indexes subject vs. nonsubject topicalization. We then present independent evidence that Javanese’s alleged passive construction is essentially an object voice construction that contains a third-person subject/initiator. We conclude that Javanese exhibits a reduced Philippine-type voice system where voice alternation is an \bar{A} -phenomenon associated with topicalization, similar to the voice system of Tagalog (Shibatani 1988; Richards 2000; Chen 2017), Malagasy (Pearson 2005), and Puyuma (Chen 2017).

1. Introduction

Surabaya Javanese, an understudied Javanese variety spoken in East Java, Indonesia, displays an understudied asymmetry in quantifier floating. When a clause is marked in actor voice (AV), the universal quantifier *kabèh* ‘all’ can intervene between its sentence-initial host and the perfective auxiliary *wis* (1).

- (1) [____i Konco-ku] **kabèh**_i wis mangan tahu. (AV)
[___ friend-1SG **all** PERF AV-eat tofu
‘All my friends have eaten the tofu.’

In object voice (OV), however, quantifier floating in the pre-auxiliary field is unacceptable unless uttered with a special intonation, which yields a distinct reading.¹ This is seen in (2), where dislocation of the same universal quantifier *kabèh* ‘all’ between the fronted theme (e.g. ‘all the tofu’) and the auxiliary *wis* yields semantic and grammatical consequences.

- (2) *[____i Tahu-ne] **kabèh**_i wis ta’=Ø-pangan. (OV)
[___ tofu-DEF] **all** PERF 1SG=OV-eat
(intended: ‘I have eaten all the tofu.’)

* We are grateful to Awaludin Rusiandi and Anang Santosa for providing grammaticality judgements to the Javanese data presented in this paper. Thank you also to Miriam Meyerhoff, Saurov Syed, and Lisa Travis, as well as the audiences at TripleAFLA and NELS 53 for their useful feedback.

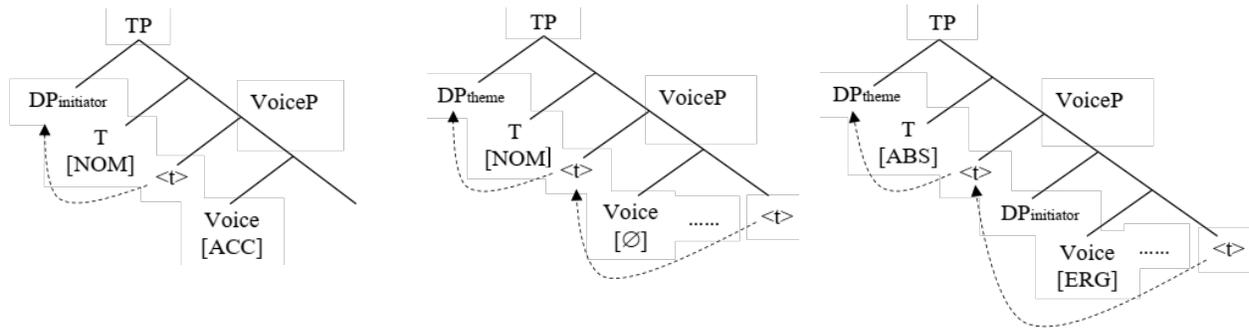
¹ According to the first author’s native intuition and consultation with other speakers, the dislocated universal quantifier *kabèh* in OV (2) and passive voice (3) can only be made unacceptable when pronounced with a significantly high intonation, which would derive a focal/emphatic meaning ‘As for the tofu, ALL OF THEM, I have eaten.’ This differs significantly from (1), where dislocation of the quantifier is grammatical without any specific intonation and emphatic reading.

In the so-called passive voice construction (3), quantifier float in the pre-auxiliary field is also unacceptable, as in OV (2).

- (3) *[____i Tahu-ne] **kabèh_i** wis ò-pangan ((ambè') konco-ku). (PassV)
 ___ tofu-DEF **all** PERF 3/PASS-eat ((by) friend-1SG)
 (intended: 'All the tofu were eaten (by s/he/my friend).')

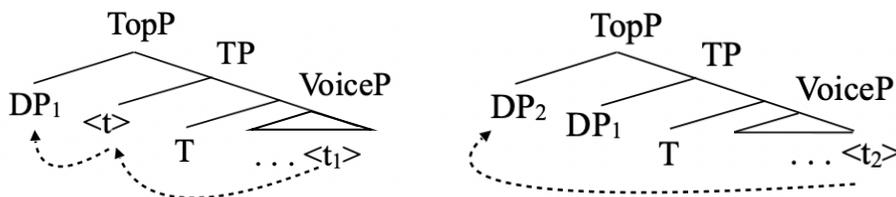
This voice-based asymmetry in quantifier floating (QF) is unexpected under the traditional split ergative approach to Javanese. Under that approach, the preverbal phrase in all three voices (1)-(3) invariably lands in [Spec, TP] through a one-step A-movement from the phase edge of VoiceP, as schematized below in (4a–c) (Suhandano 1994; Nurhayani 2014; Aldridge 2008; Cole et al. 2008; Legate 2014). The additional pause in AV clauses' pre-auxiliary field, as informed by the QF fact (1), is unpredicted and left unexplained.

- (4) The split ergative approach to Indonesian-type languages
 a. Actor Voice (accusative) b. Passive Voice (accusative) c. Object Voice (ergative)



Using this QF asymmetry as the empirical starting point, we demonstrate instead that an \bar{A} -approach to Javanese voice better accounts for the various asymmetries observed between the AV and the other two voices. Specifically, we argue that the voice-based asymmetry in QF (1)–(3) features an instance of **subject-to-topic movement** present only in **subject topic constructions**, the AV (5a). In **nonsubject topic constructions** — the OV and the so-called passive (2)-(3)— quantifier float in the pre-auxiliary field is banned because the theme topic \bar{A} -moves directly from its postverbal θ -position to [Spec, TopP], (5b). Stranding in the subject position ([Spec TP]) is therefore predicted to be impossible, as borne out exactly by (2)–(3). We then provide independent evidence that the so-called passive voice (3) is essentially an OV construction (2) with a third-person initiator/agent.

