SUCCESSIVE CYCLICITY AT THE SYNTAX-MORPHOLOGY INTERFACE

EVIDENCE FROM STANDARD INDONESIAN AND KENDAL JAVANESE

Abstract: This paper proposes a new analysis of the distribution of the active voice morphology in Standard Indonesian and Kendal Javanese. Specifically, an NP undergoes movement into the edge of *v*P to check and delete the D-feature of *v*. This deletion, in turn, blocks the active voice prefix from being inserted under *v*; its null counterpart is inserted instead as the elsewhere vocabulary item. I compare this analysis with two recent analyses presented by Cole et al. (2008) and Aldridge (2008). I point out empirical and typological problems with these analyses that are naturally resolved under our analysis. The proposed analysis lends support for the role of *v*P phases (Chomsky 2004) at the syntax-morphology interface and yields a new understanding of deletion as the failure of vocabulary insertion (Harley 2005).

1. Introduction

In this paper, I present a new analysis of the distribution of the active voice/AV morphology in certain dialects of Indonesian and Javanese within a phase-theoretic approach (Chomsky 2000, 2004) to the syntax-morphology interface, coupled with certain key assumptions of the framework of Distributed Morphology (Halle and Marantz 1993). It is known since Cole

and Hermon (1998) (see also Saddy 1991) that, in Malay/Indonesian, the movement of an NP across a verb results in the obligatory deletion of the AV prefix *meN−* from the verb. I propose that this "deletion" is a two-step process. The moved NP enters into the Spec-Head D-feature checking relation in the syntax with its local *v* head, as required by the Phase Impenetrability Condition/PIC (Chomsky 2000, 2004). Since the D-feature of the *v* is uninterpretable, it is erased upon checking, changing the feature content of the *v* head. This change, in turn, blocks the insertion of *meN−* under *v* in the post-syntactic morphological component. Instead, its null counterpart $Ø_{meN-}$ is inserted as the elsewhere vocabulary item. I compare this analysis with two recent alternative accounts within Phase Theory proposed by Cole et al. (2008) and Aldridge (2008). I point out empirical and typological problems with these analyses that are naturally resolved under our proposed analysis.

This paper is organized as follows. In sections 2 and 3, I provide data from Standard Indonesian and Kendal Javanese to illustrate the generalization due to Cole and Hermon (1998) that the movement of an NP across an active verb results in the deletion of the otherwise obligatory AV prefix from the verb. In section 4, I propose a new analysis of this generalization within Phase Theory coupled with the Distributed Morphology framework, according to which the regular insertion of the active voice prefix under *v* is blocked in the post-syntactic morphological component due to the D-feature checking between the moved NP and *v*. In

section 5, I compare this analysis with two recent alternative analyses proposed by Cole et al. (2008) and Aldridge (2008), who both attempt to account for the AV deletion in Indonesian from an Austronesian perspective, as informed by recent minimalist inquiry into the Philippine-type voice system in Tagalog. I point out problems with these alternatives that concern Case agreement, (the absence of) one-to-one correspondence between voice morphology and argument structure, and a typological correlation between word order and ergativity and show that our analysis naturally resolves these problems. Section 6 compares our analysis further with other accounts resorting to NP Accessibility (Keenan and Comrie 1977), Relativized Minimality (Soh 1998), *pro*(Voskuil 2000), and antipassives (Fortin in press). Section 7 is the conclusion.[1]

2. Active Voice Morphology in Standard Indonesian

In this section, I first review data from Standard Indonesian to illustrate Cole and Hermon's (1998) generalization about the distribution of the AV prefix *meN−*.

Cole and Hermon (1998) establish generalization (1) for a dialect of Malay used by educated speakers in Singapore. They note that this generalization also holds for Indonesian.

(1) The obligatory omission of *meng−* with verbs that would otherwise permit *meng−* indicates the movement of an NP argument over the *meng−* + verb.

The AV prefix *meN−* takes one of the phonologically conditioned allomorphs in (2a-e).

(2) a. *meN−* → *meng/menge* (if the stem starts with a, e, g, h, i, o, u)

b. *meN−* → *mem* (if the stem starts with b, f, p, v)

c. *meN−* → *men* (if the stem starts with c, d, j, t, z)

d. *meN−* → *men/meny* (if the stem starts with s)

e. *meN−* → *meny* (if the stem starts with k, l, m, n, v, w, y)

One caveat is in order. Judgments reported below are based on what my consultants consider as formal/Standard Indonesian. The same judgments may or may not hold for other (colloquial) varieties of Indonesian. See Cole et al. (2008) for much relevant discussion.

Let us now illustrate (1) with A′-movement, A-movement, and the movement of an NP vs. non-NP in turn. Firstly, examples (3a, b) and (4a, b) show that *wh*-movement and relativization cause *meN−* deletion from the verb within their extraction path.

(3) a. Siapa$_i$ Bill (***mem**)-beritahu ibu-nya [$_{CP}$ yang t_i *(**men**)-cintai Fatimah]?

who Bill AV-tell mother-his that AV-love Fatimah

'Who does Bill tell his mother that loves Fatimah?'

b. Apa$_i$ yang Ali (***mem**)-beri t_i kepada Fatimah?

what that Ali AV-give to Fatimah

'What did Ali give to Fatimah?'

(Standard Indonesian; based on Cole and Hermon (1998: 231, 232), their (25a, 27a))

(4) a. [Lelaki$_i$ [$_{CP}$ OP$_i$ yang [t_i *(**mem**)-beli buku itu]]] adik saya.

man that AV-buy book that brother my

'The man who bought that book is my brother.'

b. [Buku$_i$ [$_{CP}$ OP$_i$ yang [John (***mem**)-beli t_i]] itu] menarik.

book that John AV-buy that interesting

'The book that John bought is interesting.'

(Standard Indonesian; based on Cole and Hermon (1998: 233), their (29a, b))

In (3a), the movement of *siapa* 'who' crosses the matrix verb but not the embedded verb. The AV prefix must be deleted from the matrix verb whereas it must not be deleted from the embedded verb. A similar characterization holds for the examples in (3b) and (4a, b).

Secondly, *meN*− deletion is also caused by A-movement, as shown in (5).

(5) Ali_i saya (***men***)-cubit t_i.

Ali I AV-pinch

'I pinched Ali. /Ali was pinched by me.'

(Standard Indonesian; Cole and Hermon (1998: 232), their (28a, b))

On might analyze (5) as topicalizaton, which is an example of A′-movement in languages like English. However, Chung (1976) presents evidence from Equi NP/Control that the preposing of the NPs in (5) involves A-movement. Consider (6a-d).[2]

(6) a. Dia datang untuk ber-cakap-cakap dengan Ali.

he come for Intr-talk-Red with Ali

'He came to talk with Ali.'

b. ?*Saya mem-bawa surat itu untuk teman saya (dapat) (mem)-baca.

I AV-bring letter the for friend my can AV-read

'I brought the letter for my friends to (be able to) read.'

c. Saya mem-bawa surat itu untuk (dapat) di-baca oleh teman saya.

I AV-bring letter the for can Pass-read by friend my

'I brought the letter to (be able to) be read by my friends.'

d.	Saya	mem-bawa	surat	itu	untuk	(dapat)	kau	baca.
	I	AV-bring	letter	the	for	can	you	read

'I brought the letter to (be able to) be read by you.' (Chung (1976: 46, 47))

The contrast between (6a) and (6b) shows that the embedded subject in [Spec, TP] can undergo Equi NP/become PRO while the embedded object cannot. (6c) is a *di*− passive construction. This type of passive takes the order of Neg + Aux + *di*− verb + *oleh* NP. (6c) shows that the derived subject in [Spec, TP] can undergo Equi NP/become PRO. Now, (6d) is our crucial case. This example illustrates a zero passive construction. This type of passive takes the order of Neg + Aux + pronominal subject + (stem) verb in Standard Indonesian (Sneddon 1996; Cole and Hermon 2005). The fact that the derived subject in this construction patterns with the subject of the *di*− passive in its ability to undergo become PRO suggests that the zero passive construction instantiates A-movement. Thus, we can conclude that (5) provides evidence that A-movement causes *meN*− deletion.

