ARGUMENT POSSIBILITIES IN THE OBJECT VOICE OF EAST JAVANESE INDONESIAN*

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Indonesian, like other Western Austronesian languages, possesses a tripartite voice system: active, passive, and object. In Standard Indonesian, the object voice is characterized by two requirements: the agent is a pronoun, and all negation or auxiliaries precede the agent. From original fieldwork, I find evidence that initially suggests that neither restriction holds in the object voice of East Javanese Indonesian (EJI): post-agent auxiliaries and non-pronoun agents are permitted. Under an array of syntactic diagnostics—control constructions, indefinite themes, and prosody—I find that the constructions with post-agent auxiliaries are underlyingly active topicalization structures. However, only some, not all, of the non-pronoun-agent constructions are also underlyingly active. This leaves a subset of non-pronoun-agent constructions that the diagnostics indicate as object voice, and thus cannot be accounted for under the voice profile given for Standard Indonesian. The crucial factor in the voice status with non-pronoun agents appears to lie in prosody rather than a binary categorial restriction. I propose that word-order restrictions are a necessary but not sufficient condition for object voice in East Javanese Indonesian. The findings lend themselves to contemporary cross-linguistic accounts of argument structure at the syntax-prosody interface.

1. Introduction

Austronesian languages supply a rich variety of voice systems, beyond the bipartite active/passive system observed in languages like English, using distnct morphological voice markers and word-order patterns. In this paper, I consider one such voice system in East Javanese Indonesian (EJI), spoken by native speakers of Indonesian in and around Malang, East Java. Namely, I investigate the object voice, which falls outside of an active/passive paradigm. Indonesian is recognized to have three distinct morphosyntactic voice configurations: active, typically marked with the prefix *meN-* (1a);[1] passive, with *di-* (1b); and object, marked with no verbal prefix (1c) (Dardjowidjojo 1978; Arka and Manning 1998; Cole et al. 2008; among many others). Of primary interest in this work is the object voice, which has alternatively been termed object preposing (Chung 1976), passive type two (Dardjowidjojo 1978), objective voice (Arka and Manning 1998), subjective passive (Guilfoyle et al. 1992), and bare passive (Nomoto 2021).

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[1] Throughout this paper, I use the Leipzig Glossing Conventions for Indonesian data. One additional glossing term is OV to indicate overt object-voice marking in non-Indonesian languages. Unless indicated otherwise, the data in this paper comes from original fieldwork with EJI speakers.

(1) a. *Active voice*
Dia sudah mem-beli buku itu.
3.SG PRF *meN*-buy book DET
'She has bought the book.'
b. *di-Passive voice*
Buku itu sudah di-beli (oleh dia).
book DET PRF PASS-buy by 3.SG
'The book has been bought (by her).'
c. *Object voice*
Buku itu sudah *(dia) beli.
book DET PRF 3.SG buy
'She has bought the book.'

Indonesian object voice has been characterized as being restricted to auxiliary-agent relative word ordering and only to pronoun agents, exemplified in (1c). There is a two-dimensional flexibility in EJI, however, that calls into question the identity of the object voice in EJI and its position within an Austronesian gradient of voice morphosyntax. This question is significant as Cole et al. (2008) and others have identified other varieties of Malay/Indonesian, such as Mudung Darat, for which there is no object voice. (2a) and (2b) show flexibility in the relative ordering of the agent and the auxiliary; (2c) and (2d) demonstrate flexibility in whether the agent is a pronoun:

(2) a. *Canonical object voice: pronoun agent, auxiliary-agent ordering*
Buku itu sudah aku beli.
book DET PRF 1.SG buy
'I have bought the book.'
b. *Pronoun agent, agent-auxiliary ordering*
Buku itu aku sudah beli.
book DET 1.SG PRF buy
'I have bought the book.'
c. *Non-pronoun agent, auxiliary-agent ordering*
Buku itu sudah perempuan tersebut beli.
book DET PRF girl DEM buy
'That girl has bought the book.'
d. *Non-pronoun agent, agent-auxiliary ordering*
Buku itu perempuan tersebut sudah beli.
book DET girl DEM PRF buy
'That girl has bought the book.'

I claim that despite these apparent flexibilities, the EJI object voice still preserves canonical auxiliary-agent restrictions and that this restriction is necessary but not sufficient for the object voice. Sentences like (2b) are instead instances of topicalization of active-voice sentences. Sentences like (2c), despite having the same ordering of constituents as sentences like (2a), are actually instances of active-voice topicalization and auxiliary fronting. The canonical condition that the object-voice agent must be a pronoun, however, does not hold for EJI, and I propose that

the basis for the distribution of object-voice agents in EJI is not pronoun status but ultimately the ability for the agent and the verb to form a sufficiently small phonological domain. The findings and analysis bear significant implications on broader discussions of Indonesian voice: first, I call into question the criterion of auxiliary-agent word ordering as a sufficient indicator of object voice on its own; second, I challenge a categorical condition on object-voice agents that is based solely on pronoun status, without regard for prosody.