- (5) The proposed \bar{A} analysis for Javanese
 a. AV (accusative; subject topic) b. OV/passive (accusative; nonsubject topic)



This new analysis for Javanese has important broader implications for our understanding of the syntactic typology of Indonesian-type languages. Not only does it reveal a new locus of variation within languages traditionally labeled as this type, many of which have been claimed to display a split ergative case system, but it also suggests that some voice systems previously identified as Indonesian-type, such as Javanese, may be more similar to those observed in Philippine-type Austronesian languages, many of which exhibit voice alternations that have been shown to encode topicalization (see, e.g., Tagalog: Richards 2000; Chen 2017; Malagasy: Pearson 2005; Puyuma, Amis, and Seediq: Chen 2017). The current analysis for Javanese therefore indicates further variation within typologically similar languages. Finally, it also reveals variation within a cline of constructions traditionally termed the Indonesian-type passives, many of which have been claimed to be structurally equivalent to Indo-European-type passives (e.g. Indonesian: Aldridge 2008; Acehese: Legate 2012, 2014).

The remainder of the paper is structured as follows. Section 2 introduces the basics of Javanese’s voice system and lays out major predictions for the competing analyses. Section 3 presents evidence for the pre-auxiliary phrase in all three voices as a true topic and not a pure subject located in [Spec, TP]. Section 4 examines the status of the proclitic in the OV and presents new evidence that it is best viewed as subject agreement and not an ergative DP. Section 5 summarizes and concludes.

2. The nature of Javanese voice: the competing analyses

2.1 Javanese voice basics

Javanese is conventionally described as possessing a three-way voice system (e.g., Suhandano 1994; Ogloblin 2005; Nurhayani 2014; Robson 2014; a.o.)² Voice alternations among actor voice, object voice, and the so-called passive voice are exemplified below in (6)–(8).

(6) **Siti** wis ng-rangkul arè’ iku. (AV)
Siti PERF AV-hug child DEM
 ‘Siti hugged that child.’

(7) **Arè’ iku** wis ta’/mbo’/*di=Ø-rangkul (**arè’ iku**). (OV)
child DEM PREF 1SG/2SG/*3=OV-hug (**child DEM**)
 ‘I/you hugged that child.’

(8) **Arè’ iku** wis di-rangkul (**arè’ iku**) ((ambè’)Joko). (PassV)
child DEM PREF PASS/3=hug (**child DEM**) ((P) Joko)
 ‘He/she/Joko hugged that child.’

The AV (6) is characterized by the homorganic nasal prefix *ng-* and an English-style SVO word order—in which the DP that typically constitutes the subject in accusative languages (i.e., external argument of unergatives and transitives; internal argument of unaccusatives) surfaces in

² Suhandano (1994), Ogloblin (2005), and Robson (2014) all refer to the OV and the *di*-construction as two different subtypes of passive voice. In this regard, all these authors maintain that Javanese exhibits a three-way distinction in its basic constructions.

the preverbal position. Aspectual auxiliaries, where present, intervene between the subject and the verb.

The OV (7) features an unmarked verb and an obligatorily proclitic attached to the bare verb. The proclitic is typically an external argument (see, however, section 4 for a discussion of exceptions) and must be in first or second person (i.e., ‘I’ or ‘you’—Javanese does not permit plural proclitics). This construction allows flexible word order—the internal argument can either surface in the pre-auxiliary field or remains post-verbally without semantic or grammaticality consequences.

The construction traditionally referred to as a passive (8) is characterized by a third-person verbal prefix *di-*. This affix is conventionally glossed as a passive marker (Wedhawati 2006, Robson 2014; KrauBe 2017). To remain analysis neutral, we refer to this construction as the *di-* construction and label the prefix as ‘3/PASSIVE.’³ Similar to that in the OV, the internal argument in a *di-* construction can either surface in the pre-auxiliary position or remain postverbally. The external argument—which is obligatorily indexed by the third-person prefix *di-*—must be a third-person argument and can be optionally spelled out as a *by*-phrase marked by the preposition *ambe*. Where the *by*-phrase agent is right-adjacent to the verb, the preposition can be omitted, as seen in (8). Key traits of these three voices are summarized in (9).

(9) Core traits of Javanese AV, OV, and passive

	AV	OV	“Passive”
Voice morphology	Homorganic nasal prefix	∅	<i>di-</i>
Status of the external argument	Obligatory preverbal, pre-auxiliary (if any)	Proclitic; 1st or 2nd person	Proclitic; 3rd person
Status of the internal argument	Obligatory postverbal	Preverbal, pre-auxiliary (if any), or postverbal	Preverbal, pre-auxiliary (if any), or postverbal

2.2 What does Javanese’s voice alternation mark? The competing analyses

The syntactic status of the preverbal constituent is crucial for understanding the nature of this voice system. As seen earlier, in AV-marked simple transitives, the phrase that surfaces in the preverbal position is the external argument; in OV and the passive, the same position is occupied instead by the internal argument—although, in these two voices, the internal argument can also remain postverbally without grammatical consequences. Hereafter, we refer to this phrase as the pivot, following the tradition in the Austronesian literature.