Finally, what matters for *meN*− deletion is the movement of an NP across *meN*− verbs. This observation is illustrated by examples (7a-c).

(7) a. Kenapa$_i$ Mary *(**mem**)-beli buku itu t_i?

why Mary AV-buy book that

'Why did Mary buy that book?'

b. [$_{PP}$ Di mana]$_i$ John *(**mem**)-beri Mary buku itu t_i?

at where John AV-give Mary book that

'Where did John give Mary that book?'

c. [$_{PP}$ Kepada siapa]$_i$ Mary *(**mem**)-beri buku itu t_i?

to who Mary AV-give book that

'To whom did Mary give that book?'

(Standard Indonesian; modeled on Cole and Hermon (1998: 231, 232), their (26a-c))

In these examples, the movement of the non-nominal *wh*-phrases does not trigger *meN*−deletion. The active voice prefix is obligatory in this environment.

So far, we have seen examples from Standard Indonesian to illustrate Cole and Hermon's generalization in (1). One question arises here. What is the nature of this "*meN*−deletion" as governed by this generalization? More precisely, what mechanism underlines this phenomenon? I answer this question in section 4. Before doing so, however, I show in the following subsection that the same generalization also holds for a dialect of Javanese.

3. Active Voice Deletion in Kendal Javanese

In this section, I explore the distribution of the AV morphology in Javanese. I base my observations in this subsection entirely on the dialect of Javanese spoken by my three consultants. My primary consultant is a native bilingual Indonesian-Javanese speaker from Kendal, a *kabupaten* (regency) in the northern division of the province of Central Java in Indonesia, 34 kilometers west from Semarang, the capital of the province of Central Java. I dub this variety Kendal Javanese in this paper for convenience's sake, though this in no way means that there is such a geographically characterizable variety in this area. The judgments reported by my primary consultant were further checked with two other consultants, who are also native bilingual Indonesian-Javanese speakers in Kendal. As we will see shortly, this variety is different from the other varieties of Javanese studied in the literature − Standard Javanese (Conners 2008) and Semarang Javanese (Cole et al. 1999) − with respect to zero passive constructions. Nonetheless, the data discussed below show that Cole and Hermon's generalization in (1) holds for this variety in the same way it does for Standard Indonesian.

As in Standard Indonesian, in (Kendal) Javanese, the movement of an NP across a verb that otherwise must have a nasal prefix that assimilates to the place of articulation of the following consonant causes the obligatory omission of that prefix from the verb. Let us first illustrate this observation with A′-movement in (8a, b) and (9a, b).[3]

(8) a. Sapa$_i$ sing Bill (***ng**)kandha ibu-ne [$_{CP}$ sing t_i ***(ng)**epeli Fatimah]?

who that Bill AV.tell mother-his that AV.hit Fatimah

'Who did Bill tell his mother that hit Fatimah?'

b. Apa$_i$ sing Bill (***ng**)kékke t_i nggo Fatimah?

what that Bill AV.give to Fatimah

'What did Bill give to Fatimah?' (Kendal Javanese)

(9) a. Uwong$_i$ [$_{CP}$ sing t_i **maca/*waca** buku kuwi] adikku.

man that AV.read/read book that brother.my

'The man who read that book is my brother.'

b. Buku$_i$ [$_{CP}$ sing John ***maca/waca** t_i] kuwi mboseni.

Book that John AV.read/read that boring

'The book that John read is boring.' (Kendal Javanese)

To take (8a) for illustration, the movement of the *wh*-phrase *sapa* 'who' crosses the matrix verb but not the embedded verb since it starts from the external argument position of the embedded clause. Thus, the nasal prefix must be deleted only from the matrix verb but must not be deleted from the embedded verb. The same story holds for (8b) and (9a, b).

Although I treat (8a, b) as cases of *wh*-movement on a par with English *wh*-questions for the purposes of the present discussion, they may well be more accurately analyzed as clefted *wh*-questions, consisting of a *wh*-question word in subject position and a headless relative clause in predicate position. This analysis is explicitly argued for by Cole et al. (1999) for Semarang Javanese. The choice between these two analyses does not affect our exposition here since, whichever analysis may be adopted for (8a, b), the movement of a *wh*-phrase (under the *wh*-movement analysis) or the null operator associated with it (under the cleft analysis) moves across the verb that otherwise must have an AV prefix. The same qualification applies for (9a, b), which may well be more properly analyzed as headless relative clause structures.

Let us next consider the effects of A-movement on the morphology of verbs with the otherwise obligatory nasal prefix. Again, as in Standard Indonesian, evidence from zero passive in Kendal Javanese suggests that A-movement causes active voice deletion. Consider examples (10a-d).

(10) a. Buku kuwi$_i$ aku * **maca/waca** t_i. (first person pronominal subject)

book that I AV.read/read

'That book is read by me.'

b. Buku kuwi$_i$ kok * **maca/waca** t_i. (second person pronominal subject)

book that you AV.read/read

'That book is read by you.'

c. Buku kuwi$_i$ d(h)ewéke * **maca/waca** t_i. (third person pronominal subject)

book that he/she AV.read/read

'That book is read by him/her.'

d. Buku kuwi$_i$ Esti * **maca/waca** t_i. (independent NPs)

Book that Esti AV.read/read

'That book is read by Esti.' (Kendal Javanese)

In these examples, the movement of the NP *buku kuwi* 'that book' crosses the verb 'read', resulting in the deletion of the nasal prefix from the verb. This yields the passive variant *waca* instead of the active voice variant *mawa*. It may be tempting to analyze these examples as topicalizaton, a case of A′-movement, but evidence from Equi NP/control suggests that these examples involve A-movement. Consider (11a-d).

(11) a. dhewéke teka arep ngomong karo Ali.
he come will talk with Ali.
'He will come to talk with Ali.'

b. *Aku nggowa surat kuwi nggo kancaku (isa) waca.
I bring letter that for friend.my can read
'I brought the letter for my friends to be able to read.'

c. Aku nggowa surat kuwi nggo di-waca karo kancaku.
I bring letter that for Pass-read by friend.my
'I brought the letter to (be able to) be read by my friends.'

d. Aku nggowa surat kuwi nggo kowe waca.
I bring letter that for you read
'I brought the letter to (be able to) be read by you.' (Kendal Javanese)

The contrast between (11a) and (11b) shows that the embedded subject can but the embedded object cannot undergo Equi NP/become PRO. (11c) illustrates the Javanese analogue of the canonical passive construction in (Standard) Indonesian: it takes the *di*-verb form followed by *karo* 'by' and the Agent NP. (11c) shows that the derived subject in [Spec, TP] can become PRO. Our crucial example is (11d). This example instantiates the (Kendal) Javanese analogue

of the zero passive construction in (Standard) Indonesian, which takes a (pronominal) subject followed by the stem verb form. The fact that the derived subject *surat kuwi* 'that letter' in (11d) can become PRO indicates that (11d) involves A-movement into [Spec, TP]. Accordingly, we can conclude that A-movement in Kendal Javanese causes the AV deletion.

As stated above, Kendal Javanese is different from Semarang Javanese and Standard Javanese with respect to Zero Passive. Cole et al. (1999) observe that this construction does not exist in Semarang Javanese based on the ill-formedness of (12a-c) in this dialect.

(12) a.* Buku kuwi aku waca.
book this I read
'This book is read by me.'

b.* Asu-ne Budi kowe pateni.
dog-NE Budi you kill
'Budi's dog was killed by you.'

c.* Siti Budi kepruk.
Siti Budi hit
'Siti was hit by Budi.' (Semarang Javanese: Cole et al. 1999: 91)

This judgment clearly does not hold for Kendal Javanese, as the well-formedness of the examples in (10a-d) show. Thus, Kendal Javanese provides crucial evidence, which would be unavailable from the investigation of Semarang Javanese alone, that A-movement, as well as A′-movement, triggers the deletion of the active voice morphology.