2. Profiling the object voice

2.1. Background on the object voice

In the literature on Indonesian voice morphosyntax, the object voice has traditionally been viewed as having an obligatorily pronoun agent and a preposed theme DP in Standard Indonesian.[2] Any auxiliaries or negation precede the agent, and there is no intervening material between the agent and the verb:

(3) a. Topi ini sudah saya beli.
hat this PRF 1.SG buy
'This hat has been bought by me.' Cole, Hermon & Yanti 2008; 15a

b. *Topi ini saya sudah beli.
hat this 1.SG PRF buy
'This hat has been bought by me.' Cole, Hermon & Yanti 2008; 16a

c. Rumah itu akan saya jual.
house that FUT 1.SG sell
'The house, I will sell.' Arka & Manning 1998; 13a

d. *Rumah itu akan saya besok jual.
house that FUT 1.SG tomorrow sell
'The house, I will sell tomorrow.' Arka & Manning 1998; 13c

From Chung's (1976) analysis onward, for object-voice constructions, the fronted DP has been considered the surface subject, identified by Chung (1976) and others through control diagnostics, illustrated in (4). Chung (1976) illustrates that the subject of the embedded clause in (4a) is *surat itu*, as is the case with a passive in (4c). In contrast, the subject of the embedded clause in (4b) is not *surat itu*, as the control reading is inaccessible.

(4) a. Saya mem-bawa surat itu [untuk dapat kau baca].
1.SG *meN*-bring letter DET for can 2.SG read
'I brought the letter to (be able to) be read by you.' Chung 1976; 20

b. *?Saya mem-bawa surat itu [untuk teman saya dapat (mem-)baca].
1.SG *meN*-bring letter DET for friend 1.SG can *meN*-read
'I brought the letter for my friends to (be able to) read.' Chung 1976; 17

[2] Some papers translate object-voice constructions into English passives (e.g. Cole et al. 2008) while others have provided active (e.g. Arka 2003) or topicalized translations (e.g. Arka and Manning 1998). All glosses and translations in section 2 are identical to those in the source literature, unless noted otherwise, and these different English translations of the object-voice constructions will not impact the discussion here unless otherwise noted.

c. Saya mem-bawa surat itu [untuk dapat di-baca (oleh teman saya)].
1.SG *meN*-bring letter DET for can PASS-read by friend 1.SG
'I brought the letter to (be able to) be read (by my friends).' Chung 1976; 18

The control construction requires that there be PRO, co-indexed with *surat itu*, in the Spec,TP position at some point in the syntactic derivation. The contrast between the accessible readings of (4a) and (4b) is schematized below. These technical schematics are original to this paper, providing updates to the terminology from Chung (1976).

(5) a. $[_{CP}$ Saya membawa surat itu$_i$ $[_{CP}$ untuk $[_{TP}$ PRO$_i$ T$_{-Fin}$ $[_{AuxP}$ dapat $[_{VoiceP}$ kau baca t$_i$.]]]]]
b. $[_{CP}$ Saya membawa surat itu$_i$ $[_{CP}$ untuk $[_{TP}$ teman saya$_j$ T$_{-Fin}$ $[_{AuxP}$ dapat $[_{VoiceP}$ t$_j$ baca (*PRO$_i$).]]]]]

The accessibility of a controlled subject in the embedded clause in (5a) follows from PRO being able to reside in the Spec,TP position, a configuration not possible in (5b) since such a position is occupied by the external argument of the embedded clause. Taking the theme argument *surat itu* to be the complement of the verb *baca*, the only position available for the theme in (5b) is in its base-generated position, which cannot host PRO.

Furthermore, it is noted in the literature that the agent in Indonesian object-voice constructions must be a pronoun or a pronoun substitute (Sneddon 1996).

(6) *Buku itu orang itu baca.
book that man the read
'The book, the man read.' Arka & Manning 1998; 12a

Like Indonesian object voice, the Acehnese and Tanjung Raden Jambi Malay object voice constructions are characterized by, among other morphosyntactic factors, the agent immediately preceding the verb (7a-b). Observable in this data below, however, is the possibility of non-pronominal agents in Acehnese and Tanjung Raden Jambi Malay object voice. In addition to permitting non-pronoun agents, the Balinese construction also has the agent following the verb, and the two are not necessarily adjacent (7c).

(7) a. *Acehnese*
Ibrahim ka doktu peu-ubat.
Ibrahim PRF doctor CAUS-medicine
'Ibrahim was treated by the doctor.' Legate 2014; 89a
b. *Tanjung Raden Jambi Malay*
budi da? siti jola?.
Budi NEG Siti push
'Budi wasn't pushed by Siti.' Yanti 2010; 37
c. *Balinese*
Celeng-e lakar ejuk tur adep tiang.
pig-DEF FUT OV.arrest and OV.charge 1.SG
'I will catch and (then) sell the pig.' Arka 2003; 52a

Within Malay/Indonesian voice configurations, Cole et al. (2008) propose that the object voice does not exist in Mudung Darat Malay, given the degree of variation in word order and the optionality of verbal prefixes in the active voice. In this paper, I present evidence of EJI upholding the object voice as a configuration distinct from the active voice.

2.2. Dimensions of possibility in EJI object voice

Whereas Standard Indonesian object voice obligatorily requires (i) any negation or auxiliaries to precede the agent and (ii) only pronoun or pronoun-substitute agents, EJI object voice shows that adjusting either or both of these factors does not appear to affect acceptability.

(8) a. *Canonical object voice: pronoun agent, auxiliary-agent ordering*
Buku itu sudah aku beli.
book DET PRF 1.SG buy
'I have bought the book.'

b. *Pronoun agent, agent-auxiliary ordering*
Buku itu aku sudah beli.
book DET 1.SG PRF buy
'I have bought the book.'

c. *Non-pronoun agent, auxiliary-agent ordering*
Buku itu sudah perempuan tersebut beli.
book DET PRF girl DEM buy
'That girl has bought the book.'

d. *Non-pronoun agent, agent-auxiliary ordering*
Buku itu perempuan tersebut sudah beli.
book DET girl DEM PRF buy
'That girl has bought the book.'