What is the nature of the pivot phrase? Under the traditional view (henceforth **Hypothesis A**), the pivot in all three voices functions as the subject. In AV and the passive, the highest DP moves to [Spec, TP] through the VoiceP phase edge and becomes the nominative subject. The OV is ergative-aligned with an EPP feature present on Voice, whereby the internal argument raises to [Spec, TP] across the immobile ergative initiator and becomes the absolutive (e.g. Aldridge 2008; Cole et al. 2008; Legate 2014). If this analysis is correct, voice alternation in

³ For native speakers, where an overt DP/PP is absent, the initiator of a *di-* construction is intuitively in third singular. Nevertheless, the third-person prefix *di-* is free to cross-reference a plural DP/PP. We gloss it as “3” accordingly.

Javanese is hosted within VoiceP and reflects a change in case alignment, as illustrated earlier in (4a–c).

Under the present analysis (henceforth **Hypothesis B**), voice alternation in Javanese indexes subject vs. nonsubject topicalization, whereby the pivot in all three voices constitutes an internal topic that \bar{A} -moves to [Spec, TopP] in the language’s left periphery. The so-called AV indexes subject topicalization, in which the subject topic first moves to [Spec, TP] before it \bar{A} -moves to [Spec, TopP] (5a). In the so-called OV, the nonsubject topic moves directly from within VoiceP to [Spec, TopP] without landing in the subject position, hence the prohibition on quantifier floating in the pre-auxiliary field (2). This \bar{A} -approach to Javanese voice shares similarities with Davies’s (1993) view for Javanese and previous analyses for typologically similar languages (Durie 1985 for Acehnese; Asikin-Garmager 2017 for Sasak).⁴ It also indicates similarities between Javanese and some Philippine-type Austronesian languages whose voice alternation have also been claimed to be an instance of topicalization (see Richards 2000 for Tagalog; Pearson 2005 for Malagasy; Chen 2017 for Puyuma, Amis, Seediq, and Tagalog).

Key assumptions for the competing analyses are summarized in (10). If Hypothesis A is on the right track, we would expect the pivot in all three voices to display typical subject properties and not topic properties (10f). Furthermore, the non-pivot external argument in OV should behave like an ergative argument that remains in its θ -position, and it should not display subject properties (10g). If, however, Hypothesis B is correct, the pivot in all three voices should show typical topic properties and, at the same time, should exhibit subject properties in AV constructions. In addition, the non-pivot external argument in OV—nonsubject topic construction in our current analysis—should behave like a true subject.

(10) Key assumptions of the competing analyses

	Hypothesis A	Hypothesis B
a. Javanese’s case alignment	split ergative	accusative
b. nature of voice alternation	alignment shift (accusative vs. ergative)	topicalization (subject vs. nonsubject)
c. AV construction	accusative construction	subject topic construction
d. OV construction	ergative construction	undergoer topic construction
e. Passive construction	accusative-aligned passive	undergoer topic construction with a 3rd-person subject
f. Status of the pivot	Subject (A-element)	Topic (\bar{A} -element)
g. Status of non-pivot external arguments	Ergative DP in [Spec, VoiceP]	Nominative subject in [Spec, TP]

In what follows, we present specific evidence for Hypothesis B. We begin by clarifying the status of the pivot phrases (10f), demonstrating that it exhibits typical topic properties in all three

⁴ Davies (1993), in his analysis of the raising-to-object construction of the language, argues that voice alternations in Javanese mark topicalization, but the paper did not present specific evidence for this claim.

voices (section 3). We then move to the status of non-pivot external arguments (10g), showing that such arguments behave like true subjects and not ergative DPs.

3. Pivots behave like \bar{A} -topics and not subjects

Support for the pivots as topics (Hypothesis B) and not subjects (Hypothesis A) comes from three independent pieces of evidence: definiteness/specificity constraints (3.1), binding facts (3.2), and PP’s eligibility to be a pivot (3.3).

3.1. Definiteness/specificity constraints

Pivohood in Javanese is obligatorily associated with definite/specific interpretation—a typical topic property. The same constraint is consistently absent within non-pivot phrases across all three voices, regardless of the thematic role of the phrase. This lends empirical support to the claim that pivots are associated with a specific information structure status (topics) and not subjects, which are crosslinguistically uncommonly subject to a definiteness/specificity constraint.

This constraint is summarized in (11) and illustrated in (12)–(13): whenever a phrase constitutes the pivot (as indicated by voice type), it must be definite-marked regardless of thematic role, as seen with the external argument in (12) and the internal argument in (13)–(14). When not in pivot status, this constraint no longer applies, as seen with the external argument in (14)–(15) and the internal argument in (12).

(11) Mapping between voice alternation and the definiteness/specificity constraint

	AV	OV	“Passive”
Which phrase must be definite/specific	initiator in unergatives/transitives; theme in unaccusatives	theme or a specific PP (see section 3.3)	

(12) **Wong-*(é)** ng-guwa’ tas-(é). (AV)
person-DEF AV-throw.away **bag-(DEF)**
 ‘{The/*a} man threw {a/the} bag away.’

(13) **Tas-*(é)** ta’/mbo’=Ø-guwa’ (**tas-*(é)**) (OV)
bag-*(DEF) 1SG/2SG=OV-throw (**bag-*(DEF)**).
 ‘I/you have thrown away {the/*a} bag.’

(14) **Tas-*(é)** di-guwa’ (**tas-*(é)**) (passive/*di*-construction)
bag-*(DEF) PASS/3-throw (**bag-*(DEF)**)
 ‘Someone/s/he has thrown away {the/*a} bag.’⁵

(15) Lawuh-*(é) di-pangan (**kucing (iku)**) (passive/*di*-construction)
 side.dish-*(DEF) 3-eat (**cat (DEF)**)

⁵ To avoid unnecessary complication, all Javanese examples are translated with active English sentences.

‘{That/a} cat ate the side dish.’