Incidentally, Kendal Javanese is also different from Standard Javanese. Although both varieties posses the zero passive construction, the two dialects diverge with respect to restrictions imposed on the subject in zero passive. Conners (2008) observes that this construction is limited to first and second person clitics in Standard Javanese. He (p. 182) remarks that "this type of passive is marked by the use of dependent clitic personal pronouns for the first and second person: *tak-*, *kok-*, respectively." This is illustrated in (13a, b).

(13)a. Buku iku tak-jupuk.
book that I-take
'That book was taken by me.'

b. Buku iku kok-jupuk.
book that you-take
'That book was taken by you.' (Standard Javanese; Conners 2008: 192)

Conner's observation does not hold true for Kendal Javanese, because (10c, d) show that the subject position in the zero passive construction can be filled by a third person pronominal or even a full-fledged NP. The question of why Kendal Javanese exhibits this deviation from Standard Javanese is a very important one but I leave this problem for future research, since it is not orthogonal to the purpose of this section.

Let us finally consider the role of the syntactic category in the AV deletion. We observed in section 2 that, in Standard Indonesian, only the movement of an NP across a *meN*−verb causes this deletion. The same observation holds for Kendal Javanese, as shown in (14a-c).

(14)a. Nangapa$_i$ Mary **maca/*waca** buku kuwi t_i ?
why Mary AV.read/read book that
'Why did Mary read that book?'

b. [$_{PP}$ ning endi]$_i$ John ***(ng)**kéi Mary buku kuwi t_i ?
at where John AV.give Mary book that
'At where did John give Mary that book?'

c. [$_{PP}$ Nggo sapa]$_i$ John ***(ng)**kéi buku kuwi t_i ?
to whom John AV.give book that
'To whom did Mary give that book?' (Kendal Javanese)

We have seen thus far that Cole and Hermon's Generalization holds true for Kendal Javanese. The role of Kendal Javanese is important in establishing this point since, unlike Semarang Javanese investigated by Cole et al. (1999), this variety possesses the zero passive construction derived by A-movement and hence provides crucial evidence that A-movement as well as A′-movement causes the AV deletion. I have also pointed out that Kendal Javanese is different from Standard Javanese in the nature of restriction imposed on the subject in this construction: while the subject can be any personal pronoun or even a full NP in the former, it is restricted to a first or second person clitic personal pronoun in the latter.

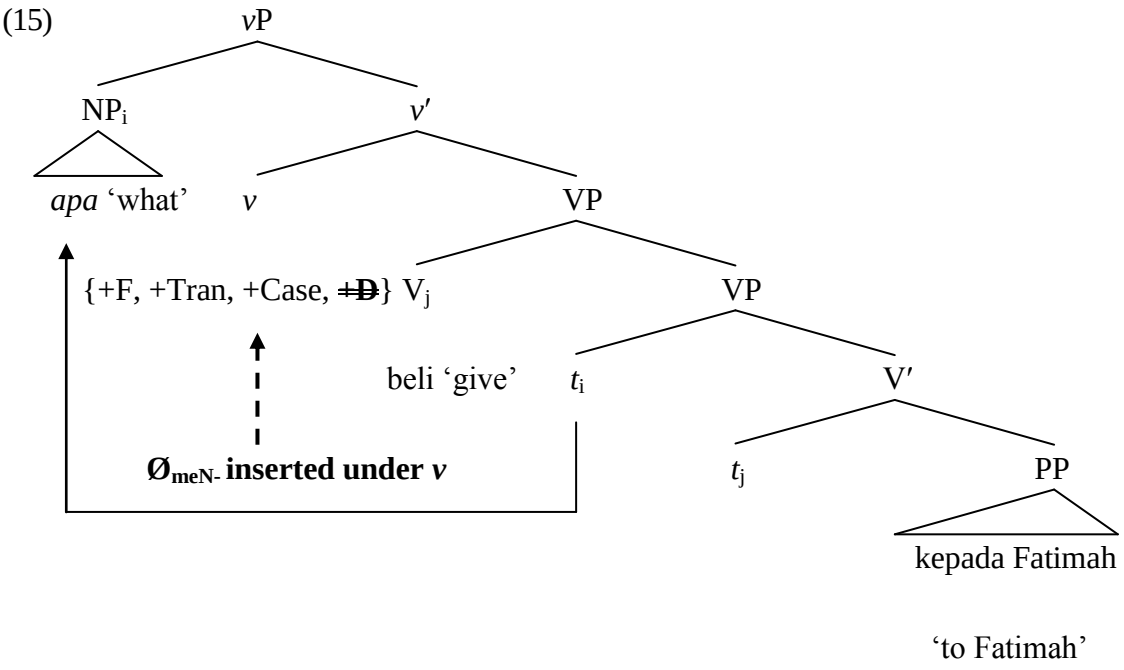
Having established the point above, the next question to ask is what is behind the nasal prefix deletion in Javanese. Cole et al. (1999: 90) leave this question as open, stating that "movement across the verb (perhaps to specifier of VP or to specifier of a functional projection above the verb) licenses the omission of the nasal prefix." Below, I address this question from the perspective of Phase Theory coupled with Distributed Morphology.

4. Locality and "Deletion" at the Syntax-Morphology Interface

Extending Harley's (2005) analysis of *one*-replacement in English, I propose to analyze AV deletion in Standard Indonesian and Kendal Javanese as failure of vocabulary insertion

along the lines of the Distributed Morphology (Halle and Marantz 1993). Let me illustrate this analysis with (15), a partial syntactic derivation for the Indonesian example in (3b).

(15)



In this derivation, the *wh*-phrase *apa* ‘what’ undergoes movement into the edge of *v*P, as required by the Phase Impenetrability Condition/PIC. This condition is stated in (16), where “the edge of the phase head H” includes any specifiers of, and any adjuncts to, H.

(16) Phase Impenetrability Condition (Chomsky 2000: 108)

In phase α with head H, only H and its edge are accessible to operations outside α.

The moved NP in (15) undergoes D-feature checking with *v*. This checking results in the erasure of the uninterpretable D-feature of the *v* (Chomsky 1995). This checking relation within the syntax, I claim, is the source of the AV deletion. Let us suppose that Standard Indonesian has (as a partial list) two vocabulary items in (17i, ii).

(17) i. *meN–* ← → [*v* ___ [+D]] (specific case)

ii. $Ø_{meN-}$ ← → [*v* ____ […]] (elsewhere case)

As illustrated in (16), the D-feature is deleted from the *v* head due to the movement of the *wh*-phrase into [Spec, *v*]. As a result, when the syntactic derivation is sent to the post-syntactic morphological component, *meN–* cannot be inserted under the *v* since this morpheme can only be inserted under *v* associated with some feature bundles including D-feature (17i). Thus, the less specific elsewhere null variant $Ø_{meN–}$ is inserted instead in compliance with the vocabulary specification in (17ii).

One question arises here. If the AV deletion is triggered by the D-feature checking between the moved NP and its local *v*, why can't external arguments like *siapa* 'who' in (3a) (or *sapa* 'who' in (8a)) check the D-feature of its local *v* head in situ to cause *meN–* deletion? An answer to this question immediately suggests itself once we recognize the distinction

between Internal Merge and External Merge. Chomsky (2004) observes that Merge comes free in two forms: when X is merged with Y, X can be either external to Y (External Merge) or part of Y (Internal Merge). Chomsky further hypothesizes that External Merge is associated with argument structure whereas Internal Merge is associated with everything else (scope, specificity, definiteness, topic, etc). It is clear that the uninterpretable D-feature of *v* is not related to argument structure but instead is a formal feature of phase heads to drive a purely mechanical computation driven by (16). It follows that the External Merge of *siapa* 'who' cannot enter into the D-feature checking relation required by the syntactic computation.