Thus, EJI appears to permit a two-dimensional flexibility with respect to auxiliary-agent relative ordering and the pronoun status of the agent. These findings demand a closer investigation of which constructions above are instances of the object voice, therein addressing potential variation among Indonesian varieties in restrictions on the object voice.[3]

3. Possibilities of the object-voice agent in EJI

I present evidence from control, indefinite theme arguments, and prosody in support of an analysis of (8b) as an instance of active-voice topicalization rather than object voice. Whereas the theme argument in (8a) occupies a surface-subject position, (8b) is instead the result of optionally null active-voice verbal morphology in EJI. Applying these same diagnostics, however, reveals an unexpected analysis of (8c): such a sentence may not itself be an instance of object voice but, like (8b), an instance of active-voice topicalization applied after auxiliary fronting. In traversing these dimensions of possibility for the object-voice agent, these findings call into question a hallmark

[3] In this paper, I focus on structures in (8a-c), though diagnostics on structures of the type in (8b) consistently match those on structures of the type in (8d).

characteristic of the object voice, previously considered to be sufficient on its own for identifying object voice: negation and auxiliaries preceding the agent argument. (8c) complicates this mapping, as it demonstrates that an auxiliary preceding an agent does not imply object voice.

3.1. Relative ordering of agent and auxiliary

The general order of the constituents in sentences such as (8b) suggests them to be instances of active-voice topicalization. Indonesian is an SVO language (Chung 2007), so transitive active voice sentences are of the form Agent-Auxiliary-Verb-Theme. (8b) follows the order Theme-Agent-Aux-Verb. Verbal morphology aside for the moment, it appears that (8b) is an instance of active-voice topicalization. With a battery of syntactic and information-structural diagnostics, I show this intuition to be borne out, made possible by flexibilities in the verbal morphology of EJI active voice.

Prior to the tests, it is necessary to identify the optionality of *meN-* in active-voice constructions in EJI. While *meN-* is of semantic and pragmatic import (Soh and Nomoto 2011), its presence is not always required to produce a well-formed sentence in EJI, as in (9). This trend is similar to the optionality observed in varieties of Malay and Indonesian, including colloquial Malay (Nomoto 2013) and standard Malay (Soh and Nomoto 2009); and the trend is in contrast with Standard Indonesian and Sarolangun Malay (Cole et al. 2008). I term these EJI constructions *stem-active sentences*.

(9) a. Saya sudah (mem-)baca buku itu.
1.SG PRF (*meN-*)read book DET
'I have read the book.'
b. Adik-ku akan (mem-)buat kartu.
younger.sibling-1.SG will (*meN-*)make card
'My younger sibling will make a card.'

In EJI, the absence of *meN-* on the verb—in line with the blocking effects in Cole et al. (2008) as well as Soh (1998), Fortin (2006), and others—permits extraction of the internal argument out of the verbal projection while the presence of *meN-* blocks such extraction:

(10)a. Apa$_i$ yang kamu (*mem-)beli t$_i$?
what that 2.SG (*meN-*)buy
'What did you buy?'
b. Apa$_i$ yang kamu akan beli-kan t$_i$ untuk Minah?
what that 2.SG will buy-APPL for Minah
'What will you buy for Minah?'

Note that whereas (10a) could be analyzed as object extraction out of the surface-subject position in an object-voice configuration, the relative ordering of the agent and the auxiliary in (10b) is unambiguously an active configuration, by which an internal argument moves to the clause-initial position with the agent already occupying the surface-subject position.

A variety of representations have been proposed to describe the difference between stem-active and *meN*-active sentences. In this paper, I make no theoretical commitment to a particular

representation to describe the contrast between stem-active and *meN*-active sentences. The crucial empirical difference, as shown in (10), is that there are different extraction possibilities based on the presence or absence of *meN*-, so *meN*- is not implied to exist covertly in EJI stem-active sentences.

I take the presence of stem-active sentences in EJI, in combination with the acceptability of the extraction of an internal argument for $\overline{A}$-movement, as evidence in favor of the claim that (8b) is an instance of active-voice topicalization.[4] That is, EJI permits active-voice constructions with no verbal prefix, and $\overline{A}$-movement can apply over such stem-active verbs. Now, I proceed with the syntactic and information-structural diagnostics in support of that claim.

First, I adapt the control diagnostic implemented in Chung (1976). I consider the auxiliary-agent and agent-auxiliary variants below, both of which are acceptable in EJI:

(11)a. Buku itu bisa kamu baca.
book DET can 2.SG read
'You can read the book.'
b. Buku itu kamu bisa baca.
book DET 2.SG can read
'You can read the book.'

I embed both of these constructions within the same matrix clause and assess the possibility of a control reading. Only (11a) permits the control reading, whereas (11b) forces an intransitive reading of the embedded predicate.

(12)a. Saya mem-beli buku itu untuk bisa kamu baca.
1.SG *meN*-buy book DET COMP can 2.SG read
'I buy the book for you to be able to read it.'
Context: Your friend really wants this book, but the book is too expensive for them to buy. You buy the book for them to be able to read that particular book.
b. Saya mem-beli buku itu untuk kamu bisa baca.
1.SG *meN*-buy book DET COMP 2.SG can read
'I buy the book for you to be able to read (*it).'
Context: You are speaking to a young child who does not yet know how to read. You buy the book for them to be able to read in general.

I schematize (12a) and (12b) in (13a) and (13b), respectively:

(13)a. [$_{CP}$ Aku beli buku itu$_i$ [$_{CP}$ untuk [$_{TP}$ PRO$_i$ T$_{-Fin}$ [$_{AuxP}$ bisa [$_{VoiceP}$ kamu baca t$_i$.]]]]]
b. [$_{CP}$ Aku beli buku itu$_i$ [$_{CP}$ untuk [$_{TP}$ kamu (*PRO$_i$) T$_{-Fin}$ [$_{AuxP}$ bisa [$_{VoiceP}$ baca (*PRO$_i$).]]]]]