Importantly, where an OV/*di*-construction contains two objects, this constraint applies only to one of the two, and only the object subject to this constraint may appear preverbally, as shown in (16)—(17). This constraint highlights pivothood’s correlations between linear order (i.e., ability to surface proverbially) and the definiteness/specificity constraint.

- (16) a. Nang taman, **arè’ *(iku)** ta’/mbo’=Ø-kè’-i dui’-(é). (OV)
 PREP park **child DEM** 1SG/2SG=OV-give-APPL money-(DEF)
 ‘In the/a park, I gave {the/*a} child {the/some} money.’
- b. Nang taman, **dui’-*(é)** ta’/mbo’=Ø-kè’-no arè’ (iku).
 PREP park **money-*(DEF)** 1SG/2SG=OV-give-APPL child DEM
 ‘In the/a park, I gave {the/a} child {the/*some} money.’
- (17) a. Nang taman, **arè’ *(iku)** di-kè’-i dui’-(é). (*di*-construction)
 PREP park **child DEM** PASS/3-give-APPL money-(DEF)
 ‘In the/a park, I gave {the/*a} child {the/some} money.’
- b. Nang taman, **dui’-*(é)** di-kè’-no arè’ (iku). PREP
 park **money-(DEF)** PASS/3-give-APPL child DEM
 ‘In the/a park, I gave {the/a} child {the/*some} money.’

As these examples show, every finite clause in Javanese requires one definite/specific phrase that constitutes the pivot (although multiple definite/specific phrases are possible). The thematic role/grammatical relation of the pivot varies according to the voice type of the sentence, akin to a similar constraint observed in Philippine-type Austronesian languages such as Tagalog and Kapampangan (Rackowski 2002; Bächtcher pers. comm), where pivots have also been analyzed as topics (Richards 2000; Pearson 2005; Chen 2017; Paul and Massam 2021).

3.2. Binding pattern

Further evidence for Javanese pivots as \bar{A} -topics comes from binding facts. If pivots are true subjects located in an A-position, as held by Hypothesis A, they should function as new antecedents for anaphors and capable to be capable of being a binder (Miyagawa 2010; van Urk 2015). Consider, for example, the binding relation in English passives (16) and the equivalent passive construction in Acehnese (17). In both constructions a theme subject can bind into an anaphor embedded inside the *by*-phrase.

(16) **Medusa_i** was poisoned by **herself_i**. (Theme subject binds into a *by*-phrase)

(17) Acehnese
Tiep-tiep aneuk geu-lindong **le mak droe-jih**.
every child 3POL-protect **LE mother self-3FAM**
 ‘Every child is protected by his/her mother.’ (Legate 2014:15)

In Javanese, however, a theme pivot in the alleged passive cannot bind into an anaphor embedded inside a *by*-phrase (18) and instead can be bound by the external argument (19). This binding relation is unexpected for a passive construction, indicating that the pivot does not behave like a true subject in the Javanese *di*-construction.

(18) *{Joko/ḍè'é}_i ḍi-jiwit-i ((ambè') awa'-é_i ḍéwé).
 Joko/3SG PASS/3-pinch-APPL by body-DEF self
 (Intended: 'Joko/he was being pinched by himself.')

(19) [Awa'-é ḍéwé]_i ḍi-{-lara-ni/gepu'/jiwit/cèt/salah-no}.
 [body-DEF self] PASS/3-{-hurt-APPL/hurt/hit/pinch/paint/wrong-APPL}
 'S/he {hurt/hit/pinched/painted/blamed} her/himself.'

As in the *di*-construction, the theme pivot in Javanese's OV construction cannot be a binder and can instead be an anaphor bound by the external argument. Consider (20).

(20) [Awa'-ku/mu ḍéwé]_i ta'/mbo'_i=Ø-{-lara-ni/gepu'/jiwit/cèt/salah-no}.
 [body-1SG/2SG self] 1SG/2SG=OV-{-hurt-APPL/hurt/hit/pinch/paint/wrong-APPL}
 'I/you {hurt/hit/pinched/painted/blamed} my/yourself.'

The same binding relation holds for AV clauses—the initiator can freely bind the theme (21a), but not vice versa (21b).

(21) a. **Joko** ng-lara-ni awa'-é_i ḍéwé (AV)
Joko AV-pain-APPL body-DEF self
 'Joko hurt himself.'
 b. ***Awa'-é_i** ḍéwé ng-lara-ni **Joko** (AV)
body-DEF self AV-pain-APPL **Joko**
 (intended: 'Himself hurt Joko.')

As these examples indicate, voice alternation in Javanese has no interaction with its binding parameter—which consistently follows the Thematic Hierarchy (Fillmore 1968; Larson 1988) across all three voices. This invariable binding pattern is compatible with the topic approach to pivothood, which predicts no correlations between topicalization (voice alternation) and binding relations. On the other hand, it posits a direct challenge to Hypothesis A, which assumes argument structure alternation and voice-sensitive shift in subjecthood. In particular, it indicates that the theme pivot in the alleged passive is not a true subject, contra Hypothesis A.⁶ Accordingly, Hypothesis B is the more optimal and applicable approach.

⁶ We acknowledge that the binding facts in OV (20) are not conclusive for evaluating the competing hypotheses, as ergative agents are known to be able to bind into absolutive objects in a subset of ergative languages (Polinsky 2016). Therefore, if Javanese's OV construction is indeed ergative aligned (as argued by Hypothesis A), it may exhibit the same binding pattern as observed in those languages.

3.3. PP's eligibility to be the pivot

A further piece of evidence for the topic approach to pivots lies in the understudied fact that a pivot in an OV/passive construction can be a prepositional phrase (PP). A PP's eligibility to be the pivot reinforces the current claim that pivothood marks topichood and is distinct from subjecthood, given the standard assumption in the Minimalist Program that only DPs and CPs may satisfy the EPP (Chomsky 1981, 1982, 1995).