The proposed analysis also captures the category sensitivity of the AV deletion in Indonesian and Javanese. The movement of non-nominal phrases does not trigger deletion because they either lack D-features to be checked against *v* heads (in the case of adverbial phrases; see (7a) and (14a)) or their D-features do not percolate onto their dominating PPs to be checked against local *v* heads (in the case of PPs; see (7b, c) and (14b, c)).

As pointed out by a reviewer, our analysis is similar to Rackowski and Richards' (2005) analysis of the voice-movement correspondence in Tagalog. Assuming that Tagalog is a nominative-accusative language, they propose that the voice morphology realized on a verb is the PF reflex of the Case-agreement relation between *v* and the NP that is attracted to its specifier by the EPP feature. See Chung (1994, 1998) and Pearson (2005) for analyses, quite

similar to Rackowski and Richards', for *wh*-agreement in Chamorro and the voice-movement interaction in Malagasy, respectively. Cole et al. (2008) have recently proposed an extension of this "*wh*-agreement" analysis to the AV deletion in Standard Indonesian and many varieties of Malay/Indonesian.[4] In section 5.1, I review this Case-agreement analysis and provide arguments that this analysis is hard to extend to Standard Indonesian and Kendal Javanese at least in the form Rackowski and Richards and Cole et al. have presented it.

The same reviewer also points out that our analysis makes one important prediction. Specifically, DPs *other than* direct objects should also be able to trigger the deletion of the AV morphology. This is because our analysis states that the deletion occurs as long as an NP moves across an active voice verb marked with *meN*−/the nasal prefix, irrespective of the grammatical/thematic role of the moved NP (e.g. direct object, subject, indirect object, etc.). This prediction is indeed borne out by the following two facts. First, (3a) and (8a) show that the raising of the external argument/subject in an embedded clause triggers the AV deletion on the matrix verb. This is exactly the pattern our analysis predicts since the NP enters into the Spec-Head D-feature checking relation with the matrix *v* in compliance with the PIC before it reaches the matrix [Spec, CP]. This checking deletes the uninterpretable D-feature from *v*, which, in turn, is realized as the insertion of the null prefix in the morphological component.

Second, (18b, c) from Standard Indonesian and (19b, c) from Kendal Javanese show that both the second Theme object and the first Goal object in applicatives both trigger the AV deletion.

(18) a. Kamu ***(mem)**-beli-kan ibu-mu bunga.
you AV-buy-Appl mother-your flower
'You bought your mother a flower/flowers.'

b. Apa$_i$ yang kamu **(*mem)**-beli-kan ibu-mu t_i?
what that you AV-buy-Appl mother-your
'What did you buy your mother?'

c. Siapa$_i$ yang kamu **(*mem)**-beli-kan t_i bunga?
who that you AV-buy-Appl flower
'Who did you buy a flower/flowers?' (Standard Indonesian)

(19)a. Kowe **nukokke/*tuku** ibu-mu kembang.
you AV.buy.Appl/buy mother-your flower
'You bought your mother a flower/flowers.'

b. Apa$_i$ sing mok ***nukokke/tukokke** ibu-mu t_i?
what that you AV.buy.Appl/buy.Appl mother-your
'What did you buy your mother?'

c. Sapa$_i$ sing mok ***nukokke**/**tukokke** t_i kembang?
who that you AV.buy.Appl/buy.Appl flower
'Who did you buy a flower/flowers?' (Kendal Javanese)

Once again, the pattern observed here naturally falls out from our analysis. The AV deletion occurs in the morphological component as long as some NP moves across a verb otherwise obligatorily marked with an AV prefix, no matter what thematic function the NP may bear.

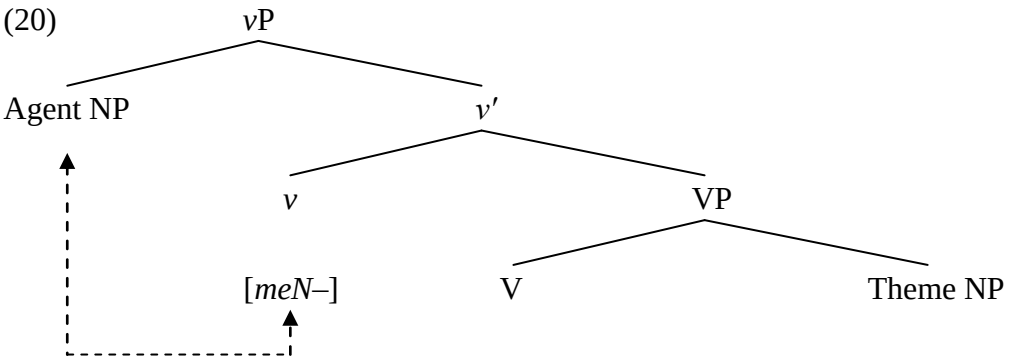
5. Alternative Analyses within Phase Theory from a Pan-Austronesian Perspective

In this section, I compare our analysis with two recent alternative analyses of the AV deletion in Standard Indonesian proposed by Cole et al. (2008) and Aldridge (2008). The two analyses, both couched within Phase Theory, have their goal to analyze this phenomenon within the larger theoretical context of comparative Austronesian syntax by drawing on recent minimalist research on Tagalog and Malagasy. I show that both Cole et al.'s and Aldridge's analyses are faced with different empirical/typological problems that are naturally resolved under our D-feature checking analysis.

5.1. *Cole et al.'s (2008) Case-Agreement Analysis*

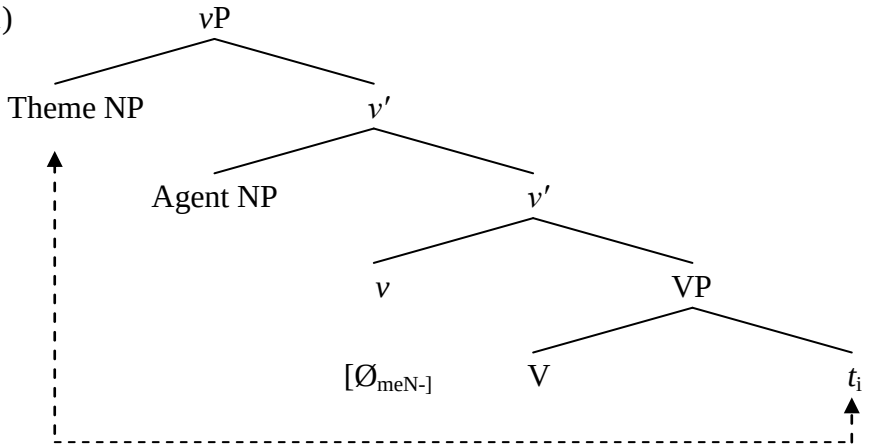
Cole et al. (2008) propose a Case-Agreement analysis of *meN–* deletion in Standard Indonesian. Adopting the phase-theoretic analysis of the symmetric voice system of Tagalog presented by Rackowski and Richards (2005), Cole et al. propose that the AV prefix *meN–* and the object voice $Ø_{meN-}$ in Standard Indonesian are identical with analogous voices (Actor and Theme Voices, respectively) in Tagalog. Cole et al.'s analysis is illustrated in (20) and (21).

(20)



Nominative Case Agreement

(21)



Accusative Case Agreement

In (20), the presence of *meN–* indicates that the Agent argument is in the highest specifier of *v*P and that no object shift has applied. Cole et al. analyze this movement as due to nominative Case agreement. Thus, the ban against extracting a non-Agent NP such as a Theme NP in (20) across *meN–* falls out from the PIC. In (21), the absence of *meN–* ($Ø_{meN–}$) indicates that object shift has applied, and that the Agent NP is not in the highest specifier of *v*P. Cole et al. analyze this movement as due to accusative Case agreement. Cole et al. (p. 1503) assume the definition of *closest* in (22) from Rackowski and Richards (2005: 579).

(22) A goal α is the closest one to a given probe if there is no distinct goal β such that for some X (X a head or maximal projection), X c-commands α but does not c-command β.