The availability of the control reading in (12a) falls out from the accessibility of the Spec,TP position in the embedded clause, which is crucially already filled in (12b) by the overt agent, ren-

[4] I recognize that there exist varieties of Malay/Indonesian without the stem-active construction but permit the bare form in instances of internal-argument extraction. For example, Sarolangun Malay does not permit stem-active constructions but does permit a bare verb in internal-argument extraction (Cole et al. 2008).

dering a control reading of (12b) inaccessible. This analysis follows Chung's (1976) account.

To analyze (12b), I suppose that there exists PRO within the embedded clause. PRO cannot be in Spec,TP since that position is already occupied by the overt agent in the active-voice construction; I obtain that the embedded clause is active-voice based on the relative ordering of the agent *kamu* and the auxiliary modal *bisa*. Then PRO would have to be the complement of the verb in the embedded clause, which is impossible. Thus, there is no position in the embedded TP to host PRO. I then conclude that there is no internal argument of the embedded clause, yielding the intransitive, i.e. non-control, reading of the embedded clause in (12b).

I share evidence from indefinite theme arguments to refine the claim that the theme argument in (8b) is in the left periphery;[5] more specifically, it is a topic.[6] Following Gundel and Fretheim (2004), topics must be definite:

(15)a. The window, it's still open. Gundel & Fretheim 2004; 12a
b. *A window, it's still open. Gundel & Fretheim 2004; 12b

Considering the contrast in (8a) and (8b) with indefinite theme arguments introduced, the topic status of the theme argument in the agent-auxiliary construction becomes clear:

(16)a. Sebuah buku sudah aku beli.
CL book PRF 1.SG buy
'I have bought a book.'

b. *?Sebuah buku aku sudah beli.
CL book 1.SG PRF buy
*'A book, I have bought.'

I take this evidence to indicate that the theme argument in (8b) is in a topic position. Both diagnostics present thus far affirm the Spec,TP position of the theme argument in (8a), and these tools affirm the intuition that (8b) is an instance of topicalization.

Musgrave (2001) notes that the agent-auxiliary word ordering, when acceptable, is characterized by an intonational break after the theme argument. This evidence, replicated in this project, is consistent with treating (8b) as an instance of a left-dislocated theme argument within an active-voice construction. The EJI consultants expressed a range of opinions on the necessity of a brief pause after the theme argument in (8b), but they always considered its presence to maintain, if not improve, the quality of the sentence. I take this trend as weak evidence in support of the topicalization analysis of (8b). In concert with the two other tests presented here, I conclude that (8b) is an instance of topicalization in the active voice in EJI.

[5] Instead of looking at indefinite themes, future work could use an alternative diagnostic for theme position: quantifiers that are inherently non-topicalizable.

[6] By the Split CP hypothesis of Rizzi (1997), the clause's left periphery is articulated into functional projections as follows:

(14) ForceP > TopP* > FocP > TopP* > FinP > TP

TopP may be iterated, but FocP's ability to be iterated varies across languages. Rizzi (1997) takes FocP to be the landing site for *wh*-movement, and the presence of a fronted *wh*-phrase prevents the co-occurrence of an in situ *wh*-phrase. Fortin (2009) extends this framework to show that Indonesian has a unique FocP, referencing the restriction against multiple *wh*-phrases in a *wh*-question.

3.2. The object-voice agent DP

Applying the same attention to prosody as in the immediately previous discussion to sentences like (8c), a surprising pattern emerges. Among the speakers who were less confident in accepting (8c), the presence of an intonational break after the sentence-initial theme argument crucially improved their judgments from unacceptable to acceptable:

(17)a. Buku itu, sudah perempuan tersebut beli.
book DET PRF girl DEM buy
'The book, that girl has bought.'
b. Buku itu, sudah tetangga saya beli.
book DET PRF neighbor 1.SG buy
'The book, my neighbor has bought.'

Prosody appears to be crucial in salvaging (17a), suggesting topicalization of the theme argument. Among the speakers who accepted (17a) without an intonational break, the presence of such a break did not adversely affect their judgments. With the accessibility of internal argument extraction in mind, I proceed with the consideration of indefinite themes and control to propose that sentences like (17a), while acceptable in EJI, are actually instances of active-voice topicalization.

First, I introduce indefinite themes to constructions like (8c) to identify a sensitivity to definiteness that only occurs in sentences with non-pronominal agents. An indefinite theme argument does not affect the quality of a canonical object-voice construction like (18a), where the theme is in the surface-subject position. Such a construction with a non-pronominal theme, however, is consistently judged as degraded in (18b) and (18c). Following Gundel and Fretheim (2004), this pattern can be understood from the sensitivity of topics to definiteness.

(18)a. Sebuah buku sudah dia beli.
CL book PRF 3.SG buy
'She has bought a book.'
b. ?Sebuah buku sudah perempuan tersebut beli.
CL book PRF girl DEM buy
'A book, that girl has bought.'
c. ??Sebuah buku sudah orang itu beli.
CL book PRF person DET buy
'A book, the person has bought.'

The acceptability of the sentences in (17) contrasted with the data in (18) suggests that the theme argument in a construction with a non-pronominal agent is sensitive to definiteness in a way that such constructions with pronominal agents are not. As (16) has demonstrated the resistance in EJI of topicalizing an indefinite theme, an account emerges in which (18b) and (18c) are instances of theme topicalization whereas (18a) positions the theme in the surface subject position. Based on linear ordering of the theme argument with respect to auxiliaries and the agent, I infer that the theme argument in the sentences in (18) must reside at least as high as Spec,TP. I thus propose that the theme arguments (18b) and (18c) reside in TopP.