Recall that the topicalization approach to Javanese's pivothood holds that AV clauses are subject topic constructions and that the OV/passive involves nonsubject topicalization (5a-c). If this analysis is correct, PPs should never receive pivot status in AV (subject topic construction), while they should be eligible to do so in OV and the passive. This prediction is borne out exactly by (22). As seen below, a prepositional phrase (PP) in Javanese's OV and passive constructions can optionally appear in the preverbal position and conform to the definiteness/specificity constraint known to be associated with pivothood (3.1). Importantly, where a PP surfaces preverbally and receives a definiteness/specificity interpretation, the internal argument must appear post verbally and can freely be indefinite/nonspecific, suggesting that the true pivot is the PP. Possible thematic role of such PPs range from instrument (22a), to locative (22b), reason (22c), beneficiary (22d), and comitative (22e), as well as purpose and cause, demonstrating striking similarities with Philippine-type voice.

- (22) a. **Ambè' hapé** ta'/mbo'=jupu' sembarang gambar. (instrument PP)
with cellphone 1SG/2SG=hang any picture
 'I/you took a picture with {my/your/*a} cellphone.'
- b. **Nang omah** ta'/mbo'=kirim surat opo aé. (locative PP)
to house 1SG/2SG=send letter what AE
 'I/you sent any letter to {my/your/*a} house.'
- c. **Gara-gara utang** ta'/mbo'=jalu'-i dui' sopo aé. (reason PP)
because debt 1SG/2SG=ask.for money who AE
 'I/you asked any person for money because of {my/your/*some} debt.'
- d. **Kanggo Joko/*arè'** ta'/mbo'=buka'-no lawang ndi aé. (beneficiary PP)
for Joko/child 1SG/2SG=open-APPL door which AE
 'I/you/s/he opened any door for {Joko/*a boy}.'
- e. **Ambè' Maria/*arè'** ta'/mbo'=resi'-i omah ndi aé. (comitative PP)
with Maria/child 1SG/2SG=clean-APPL house which AE
 'I/you/s/he cleaned any house with {Mary/*a boy}.'

As (22a—e) show, where the preverbal pivot position is filled by a PP (e.g., *ambè' hapé* 'with cellphone,' *nang omah* 'to house,' *gara-gara utang* 'because of debt,' *kanggo Joko* 'for Joko,' and *ambè' Maria* 'with Mary'), the PP must be interpreted as definite/specific even without an overt determiner or definite marker.⁷ Concurrently, the theme obligatorily remains postverbal and need not be definite. This is seen in its eligibility to be modified by an indefinite phrase (e.g.,

⁷ When no definite or specific marker is available, as in (22a—c), the nominal phrase embedded inside the PP pivot is usually interpreted as the possessum with a first- or second-person possessor, hence the reading 'my/your debt' (22c).

modified by *sembarang* ‘any’ or a *wh*-word with an emphatic word *aé* like *sopo* ‘who’ + *aé* (19c) ‘any person/anyone’).

A look into Javanese’s hanging topic constructions confirms that the preverbal PP is indeed a true pivot in examples like the above. Hanging topics in Javanese must surface to the left of the pivot and are immune to the definiteness/specificity constraint. This is seen in the AV example (23), in which the indefinite hanging topic ‘any garden’ precedes the preverbal pivot ‘man,’ which must be definite marked.

- (23) Nang kebun-(é) wong *(iku) nandur pirang-pirang kembang.
 PREP garden-(DEF) man DEM AV.plant several-RED flower
 ‘In {the/any} garden, {the/*a} man planted several flowers.’

As predicted exactly by the current analysis, in OV and passive constructions, a PP pivot can surface in the pivot position, intervening between an indefinite hanging topic and the verb, as in (24) and (25). This reinforces that the preverbal PP is a genuine pivot and not a hanging topic or an adjunct of some sort, both of which need not be subject to the definiteness/specificity constraint.

- (24) [Pirang-pirang kembang]_{hanging topic} [nang kebun (*n_{di} a_é)] ta’/mbo’/di=tandur.
 several-RED flower [PREP garden (which AE)] 1SG/2SG/3=plant
 ‘Several flowers, in {the/*any} garden, I/you/she/he planted (them).’
- (25) [Pirang-pirang kembang]_{hanging topic} [kanggo Joko/*wong] ta’/mbo’/di=tandur.
 several-RED flower [PREP Joko/man] 1SG/2SG/3=plant
 ‘Several flowers, for {Joko/*a man}, I/you/she/he planted (them).’

In contrast, Javanese’s AV constructions disallow a PP to surface in the pivot position (i.e. between a hanging topic and the verb), as in (26). This observation follows consistently from the current analysis, according to which the construction contains a subject topic that must be a DP.

- (26) *[Joko]_{hanging topic} [nang omah-é] moco buku.
 Joko PREP house-DEF AV.read book
 (Intended: ‘As for Joko, in the house, (he) read a book.’)

To conclude, a PP’s eligibility to be a pivot in OV and passives undermines Hypothesis A, which requires all pivots in these constructions to be an (absolute) DP. The AV/non-AV attested with PPs’ eligibility to be the pivot lends further support to the current approach to Javanese voice, which predicts voice-based asymmetry in a PP’s eligibility to be the pivot.