Cole et al. use this definition in order to ensure that only the highest specifier of the *v*P phase is accessible to operations at the CP phase. Under this definition, it is the Theme NP in (21) that is closest to the probe C. Thus, only this NP is moved into [Spec, CP] at the CP phase.

Aldridge (2008) points out two empirical problems with Cole et al.'s (2008) analysis. One problem concerns cases that would involve the nominative agreement of an accusative-marked NP with finite T under Cole et al.'s assumptions. Consider examples (23a, b).

(23) a. Buku$_i$ [$_{CP}$ OP$_i$ yang [$_{TP}$ ia/dia **tidak akan** [$_{vP}$ t_i Ø-baca t_i]] menarik.

Book that 3rd.sg Neg will read interesting

'The book that he/she will not read is interesting.'

b. Buku [$_{CP}$ OP$_i$ yang [$_{TP}$ t_i **tidak akan** [$_{vP}$ t_i ia/dia Ø-baca t_i]] menarik.

Book that Neg will 3rd.sg read interesting

'The book that will not be read by him/her is interesting.'

(Standard Indonesian)

(23a) and (23b) instantiate active and zero passive constructions, respectively. This is evidenced by the relative order of a pronominal subject with respect to negation and auxiliary phrases: the pronominal subject precedes *tidak akan* in (23a) whereas the reverse order holds in (23b). The problem with Cole et al.'s analysis posed by these examples is the following. Under their analysis, in the derivation of (23b), the null operator OP agrees with *v* in the Accusative Case within the *v*P phase since Ø$_{meN-}$ indicates that the Theme NP has undergone object shift into the specifier of *v*P for Accusative Case. Crucially, however, at the CP phase, the same operator enters into a second Case agreement relation with T, which assigns Nominative Case to it. The derivation of (23b) then should crash because the OP obtains conflicting information as to its case features. Alternatively, the derivation should be blocked

by the Last Resort Condition (Chomsky 1986, 1995), which bans movement of a single NP from a Case position to another Case position, as illustrated in (24a, b).

(24)a. He_i seems to Mary [$_{TP}$ t_i to be ill].

b.* He_i seems to Mary [$_{CP}$ that t_i is ill].

This problem does not arise under our analysis, which takes the motivation for the movement of an NP to be D-feature, not Case. Under our analysis, in (23b), the OP first undergoes movement into [Spec, *v*] to check and erase the uninterpretable D-feature of *v*. The OP undergoes further movement into [Spec, T] and then into [Spec, C] to check and erase the D-features of T and C. This multiple checking is possible because the D-feature of an NP is interpretable and hence is not subject to erasure upon checking (Chomsky 1995).

The other problem with Cole et al.'s analysis noted by Aldridge (2008) concerns the lack of one-to-one correspondence between voice and argument structure. To illustrate, compare (18a-c) and (19a-c) with (27a-c) from Tagalog. (18a-c) and (19a-c) are repeated here as (25a-c) and (26a-c), respectively.

(25) a. Kamu ***(mem)-**beli-kan ibu-mu bunga. (=18a)

you AV-buy-Appl mother-your flower

'You bought your mother a flower/flowers.'

b. Apa$_i$ yang kamu **(*mem)**-beli-kan ibu-mu t_i? (=18b)

what that you AV-buy-Appl mother-your

'What did you buy for your mother?'

c. Siapa$_i$ yang kamu **(*mem)**-beli-kan t_i bunga? (= 18c)

who that you AV-buy-Appl flower

'Who did you buy a flower/flowers?'

(26)a. Kowe **nukokke/*tuku** ibu-mu kembang. (=19a)

you AV.buy.Appl/buy mother-your flower

'You bought your mother a flower/flowers.'

b. Apa$_i$ sing mok ***nukokke/tukokke** ibu-mu t_i? (=19b)

what that you AV.buy.Appl/buy.Appl mother-your

'What did you buy your mother?'

c. Sapa$_i$ sing mok ***nukokke/tukokke** t_i kembang? (=19c)

who that you AV.buy.Appl/buy.Appl flower

'Who did you buy a flower/flowers?'

(27) a. B-in-ili-**Ø** ng bata ang tela sa palengke para sa nanay.
Asp-buy-Acc CS child ANG cloth Dat market for Dat Mother
'The child bought the cloth at the market for Mother.'

b. **I**-b-in-ili ng bata ng tela sa palengke ang nanay.
Obl-Asp-buy CS child CS cloth Dat market ANG Mother
'The child bought (the) cloth at the market for Mother.'

(Tagalog; Rackowski and Richards 2005: 566)

(25b)/(26b) involve extraction of the Theme object whereas (25c)/(26c) involve extraction of the Applicative/Goal object. In both cases, the null variant $Ø_{meN-/}$the stem without the nasal prefix is employed. In other words, this single morpheme signals the object shift of either the Theme or Applicative arguments into the highest specifier of *v*. Crucially, however, this one-to-many correspondence between voice and argument structure does not hold in Tagalog. As shown in (27a, b), this language has a different morpheme for the object shift of a Theme and an Applicative argument (Ø and *I*, respectively). This difference between Standard Indonesian/Kendal Javanese and Tagalog is detrimental to Cole et al.'s analysis because the most important claim of their analysis is that Standard Indonesian instantiates the Philippine-type voice system in the syntax and morphology of the active and object voice. The contrast

between the two languages observed above, therefore, suggests that Cole et al.'s attempt to analyze *meN−* deletion as a language-particular case of the Tagalog-type voice system is difficult to sustain at least in the present form. Our analysis, however, neatly explains why this one-to-many correspondence between voice and argument structure comes about in Indonesian. Recall crucially that under our analysis, $Ø_{meN-}$ is not the object voice marker but rather the elsewhere vocabulary item that is inserted under *v* as the result of the D-feature checking between the *v* and the NP moved to its specifier, as illustrated in (15). This means that $Ø_{meN-}$ can be inserted under the *v* node in all miscellaneous cases that involve the extraction across otherwise active voice verbs of non-externally merged phrases, including Theme and Applicative arguments. Thus, one-to-many correspondence relation here is exactly what our analysis correctly predicts.

5.2. *Aldridge's (2008) Antipassive Analysis*

Aldridge (2008) proposes that the feature bundle inserted under *v* and spelled-out as *meN−* in Indonesian does not carry an EPP/D-feature. Aldridge attributes this property to the historical remnant of its origin as an antipassive marker found in Tagalog/Malagasy. Her analysis for *meN−* deletion is illustrated in (29) for the data in (28a, b).

(28) a. Siapa$_i$ yang t_i **mem**-beli buku-nya?

who that AV-buy book-Def

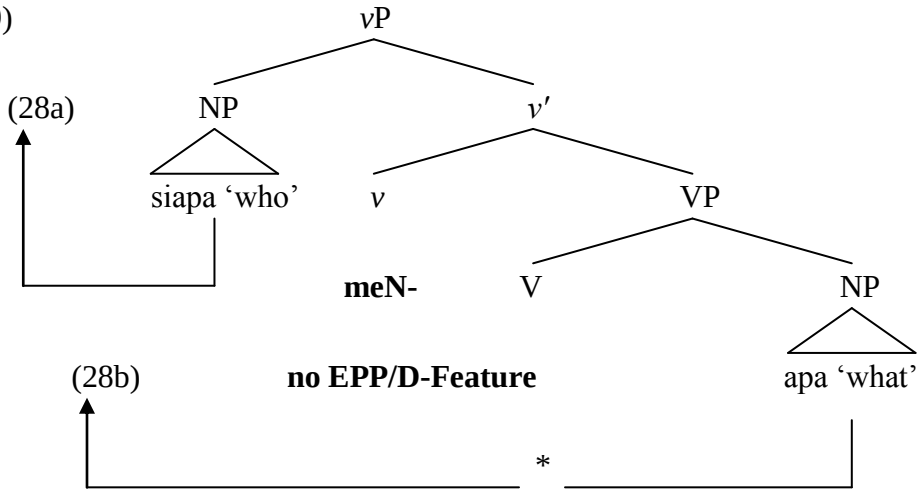
'Who bought the book?'

b. *Apa$_i$ yang Ali **mem**-beli t_i ?

what that Ali AV-buy

'What did Ali buy?' (Aldridge (2008: 1448, 1449))

(29)



Due to the Phase Impenetrability Condition

(Adopted from Aldridge (2008: 1448, 1449), her (19b, 20b))

(28a) results when *siapa* 'who' undergoes movement into [Spec, CP]. The presence of *meN*− under *v* does not affect this movement. (28b) is ungrammatical with this prefix: the direct object *apa* 'what' cannot move to the edge of *v*P to be accessible to operations at the next

phase since *v* spelled-out as *meN−* cannot have the EPP feature. As a result, *apa*, being frozen within the VP, cannot move to [Spec, CP], for the movement would violate the PIC.