Taking (18b) and (18c) to be instances of stem-active topicalization, the position of the auxiliaries in (18) preceding the subject demands explanation, as the agent precedes any auxiliaries in the active voice. I again engage with the Split CP Hypothesis of Rizzi (1997) and incorporate findings of auxiliary fronting with information-structural import. Under the proper contexts, EJI speakers accept the fronting of an auxiliary to express information focus:

(19)a. Sudah$_i$ kamu t$_i$ beli buku itu.
PRF 2.SG buy book DET
'You ALREADY bought the book.'
Context: You and your friend are at the bookstore and your friend wants to buy a book. You have already seen that book at your friend's house.
b. Sudah$_i$ perempuan tersebut t$_i$ beli buku itu.
PRF girl DEM buy book DET
'That girl ALREADY bought the book.'

I find additional evidence from question formation that the internal argument of a stem-active construction can undergo $\overline{A}$-movement over a focus element, employing the Focus marker *-kah* studied in Fortin (2009).[7] In (20b), the presence of the comma is crucial in maintaining the acceptability of the sentence. This intonational observation suggests left-dislocation of the theme argument that would not be predicted if the argument resided in Spec,TP.

(20)a. Surat itu$_i$ sudah$_j$-kah kamu t$_j$ tulis t$_i$?
letter DET PRF-FOC 2.SG write
'Have you written the letter?'
b. Surat itu$_i$, sudah$_j$-kah lakilaki tersebut t$_j$ tulis t$_i$?
letter DET PRF-FOC boy DEM write
'Has the boy written the letter?'

I then consider (17a) and (17b) to be instances of auxiliary fronting followed by topicalization of the theme argument, made possible by the lack of *meN-* on the verb, with (17a) schematized below:

(21) [$_{TopP}$ Buku itu$_i$ [$_{FocP}$ sudah$_j$ [$_{TP}$ perempuan tersebut t$_j$ beli t$_i$.]]]

4. An analysis of the distribution of the EJI object-voice agent

The object-voice agent has been considered from a categorical standpoint: it must be a pronoun or a pronoun substitute (Sneddon 1996; Cole et al. 2008). In this section, I present an account that challenges this categorical perspective on object-voice agents, suggesting that the permissibility of an agent in EJI object voice is not conditioned on whether or not it is a pronoun (substitute) but rather on its ability to form a sufficiently small phonological domain with the verb. I consider phasehood of the voice projection to analyze the distribution of object-voice agents in EJI.

[7] I do not yet know of an attested non-interrogative Focus marker that can combine with auxiliaries like *sudah*; I note that *-lah* is a non-interrogative Focus marker (Fortin 2009), but its affixation distribution does not appear to include auxiliaries like *sudah*.

4.1. Complications to the distribution of object-voice agents

Having disentangled canonical object-voice constructions like (8a) from superficially similar constructions like (8c) that appear to instead be instances of stem-active topicalization, I find that some agents, while failing to meet the pronoun (substitute) criterion, appear to qualify as object-voice agents. When the theme argument is indefinite as in (22), a split occurs in the judgments, but not along the lines of an agent's pronoun status:

(22)a. Sebuah buku akan aku beli.
CL book will 1.SG buy
'I will buy a book.'
b. ?Sebuah buku akan perempuan tersebut beli.
CL book will girl DEM buy
'A book, that girl will buy.'
c. Sebuah buku akan guru-ku beli.
CL book will teacher-1.SG buy
'My teacher will buy a book.'

Thus, it appears that the theme argument in (22c) is not in the Topic position; otherwise, (22c) would have an indefinite Topic, which is not acceptable. I also find indefinite theme arguments to not affect the quality of similar sentences with other non-pronoun agents, such as *adik-ku* 'my younger sibling' and *guru itu* 'that teacher.' Homing in on forms with virtually identical meanings, modulo sociolinguistic register, there is a gradation of judgments for an individual consultant between a clitic possessive and its full-word equivalent:

(23)a. Sebuah buku akan [adik-ku] beli.
CL book will younger.sibling-1.SG buy
'My younger sibling will buy a book.'
b. ?Sebuah buku akan [adik saya] beli.
CL book will younger.sibling 1.SG buy
'My younger sibling will buy a book.'

Thus, the clear-cut parameter of pronoun status fails to account for the distribution of object-voice agents in EJI. Given the near-identity of the agents in (23a) and (23b), the data demands an account of EJI object-voice agents that considers prosodic factors rather than a binary indicator of pronoun status. Before providing such an account, I first develop syntactic derivations of the object-voice constructions like (8a) and instances of stem-active topicalization like (8c).