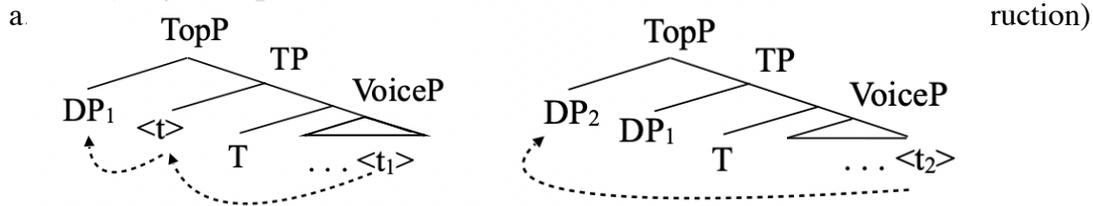
(27) Mapping between voice and pivothood

	AV	OV	Passive/ <i>di</i> -construction
What can be a pivot in Javanese	subject DP	object DP or adjunct PP	
Hypothesis B (current analysis)	subject topic	nonsubject topic	
Hypothesis A	nominative DP	absolute DP	

3.4. Further evidence for the topic approach to Javanese pivots

The current topicalization approach to Javanese voice makes two further predictions. First, in AV (i.e., subject topic construction), \bar{A} -movement of the topic occurs in the preverbal field—from [Spec, TP] to [Spec, TopP]; in OV and the passive, however, \bar{A} -movement of the nonsubject topic takes place from the postverbal θ -position to the preverbal field, as in (28).

(28) The \bar{A} -approach to Javanese voice



This prediction is indirectly supported by a specific pattern of word order flexibility observed in OV and the passive voice. Recall that, in these two constructions, the pivot can either appear in the pre-auxiliary field or remains postverbally (29a—b).

- (29) a. Arè' iku wis ta'/mbo'=Ø-rangkul (arè' iku). (OV)
 child DEM PREF 1SG/2SG=OV-hug (child DEM)
 'I/you hugged that child.'
- b. Arè' iku wis di=rangkul (arè' iku). (passive/di-construction)
 child DEM PREF 3/PASS-hug (child DEM)
 'S/he hugged that child.'

In AV, the same flexibility is not allowed. The pivot must be present in the pre-auxiliary position, as in (30).

- (30) Siti wis ng-rangkul (*Siti) arè' iku. (AV)
 Siti PREF AV-hug Siti child DEM
 'Siti hugged that child.'

Not only does this AV/non-AV asymmetry support the subject vs. nonsubject topicalization approach to Javanese voice, indicating that the pivot in AV has a higher “starting point” (Spec, TP) distinct from that in the two non-AV constructions, but it also posits direct challenges to the traditional split ergative approach to this voice system. Under that approach, the pivot in all three voices lands in [Spec, TP] through a single-step A-movement from the VoiceP phase edge. Accordingly, the word order flexibility attested only in OV is left unexplained. The fact that the

so-called passive construction patterns with OV and exhibits the same word order flexibility is also unpredicted.

Further support for the topic approach to pivots comes from a specific phenomenon observed with Javanese ditransitives—in both OV and the passive, either an adjunct PP or one of the two objects can freely surface in the pre-auxiliary position without a change in verbal morphology. This is seen in the ditransitive examples (31)—(33), where both objects ‘money’ and ‘table’ as well as the adjunct PP ‘in the restaurant’ can freely alternate and appear in the preverbal pivot position, with the appropriate definite/specificity constraint applied.

- (31) [Nang warung (iku)] **wong wèdo’*(iku)** ta’/mbo’/ḍi=kè’-i
 [PREF restaurant DEM] **person female DEM** 1SG/2SG/3=give-APPL
 (wong wèdo’*(iku) [ḍui’] [nang mèjo-(é)].
 [money] [PREF table-DEF]
 ‘In {a/the} restaurant, I/you/s/he gave {the/*a} woman {some} money on {her/a} table.’

- (32) [Nang warung] **nang mèjo*(iku)** ta’/mbo’/ḍi=kè’-i ḍui’
 [PREF restaurant] **PREF table DEM** 1SG/2SG/3=give-APPL money
 (nang mèjo*(iku) [pirang-pirang wong wèdo].
 (PREF table DEM) several-RED person female
 ‘In {a/the} restaurant, I/you/s/he gave some women {some} money on {that/*a} table.’

- (33) [Nang mèjo] **nang warung *(iku)** ta’/mbo’/ḍi=kè-i ḍui’ wong wèdo’
 PREP table **PREP restaurant DEM** 1SG/2SG/3=give-APPL money person female
 ḍi aé (nang warung *(iku)
 which AE PREP restaurant DEM)
 ‘On {her/a} table, I/you/s/he gave {the/a} woman {some} money in {the/*a} restaurant.’

This flexibility in pivot designation follows directly from the topic approach to pivoting, which predicts that nonsubject DPs and PPs can all be eligible to serve as the pivot (topic). It is, on the other hand, problematic for Hypothesis A, which views voice alternation as an A-phenomenon, which relies on argument structure alternation to derive a change in subject selection. The flexibility in pivot designation without a sign of structural change, as exhibited in (31)—(33), is left unexplained. Accordingly, Hypothesis B better accounts for the Javanese facts that were previously overlooked.

4. Proclitic as subject agreement, not ergative in NAV

We turn now to the syntactic status of the nonpivot external argument in OV and passives. Having presented evidence for Javanese pivots as \bar{A} -topics (section 3), a reasonable prediction is therefore that the nonpivot external argument in OV/passives (i.e., nonsubject topic construction) is the subject of the clause. We present specific evidence for this claim below.