One significant issue remains within Aldridge's analysis. Under Chomsky's (2004) conception of the Generalized EPP on phase heads, nothing seems to block transitive *v* heads from being assigned the EPP feature that would enable the movement of a VP-internal element to the *v*P edge. Aldridge attempts to seek a diachronic motivation for the lack of the EPP feature on *meN−* verbs. Specifically, she argues that that *meN−* is a historical remnant of the Malagasy antipassive marker *man−* in that it carries a structural Case feature but lacks the EPP feature. This analysis, however, is inconsistent with a widely known typological observation about morphosyntactic ergativity and word order. It has been acknowledged in the literature (Trask 1979; Mahajan 1994, 1997; see also Anderson 1976 and Manning 1996) that ergative languages tend to be verb-peripheral. Comrie (2008) observes that out of 38 languages with ergative case marking, 34 languages are (S) OV while the remaining 4 languages are VSO/VOS. Polinsky (2009) confirms this observation within the Austronesian family on two grounds. First, none of the Austronesian languages with morphological ergativity in Table 1 is SVO (see also Ball 2007). Second, none of the other SVO Austronesian languages than Indonesian such as Rotuman, Chuukese, and Drehu do not exhibit morphological ergativity. Now, if Indonesian is truly a morphosyntactically ergative language, as claimed by Aldridge,

then Indonesian should not be SVO. However, Chung (2008) argues convincingly that Indonesian is precisely such a language that has pretty much the same derivation as English. This typological problem does not arise under our analysis, however, which is consistent with Chung's proposed characterization of Indonesian as an SVO nominative-accusative language.

6. Other Alternative Accounts

In this section, I compare our proposed analysis with several other existing analyses of *meN*-deletion in (varieties of) Indonesian and the nasal prefix deletion in Javanese, by extension: a) the NP Accessibility-based account, b) Soh's (1998) Relativized Minimality account, c) Voskuil's (2000) *pro*-based account, and d) Fortin's (in press) antipassive account. I show that each of these analyses encounters a particular set of empirical and conceptual problems that are successfully resolved in the present analysis.

4.1. *NP Accessibility-Based Accounts*

Based on a large-scale survey of many western Malayo-Polynesian languages, Keenan and Comrie (1977) observe that only subjects can be relativized in these languages. This observation is echoed in one of the most comprehensive grammars of Indonesian in Sneddon (1996), who notes (p. 286) that "a relative clause can contain any constituent occurring in an

independent clause except the subject, which is identical to the head of the embeddeding noun phrase." The NP Accessibility-based analysis is further articulated by Nakamura (1994) within the minimalist framework, who attempts to derive the subject-only restriction in terms of a global economy principle that essentially forces non-subject arguments to be first promoted to a subject/topic position. Under this analysis, examples that involve extraction of an apparent non-subject argument all involve passivization of this argument into [Spec, TP] prior to movement to [Spec, CP]; the AV morphology is deleted as a natural result of the Passivization. This analysis appears to be particularly suitable for Indonesian because this language has zero passive, as illustrated earlier.

However, there are many arguments presented in the literature that this analysis is untenable for Indonesian and (certain dialects of) Javanese. I review only one argument here from Soh (1998). See also Cole et al. (1999) for the argument that this analysis is untenable for Semarang Javanese. Soh argues against the NP Accessibiity-based account on the basis of the relative position of subjects with respect to aspectual markers, weak crossover effects, long-distance extraction, and the *that*-trace asymmetry. To reconstruct her argument from weak crossover effects, it is well known that a) a pronoun must be c-commanded by a binder and its variable at the surface/derived structure to be construed as a bound variable, as shown by the

contrast between (30a) and (30b) and that b) the trace created by A-movement provides a new binder for a pronoun, as shown in (30c).

(30) a. Who$_i$ t_i saw his$_i$ mother?

b. * Who$_i$ did his$_i$ mother see t_i?

c. [Who$_i$ t_i seems to his$_i$ mother [t_i to have come]]. (Soh 1998: 300)

Then, the passivization-based account predicts that extraction of a non-subject argument should not cause the weak crossover effect. However, as (31b) shows, this prediction is wrong.

(31)a. Ibu-nya$_i$ sayang Ali$_i$.

mother-his love Ali

'His mother loves Ali.'

b.* Siapa$_i$-kah yang ibu-nya$_i$ sayangi t_i?

who-Q that mother-his love

'Who does his mother love?'

c. Siapa$_i$-kah yang t_i di-sayangi ibu-nya$_i$ t_i?

who-Q that Pass-love mother-his

'Who is loved by his mother?'

(Standard Indonesian; modeled on the Malay examples from Soh (1998: 300))

Note that, in the canonical *di*-passive given in (31c), we do not find weak crossover effects. This pattern, therefore, suggests that the movement of *siapa-kah* 'who-Q' in *di*-passives is preceded by the movement to [Spec, TP]. The presence of the weak crossover effect in (31b), therefore, indicates that the subject-only restriction cannot be the proper account for the AV deletion in Standard Indonesian.

4.2. *Soh's (1998) Relativized Minimality-Based Account*

Soh (1998) provides an account of the active voice deletion in Malay in terms of Relativized Minimality (Rizzi 1990). According to this account, the AV marker *meN-*, base-generated in the A′-position within the VP, blocks A′-movement of a phrase across the marker, in violation of the minimality constraint defined as in (32) and (33).

(32) Relativized Minimality

Antecedent Government: X antecedent-governs Y iff

(i) X and Y are coindexed

(ii) X c-commands Y

(iii) no barrier intervenes

(iv) Relativized Minimality is respect (Rizzi 1990: 6-7)

(33) Relativized Minimality: X α-governs Y only if there is no Z such that

(i) Z is a typical potential α-governor for Y,

(ii) Z c-commands Y and does not c-command X. (Rizzi 1990: 6-7)

(3a), for example, is ruled out with the AV marker on the matrix verb because *meN*- blocks A′-extraction of the *wh*-phrase *siapa* 'who' across it, in violation of the Relativized Minimality. Soh's analysis is close to our analysis of the AV deletion. The two analyses both block movement of an NP across the AV verb from independently motivated constraints on syntactic derivation. There is one case, however, where the predictions of the two analyses clearly diverge. Soh assumes that *meN*- is in an A′-position. This analysis thus predicts that only the A′-movement of an NP across the verb with the AV morphology is prohibited. We saw, however, that A-movement causes the AV deletion from a verb that it

crosses, as shown in (5-6). The D-feature checking account correctly predicts that *meN*-deletion is caused by the movement of an NP, whether it is A-movement or A′- movement.

4.3. *Voskuil's (2000) Pro-Based Account*

Voskuil (2000) provides an account for the distribution of the AV morphology in Indonesian from the interaction of several constraints and principles. Voskuil assumes that *meN*-licenses *pro* in its object position, as stated in (34), an assumption that he claims to be independently supported by facts concerning left dislocation, topicalization and binding.