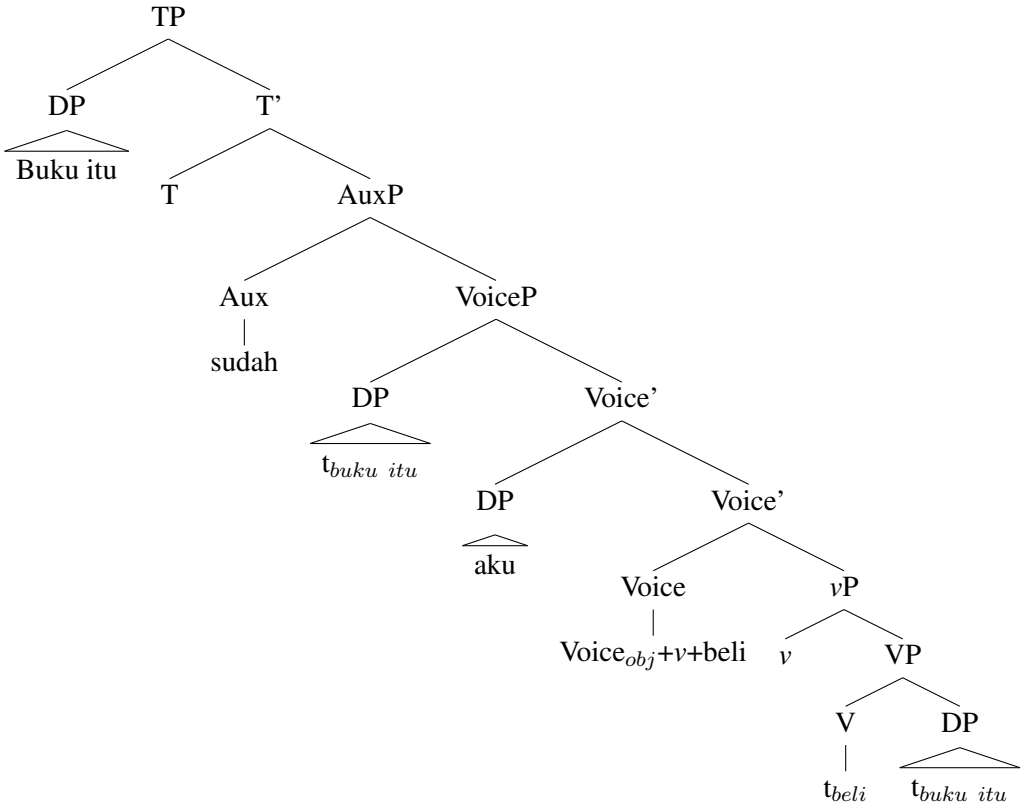
4.2. VoiceP as a phase: syntactic derivations

Here, I adopt the syntactic derivation of object voice employed in Aldridge (2008) and Cole et al. (2008). In line with these accounts, I take VoiceP to be a phase, also a stance adopted across contemporary cross-linguistic analyses (Wurmbrand and Shimamura 2017, Choi and Harley 2019). I extend analysis of phasehood in Indonesian and Javanese from Sato (2008) to VoiceP, replacing vP as the phase. A phase boundary demarcates the point at which all of the existing syntactic deriva-

tion in the complement of the phase head proceeds to phonological and semantic interpretation. The complement of the phase head is rendered immobile to further syntactic operations (Chomsky 2004). By the Phase Impenetrability Condition, the only elements available for further syntactic operations are the head of the phase and any material in the edge of the phase.

Following Legate (2014), I implement the below derivation of the sentence (8a). I derive (24) as follows, first considering the VoiceP phase. In line with the proposal put forth by Aldridge (2008), the Voice$_{obj}$ head has an EPP feature that attracts the theme argument from the complement of V up to the highest Spec,VoiceP position; the theme argument, but not the agent argument, is in the c-command domain of the Voice head and thus available to be attracted into the Spec,VoiceP position to satisfy the EPP. Here, I assume multiple specifiers. Again following Legate (2014) and Aldridge (2008), the Voice$_{obj}$ head assigns inherent Ergative case to the agent *aku*. The verb moves into *v* and then into Voice, following standard analyses like that of Cole et al. (2008); following Legate (2014), I keep *v* and Voice as distinct heads with separate projections. The theme argument receives Nominative case from T and moves into Spec,TP, the surface subject position, to satisfy the EPP; thus, the theme argument moves into the position that the control and indefinite-theme diagnostics of section 3 have evidenced.

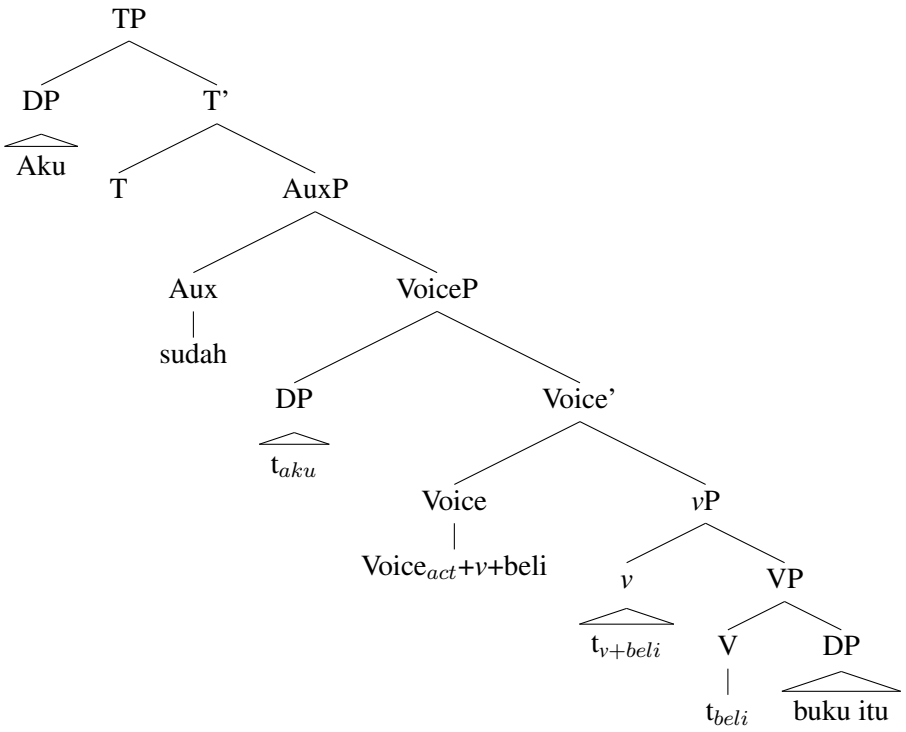
(24) Buku itu sudah aku beli.
book DET PRF 1.SG buy
'I have bought the book.'