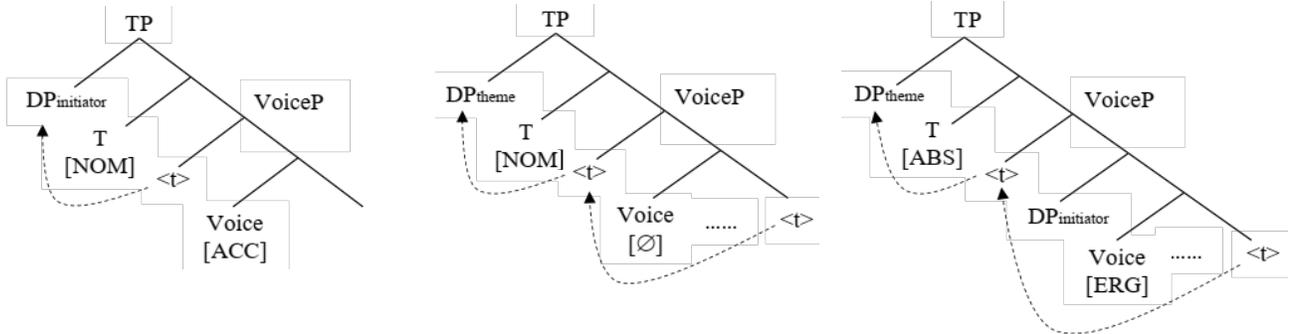
Recall that the OV and the alleged passive share the following similarities: both allow flexible word order of the pivot and allow the pivot to either be a PP or a theme DP. Importantly, both possess a verbal affix. This structural similarity is indicated in (34).

(34) (pivot) (AUX) prefix{1SG/2SG/3}-V (pivot) nonpivot phrases

Under the traditional analysis (Hypothesis A), the preverbal affix in OV is a proclitic that realizes an immobile ergative agent that remains in [Spec, VoiceP] (35c); the verbal prefix *di-* in the alleged passive construction is a passive marker (e.g. Aldridge 2004; Cole et al. 2008; Legate 2014).

(35) The split ergative approach to Indonesian-type languages

- a. Actor Voice (accusative) b. Passive Voice (accusative) c. Object Voice (ergative)



Not only does this analysis fail to account for OV and passive's person constraints on their external argument, which demonstrates a strikingly complementary distribution (see section 2.1), but it is also undermined by the fact that the so-called ergative proclitic need not be an external argument. As seen below in (36), a theme-like experiencer may be encoded as a proclitic/verbal prefix in Javanese's OV and the so-called passive construction.

- (36) a. Lindu sing **ta'mbo'di**=kuatir-no (OV/*di*-construction)
 earthquake REL 1SG/2SG/3=worry-APPPL
 'The thing that worries me/you is an earthquake.'
 b. Udan sing **ta'mbo'di**=mangkel-no.
 rain REL 1SG/2SG/3=irritate-APPL
 'The thing that irritates me/you/her/him is the rain.'
 c. Macan sing **ta'mbo'di**=wedèn-i, dudu' ulo.
 tiger REL 1SG/2SG/3=afraid-APPL NEG snake
 'The thing that frightens me/you/her/him is a tiger, not a snake.'

Wh-constructions like the one below confirm that the theme-like experiencers encoded as a verbal prefix are indeed an internal argument. Consider (37), in which the stimulus of the event is modified by an agent-oriented adverb *meneng-meneng* 'secretly,' suggesting that the experiencer is an internal argument.

- (37) a. Sopo meneng-meneng sing **mbo'di**=sedih-no? (OV/*di*-construction)
 who secretly REL 2SG/3=sad-APPL
 'Who secretly saddened you/him/her?'
 b. Sopo meneng-meneng sing **mbo'di**=wedèn-i
 who secretly REL 2SG/3=afraid-APPL
 'Who secretly frightened you/him/her?'

The fact that the phrase encoded as a verbal prefix can be an internal argument experiencer (37) suggests that this prefix is best linked to subjecthood and not a structural position linked to the external argument θ -role (Spec, VoiceP). We propose accordingly that this prefix is essentially subject agreement on the verb that spells out the phi-features (person and number) of the subject argument. Where the subject is in third person, it can be optionally spelled out as a full DP, cross-referenced by subject agreement on the verb, as in (38).⁸ Due to its structural similarities with Indo-European-type passives, the third-person subject agreement affix *di-* is traditionally labeled as a passive marker.

- (38) Tahu-ne wis **di**-pangan ((*ambè'*) **konco-ku**).
tofu-DEF PERF **3**-eat **by** **friend-1SG**
'S/he/my friend ate the tofu.'

The current claim that both the OV and the passive voice are essentially nonsubject topic constructions follows consistently from the binding facts discussed in section 3.2, which show that a theme pivot in these two constructions cannot be a binder and can be freely bound by the external argument. See Nomoto (2022) for a similar view of Balinese's passive construction.

We conclude accordingly that the nonpivot external argument in OV/passive voice is not an ergative DP but subject agreement. Accordingly, Javanese is best analyzed as exhibiting a two-way "voice" alternation that encodes subject vs. nonsubject topicalization.

5. Conclusion

In this paper, we have shown that the traditional voice-based split ergative approach to Javanese fails to capture a series of understudied asymmetries between the actor voice on one hand and the so-called object voice and the passive on the other. This analysis also contradicts the binding pattern observed in the so-called passive construction as well as the fact that a PP can constitute the syntactically prominent phrase in Javanese's non-actor voices.