(34) *pro* is licensed if governed by a verb prefixed with *meN*- or *di*-. (Voskuil 2000: 206)

He further assumes the principle in (35). This principle, combined with (34), yields the result that the object position of a verb marked with *meN*- is occupied by *pro*.

(35) Pronoun Principle: An empty category is interpreted as *pro* if morphological licensing conditions for *pro* are met, irrespective of derivational history. (Voskuil 2000: 206)

Working with this set of assumptions, Voskuil proposes that A′-extraction of an NP across the *meN*-verb is blocked by the constraint on variables in (36). This constraint essentially states that when syntactic movement does not violate island constraints, the operator-variable relation must be established by movement, which leaves a trace instead of *pro*.

(36) Constraints on Variables: A variable-operator pair at LF must be derived through movement, unless movement is prohibited by conditions pertaining to the structural distance between the variable and the operator. (Voskuil 2000: 206)

According to this proposal, the extraction of an NP across a verb with *meN*- in examples as in (3a) is blocked as follows. The presence of *meN*− on the matrix verb *beritahu* 'tell' requires that *pro* is generated in the object position of the verb. However, since the syntactic movement involved in this example does not violate any island constraint, the operator-variable relation must be established by movement rather than a resumptive-like strategy in Indonesian, leaving a trace, not a *pro*, in the direct object position. The clash of these two requirements yields the ungrammaticality of (3a) with *meN*−. When this prefix is absent, however, no such clash arises, because the tail of the movement does not have to be a *pro*. The NP-only property also follows because the only antecedent for *pro* is an operator.

There is one problem with his account. That is, as is clear from his generalization in (37), his analysis is designed to block only A′-extraction of an NP across *meN*-verb.

(37) *meN*− exclusively blocks A-bar movement of the direct object, *di*- likewise blocks A-bar movement of the genitive agent. (Voskuil 2000: 206)

Thus, Voskuil's analysis incorrectly predicts that A-extraction of an NP across such a verb should be possible.

4.4. *Fortin's (in press) Anti-Passive Account*

Fortin (in press) attempts to derive the syntactically governed distribution of the AV morphology from the assumption that *meN*− is an object-clitic antipassivizing morpheme (Baker 1988). Her argument for the analysis of *meN*- as the object clitic comes from the following observation. In colloquial varieties of Indonesian, unlike Standard Indonesian (recall section 2), *meN*− is optional with many transitive verbs. However, this prefix is obligatory when verbs like *baca* 'read' are used intransitively, i.e. without overt syntactic arguments, as illustrated in (38a, b). The same contrast holds for Kendal Javanese, as shown in (39a, b).

(38)a. Ali sedang **mem**-baca.
Ali Prog AV-read
'Ali is reading.'

b.* Ali sedang baca.
Ali Prog read
'Ali is reading.'

(Colloquial Indonesian; Fortin in press)

(39)a. Ali lagi **maca.**
Ali Prog AV.read
'Ali is reading.'

b. Ali lagi **waca**.
Ali Prog read
'Ali is reading.'

(Kendal Javanese)

The contrast here follows, Fortin argues, if *meN-* itself is base-generated as the internal argument of the verb *baca* 'read' and its absence leads to the violation of the θ-Criterion.

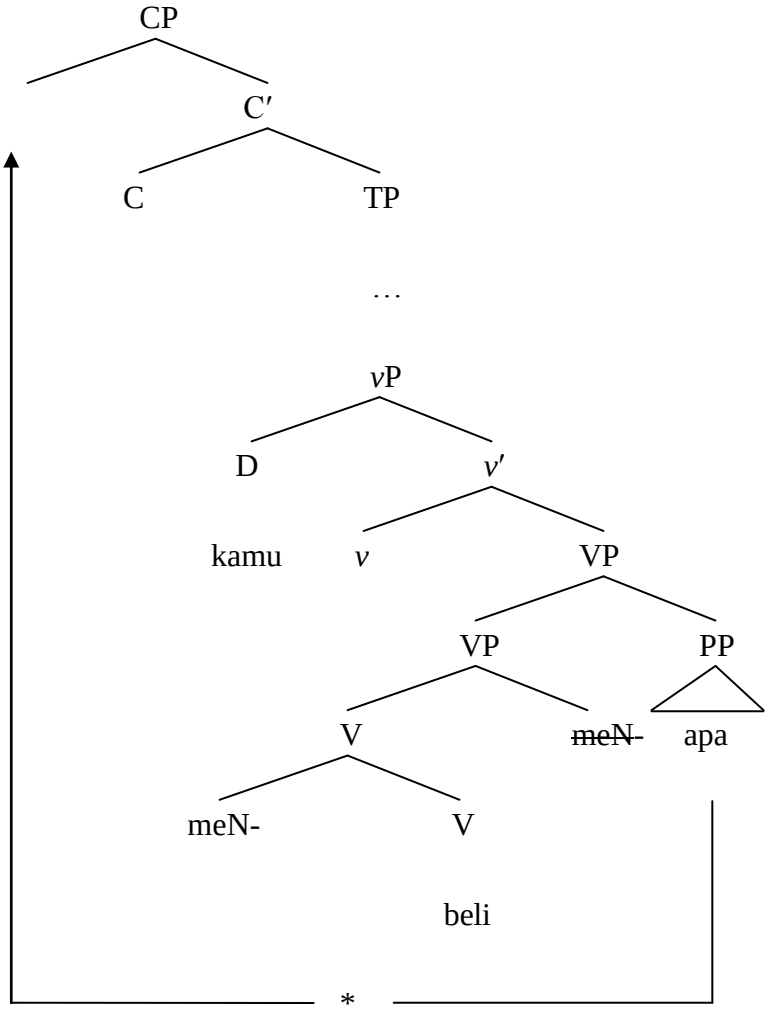
According to Fortin, for clauses with *meN-*, the prefix originates in the θ-position for the internal argument and overly moves to the verb. As is the case of bona fide antipassive constructions generally, such clauses allow an optionally specified object. In this case, the specified object is an oblique adjunct in a VP-adjoined position. In clauses without *meN-*, by contrast, the object NP is a direct object that is base-generated into the θ-position for the internal argument. The two derivations for the example in (40) will be as in (41) and (42).

(40) Apa$_i$ yang kamu (***mem**)-beli t_i?

what that you **AV**-buy

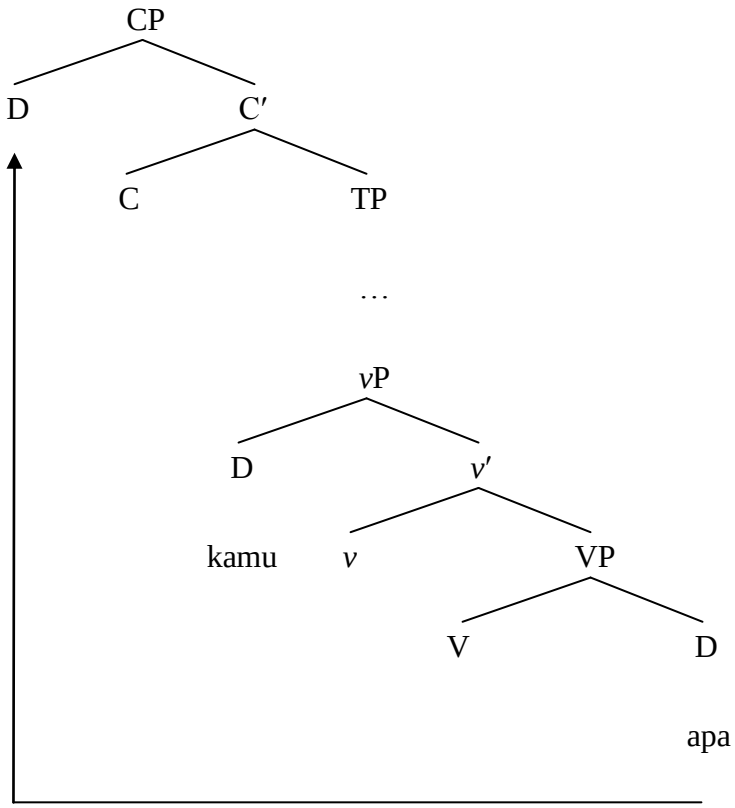
'What did you buy?' (Fortin in press)

(41)



violation of the Adjunct Island Condition (slightly modified from Fortin in press)

(42)



(slightly modified from Fortin in press)

Since *meN-* is present in (41), the prefix is base-generated in the object position of the verb *beli* 'buy' and later moves to the V position. The specified object, in turn, is base-generated as an oblique adjunct in the VP-adjoined position. If *meN-* is absent as in (42), *apa* 'what' occupies the object position of the verb. Fortin argues that the inability of an NP to move across a verb with *meN-* is due to the Adjunct Island Condition because the movement of the specified object involves extraction from within an adjunct phrase. By contrast, such a

problem does not arise with the derivation of the *meN*-less clause in (42) since *apa* 'what' moves from the thematic direct object position to the specifier of CP.