In the active-voice correlate, I have the derivation in (25). Crucially, the Voice$_{act}$ head does not attract the theme up into the highest specifier position of VoiceP. This difference can be formally represented in the featural makeup of the Voice heads for active and object constructions;

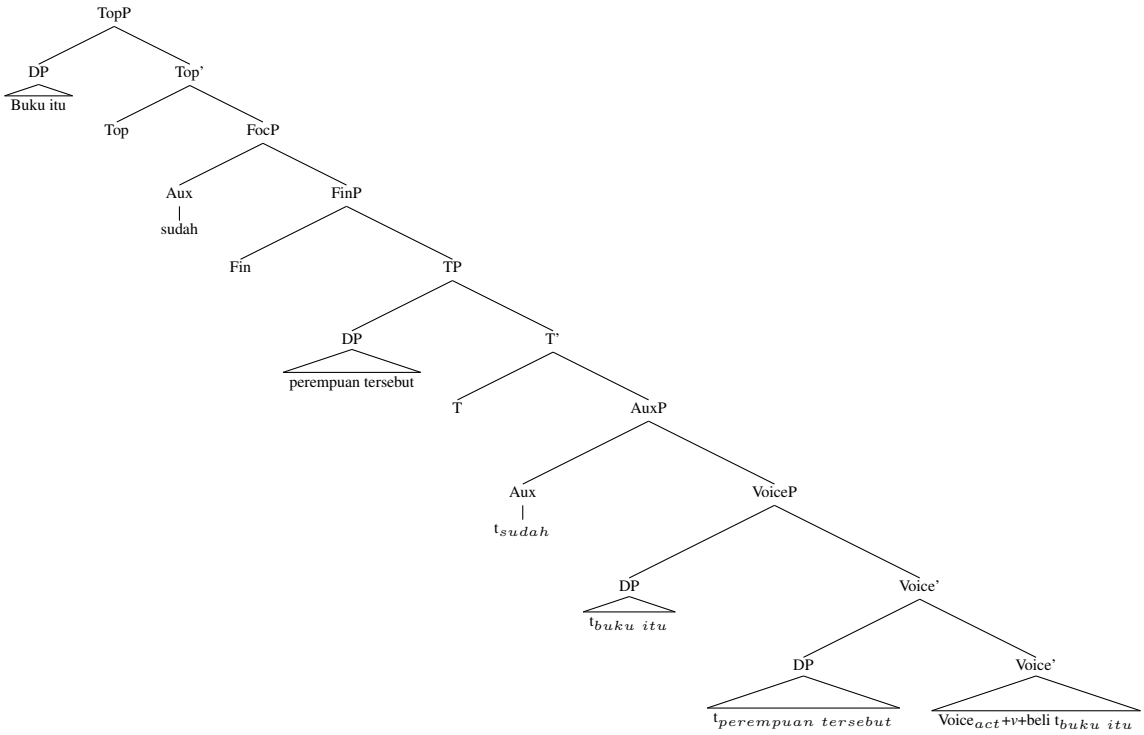
Aldridge (2008), for instance, does so with an EPP feature on Voice$_{obj}$ that does not appear on Voice$_{act}$. Instead, the Voice$_{act}$ head assigns Accusative case to the theme argument. Then only the agent argument is outside of the complement of the phase head (Voice), making the agent the one argument available to proceed up to Spec,TP. The agent argument, not receiving case from the Voice head as it did in the object-voice construction, receives Nominative case from T and moves into Spec,TP to satisfy the EPP.

(25) Aku sudah beli buku itu.
1.SG PRF buy book DET
'I have bought the book.'



Provided sentence (26), I thus have the following derivation. Recall from 3.1 that the verbal projection in stem-active sentences permit, by way of agreement or some other formal feature representation, extraction of the internal argument. I remain neutral on the theoretical account of this extraction. The theme *buku itu* has a Topic feature and, as indicated by the stem-active construction, is able to undergo movement out of the verbal projection to the highest specifier of the VoiceP phase before moving into the Spec,TopP position.

(26) Buku itu sudah perempuan tersebut beli.
book DET PRF girl DEM buy
'That girl has bought the book.'



4.3. Object-voice agents and phonological domains

Taking the derivation of Indonesian object voice as in (24), the agent and the verb are obligatorily adjacent in the object voice. I now consider the basis for restrictions on object-voice agents: why they must be sufficiently prosodically light. Previous prosodic accounts of Austronesian object-voice have proposed that the agent and the verb form a single phonological phrase. Such proposals have come forth for Acehnese (Durie 1984) and Balinese (Clynes 1995).

Guilfoyle et al. (1992) consider pronouns and pronoun substitutes to occupy the determiner (D) head in the specifier position of the highest verbal projection before left-adjoining to the verb in order to receive case. The verb is claimed to have raised to T. This derivation could not account for sentences such as (24) or (26), where there are auxiliaries positioned below T but above the verbal projection. Furthermore, it is unlikely that such an account would hold with an agent like *guru-ku*, which already is a morphological complex hosting a clitic within a larger DP. An analysis in this form cannot account for the distribution of EJI object-voice agents.

Legate (2014) and Arka (2003) provide evidence from Acehnese and Balinese, respectively, against a head-adjoining account for the object voice. For instance, Balinese allows coordinate structures to be object-voice agents that need not be adjoined to the verb.