Drawing on new data from Surabaya Javanese, we have demonstrated instead that Javanese possesses an accusative case system with obligatory topicalization in each finite clause. Subject vs. nonsubject topicalization is encoded by verbal morphology and traditionally labeled as "voice alternation"; the extra step of subject-to-topic movement is indeed attested in subject topic constructions (the AV), as evidenced by quantifier floating facts. The constructions that involve nonsubject topicalization display subject agreement on the verb, which is conventionally analyzed either as an ergative proclitic or a passive marker. We present specific evidence that the verbal affix is best analyzed as (nominative) subject agreement rather than the reflex of an ergative pronoun and that the third-person prefix *di-*, traditionally observed as a passive marker,

⁸ Although this DP must carry a preposition (*ambe'*) in modern Javanese when not immediately verb adjacent, evidence from Old Javanese texts show that this preposition developed from the case marker *ni* (Poedjosoedarmo 2002), which is a reflex of the Proto-Austronesian genitive case (i.e., nominative Case under the accusative approach to these languages; see Rackowski 2002, Rackowski and Richards 2005, and Chen 2017 for details; see also Blust 2015 and Chen 2017 for the relevant analysis of the Proto-Austronesian case system). This supports the current analysis that the verbal affix constitutes subject agreement that cross-references the nominative argument, which was originally encoded as a full DP and not a PP.

behaves consistently similar to the alleged first- and second-person proclitic, which we show to be subject agreement. We argue accordingly that Surabaya Javanese possesses a two-way “voice” system (Himmelman 2002; Arka and Ross 2005; Chen and McDonnell 2019): the actor voice is a subject topic construction and the object voice an underspecified nonsubject topic construction. If this analysis is correct, Javanese’s voice system is best viewed as a reduced Philippine-type voice system in which voice alternations mark a change in topichood (e.g. Shibatani 1988; Richards 2000; Pearson 2005; Chen 2017).

References

- Aldridge, Edith. 2008. Phase-based account of extraction in Indonesian. *Lingua* 118:1440–1469.
- Arka, I Wayan. 2003. Voice systems in the Austronesian languages of Nusantara: Typology, symmetry and Undergoer orientation. *Linguistik Indonesia* 21(1):113–39.
- Arka I Wayan and Malcolm Ross. 2005. *The many faces of Austronesian voice systems: Some New empirical studies*. Canberra: Pacific Linguist.
- Asikin-Garmager, Eli. 2017. Sasak voice. Ph.D. thesis, University of Iowa.
- Blust, Robert. 2015. The case markers of Proto-Austronesian. *Oceanic Linguistics* 54(2):436–91.
- Chen, Victoria. 2017. A reexamination of the Philippine-type voice system and its implications for Austronesian primary-level subgrouping. Ph.D. thesis: University of Hawai‘i at Mānoa.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris Publications.
- Chomsky, Noam. 1982. *Some concepts and consequences of the theory of government and binding*. MIT Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Cole, Peter, Gabriella Hermon, and Yanti. 2008. Voice in Malay/Indonesian. *Lingua* 118:1500–1553.
- Davies, William. 1993. Javanese subjects and topics and psych verbs. *Linguistics* 31:239–277.
- Durie, Mark. 1985. *A grammar of Acehnese on the basis of a dialect of North Aceh*. Dordrecht: Foris.
- Himmelman, Nikolaus. 2002. Voice in Western Austronesian: An update. In F. Wouk and M. Ross (eds.), *The history and typology of Western Austronesian voice systems*, 7–15. Canberra: Pacific Linguistics.
- KrauBe, Daniel. 2017. A description of Surabayan Javanese: with special reference to its linguistic etiquette. Master Thesis, Goethe University.
- Legate, Julie. 2014. *Voice and v: Lessons from Achenese*. MIT Press.
- Miyagawa, Shigeru. 2010. *Why Agree? Why Move?* Cambridge, MA: MIT Press.
- Nomoto, Hiroki. 2022. The development of the English-type passive in Balinese. *Wacana, Journal of the Humanities of Indonesia* 19(1), Article 6.
- Nurhayani, Ika. 2014. A unified account of the syntax of valence in Javanese. Ph.D. thesis, Cornell University.
- Ogoblin, Alexander. 2005. Javanese. In A. Adelaar and N. Himmelman (eds.), *The Austronesian languages of Asia and Madagascar*. London: Routledge.

- Paul, Ileana, and Diane Massam. 2021. Licensing null arguments in recipes across languages. *Journal of Linguistics* 57(4):815–839.
- Pearson, Matthew. 2001. The clause structure of Malagasy: A minimalist approach. PhD thesis, UCLA.
- Pearson, Matthew. 2005. The Malagasy subject/topic as an \bar{A} -element. *Natural Language and Linguistic Theory* 23:381–457.
- Poedjosoedarmo, Gloria R. 2002. Changes in word order and noun phrase marking from Old to modern Javanese: implications for understanding developments in western Austronesian “focus” systems. In F. Wouk and M. Ross (eds.), *The history and typology of western Austronesian voice systems*. Canberra: ANU.
- Polinsky, Maria. 2016. *Deconstructing Ergativity: Two types of ergative languages and their feature*. New York: Oxford University Press.
- Rackowski, Andrea. 2002. The structure of Tagalog: Specificity, voice, and the distribution of Arguments. PhD dissertation, MIT.
- Rackowski, Andrea and Norvin Richards. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry* 36(4):565–99.
- Richards, Norvin. 2000. Another look at Tagalog subjects. In I. Paul, V. Phillips, and L. Travis (eds.), *Formal issues in Austronesian linguistics*, 105–16. Dordrecht, Neth.: Kluwer.
- Robson, Stuart. 2014. *Javanese grammar for students*. Monash University Publishing.
- Shibatani, Masayoshi. 1988. Voice in Philippine languages. In M. Shibatani (ed.), *Passive and voice*, 85–142. Amsterdam: John Benjamins.
- Suhandano. 1994. Grammatical relations in Javanese: A short description. MA thesis, Australian National University.
- van Urk, Coppe. 2015. A uniform syntax for phrasal movement: A case study of Dinka Bor. PhD thesis, MIT.
- Wedhawati and Sjamsul Arifin. 2006. *Tata Bahasa Jawa Mutakhir*. Penerbit Kanisius: Yogyakarta.