Madurese and Javanese, both spoken around East Java, also permit non-pronoun (substitute) agents in the object voice. In particular, they permit complexes containing determiner heads within themselves, challenging an account of object-voice agents on the basis of the agent being just a determiner head that head-adjoins to verbs.

(27)a. *Madurese*
Hasan e-kekeq burus jhuwa.
Hasan OV-bite dog DEM
'The dog bit Hasan.' Davies 1999; 2

b. *Javanese*
Hasan di-cokot asu iku.
Hasan OV-bite dog DEM
'The dog bit Hasan.' Davies 1999; 5

With the evidence presented above, the object-voice agent can permit a pronoun or a non-pronoun. The findings in (23), in which *adik-ku* was an acceptable object-voice agent but its minimally different counterpart *adik saya* was a degraded one, point to a condition on object-voice agents such that the agents are sufficiently prosodically light. With the battery of syntactic and information-structural tests in this paper, I find that syntax alone cannot account for the distribution of EJI object-voice agents. Thus, the distribution of agents in the object voice becomes a question of what agents can pair with a verb to form a sufficiently small phonological domain. The granular phonological criteria as to what can comprise this domain in EJI are left for future work. At this stage, this project has motivated the following preliminary sketch of the prosodic restrictions on the object-voice agent in EJI:

(28) Proposed Object-Voice Agent Criterion
In EJI, the agent and the verb must form a sufficiently small phonological domain.

While *guru-ku* can form a sufficiently small phonological domain with the object-voice verb, it appears from this paper that DPs such as *perempuan tersebut* fail to form such a domain with the object-voice verb. The distribution of object-voice agents is syntactically demarcated by the phase architecture of the VoiceP, and prosody must be taken into consideration to most robustly account for the possibilities in EJI.

It then may be the case that prosodically light non-pronouns in EJI are able to cliticize onto the verb form, and this cliticization prevents the intervention of other material. Such behavior would resemble N-bonding in Malagasy, by which the agents in non-active constructions are morphophonologically attached to the verb (Travis 2005). I look to future studies of Austronesian prosody to guide a more granular account of the EJI facts, in relation to recent work in head-head adjacency and (pseudo-)noun incorporation (Levin 2015); or of Contiguity Theory (Richards 2016, Branan 2018): a cross-linguistic framework that places restrictions on phonological boundaries between syntactic probes and goals. In the understanding of EJI object voice by which the agent receives case from the Voice$_{obj}$ head, the probe-goal relationship between the agent and the Voice-*v*-Verb complex may be ripe for such an analysis.

5. Discussion and conclusion

In this paper, I have considered the distribution of the object voice in EJI, and this project's findings present challenges to existing accounts of Indonesian voice configurations while also enriching the typology of Austronesian voice. This account complicates formal typologies of object voice and has implications on the broader program of charting the voice configurations of Austronesian languages and their varieties.

Nomoto (2021) provides an agent hierarchy that describes the possibilities for the agent DP in object-voice constructions:

(29) 1st/2nd clitic pronouns > 3rd clitic pronouns > free pronouns > pronoun substitutes > kin terms > proper names > indefinites > definites > covert

Whereas the most conservative varieties, like standard Indonesian, restrict agent DPs to the first three or four categories within this hierarchy, numerous varieties of Indonesian as well as other Western Austronesian languages are positioned further to the right along this hierarchy, permitting a wider variety of agent DP types in the object voice. At first glance, EJI appears to be positioned firmly near the right extreme of the hierarchy, as definite agents like *perempuan tersebut* appear to be acceptable, as in (8c). On further consideration, however, the stem-active topicalization of (8c) calls to question whether the superficial word order in (8c) is indeed indicative of the object voice. The data in section 4 affirms that some definite agents—like *guru-ku*—are indeed permitted in the object voice in EJI. Nevertheless, I present these findings to complicate the assumption that an auxiliary preceding an agent necessarily indicates the object voice.

Further, I present an open question on the structure of the implicational hierarchy. While languages like Balinese permit indefinite object-voice agents but not definite ones, I find a mirror image in EJI. Thus far, object-voice agents in EJI are disallowed from being indefinite, even when their prosodic weight is ostensibly less than acceptable definite alternatives like *guru-ku*.

(30) *Kue itu sudah anak makan.
cake DET PRF child eat
'A child ate the cake.'

This mirror-image configuration challenges the structure of the implicational hierarchy and demands that future work investigate this typology, also reconciling the categorial restrictions presented in Nomoto (2021) with the prosodic restrictions motivated in this project.

This work highlights an implication in EJI morphosyntax: the auxiliary-agent word ordering is necessary but not sufficient for determining object-voice status in EJI; a well-formed sentence like (8c), with auxiliary-agent word ordering but an agent that fails to form a sufficiently small phonological domain with the verb, is actually not an instance of object voice.

This paper invites numerous lines of future research. With substantial language contact throughout Indonesia, precise accounts of object voice in other languages and varieties—particularly a granular account of the Arekan Javanese dialect—will shed light on how EJI object voice may be a mix of Standard Indonesian and local Javanese characteristics. Thus far, this discussion appears to be productive. While Standard Indonesian does not permit definite or indefinite non-pronoun agents in the object voice, Javanese permits both; and EJI appears to permit just one of the two: definite agents. Furthermore, an in-depth characterization of EJI prosody will refine the syntactic-phonological analysis of EJI object-voice agent distributions. In charting the possibilities of object-voice arguments in EJI and contextualizing the account within a broader typological discussion, an increasingly rich profile of Austronesian voice comes into view.

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