Three considerations indicate, however, that Fortin's analysis is hard to sustain. Firstly, Fortin assumes that, in the derivation for *meN*-clauses in (41), Case on the adjunct NP is checked against a null preposition, akin to the null preposition that checks the Case of the agent NP in *di*-passives. Examples of this type of passive are given in (43).

(43)	Piring	itu	sudah	**di**-cuci	oleh/Ø	Pak	Ali.
	dish	that	already	**PV**-wash	by	Mister	Ali

'These dishes were already washed by Pak Ali.'(slightly modified from Fortin (in press))

The crucial assumption here, then, is that the oblique adjunct *wh*-phrase in *meN*-questions would have to have a preposition. However, it is not clear whether we have independent evidence for this assumption. In fact, evidence from Heavy NP Shift in Indonesian as in (44a, b) shows that this assumption is incorrect.

(44)a. Saya **men**-emukan [$_{NP}$ buku yang ayah saya belikan lima tahun lalu] **kemarin**.

I AV-find book that father my buy five year ago yesterday

'I found the book that my father had bought five years ago yesterday.'

b. Saya **men**-emukan**kemarin** [$_{NP}$ buku yang ayah saya belikan lima tahun lalu].

I AV-find yesterday book that father my buy five year ago

'I found yesterday the book that my father had bought five years ago.'

(Standard Indonesian)

Under the standard analysis of Heavy NP Shift as a case of A′-movement, (44b) involves rightward movement of the phonologically heavy NP into a *v*P-adjoined position. That the rightward movement has occurred can be seen from the relative order of the heavy NP with respect to the adverb *kemarin* 'yesterday'. Fortin's analysis incorrectly predicts that this sentence should be ungrammatical with *meN*− because the A′-movement of the heavy NP here would also be blocked by the Adjunct Condition on a par with *meN*- sentences. This problem does not arise under our analysis. The heavy NP moves rightward into the adjoined position, not the specifier position of the *v*P. This movement does not cause the mandatory active voice deletion because it does not bring the moved NP into the Spec-Head D-feature checking relation in [Spec, *v*P], which is a necessary condition for the active voice deletion.

Secondly, it is not clear why the whole PP, not the specified object NP, cannot move into the specifier of CP in (41). If this movement were possible, then *meN*-deletion would not be obligatorily caused in this derivation. (7b, c) show that PPs can be fronted in Indonesian. In fact, the PP must be fronted in Indonesian, as shown in (45a, b).

(45) a. Mana$_i$ John *(**mem**)-beri Mary buku itu [$_{PP}$ di t_i]?
where John AV-give Mary book that at
'Where John give Mary that book at?'

b. Siapa$_i$ Mary *(**mem**)-beri buku itu [$_{PP}$ kepada t_i]?
who Mary AV-give book that to
'Whom did Mary give that book to?'

Fortin's analysis, therefore, does not seem to stand through unless this otherwise available movement option in Indonesian is blocked in (41) by independent principles of syntax.

Finally, Fortin treats *meN*− in Indonesian as the antipassivizing object clitic. In other words, *meN*− serves as the θ-bearing element which clitic-doubles it. However, this treatment is problematic because *meN*− + object NP constructions do not exhibit properties characteristic of bona-fide double-clitic constructions as found in Romance languages. To mention one case,

Franco and Landa (2006) that quantifiers and *wh*-words cannot be clitic-doubled due to their inherent quantificational force. This point is illustrated in (46a, b) from Spanish.

(46)a. Juan (*lo$_i$) quiere a **todo el mundo$_i$**.
Juan Cl love-3s to everybody
'Juan loves everybody.'

b. **¿A quién$_i$** (*lo$_i$) viste?
to whom Cl saw-2
'Who did you see?' (Franco and Landa 2006: 37)

Thus, Fortin's analysis predicts that quantifiers and *wh*-expressions should also not co-occur with the prefix. This prediction is falsified by examples of *wh*-in-situ such as (47a) and examples as in (47b) that have quantifiers in direct object positions.

(47) a. Ali (**mem)-**beri Fatimah **apa**?
Ali **AV**-give Fatimah what
'Ali loves everyone.'

b. Ali (**mem**)-beri **setiap** **orang.**

Ali **AV**-love every one

'What did Ali give Fatimah?'

One question still remains as to how we can account for the contrast noted by Fortin in colloquial Indonesian as support for her treatment of *meN−* as antipassive object clitic. I suspect that an answer to this question is related to the recent observation, made by Soh and Nomoto (2008), that *meN−* in Standard Formal Malay contributes a progressive viewpoint aspect. This effect is illustrated in intransitive verbs by (48a, b) from this variety of Malay. The same observation holds for the colloquial Indonesian analogues in (49a, b).

(48)a. Harga elektrik **turun**.

price electricity fall

'The price of electricity fell.'

b. Harga elektrik **men-(t)urun**.

price electricity AV-fall

'The price of electricity fell.'

(Standard Formal Malay; Son and Nomoto (2009: 151, 152), their (7a, b))

(49)a. Tarif listrik **turun.**

price electricity fall

'The price of electricity fell.'

b. Tarif listrik **men-(t)urun**.

Price electricity AV-fall

'The price of electricity is falling.' (Colloquial Indonesian)

Interestingly enough, however, Standard Formal Malay and colloquial Indonesian differ with respect to the aspectual progressive effect of *meN−* in transitive sentences. Soh and Nomoto (2009: 152) report that according to some Malay speakers "transitive *meN−* sentences describe events that are more 'in progress' than sentences without *meN−*." They present (50a, b) as one pair of sentences for which one of their Malay consultants detected such a difference.

(50)a. Malaysia akan **bina** se-buah makmal pengawasan nuklear di Bukit Ibam.

Malaysia will build one-Cl laboratory control nucear in Bukit Ibam

'Malaysia will build a nuclear control laboratory in Bukit Ibam.'

b. Malaysia akan **men-bina** se-buah makmal pengawasan nuklear di Bukit Ibam.
Malaysia will AV-build one-Cl laboratory control nuclear in Bukit Ibam
'Malaysia will be building a nuclear control laboratory in Bukit Ibam.'

(Standard Formal Malay; Soh and Nomoto 2009: 152, their (9a, b))

However, this effect is absent in the Indonesian counterparts in (51a, b), for which my consultant has not reported any appreciable aspectual difference.[5]

(51)a. Malaysia akan **bangun** se-buah laboratorium kontrol nuklear di Bukit Ibam.
Malaysia will build one-Cl laboratory control nuclear in Bukit Ibam
'Malaysia will build a nuclear control laboratory in Bukit Ibam.'

b. Malaysia akan **mem-bangun** se-buah laboratorium kontrol nuklear di Bukit Ibam.
Malaysia will AV-build one-Cl laboratory control nuclear in Bukit Ibam
'Malaysia will be building a nuclear control laboratory in Bukit Ibam.'

(Standard Indonesian)

The contrast illustrated in (38a, b) now may be accounted for as follows. *meN−* serves as a morpheme to bring about the progressive interpretation only in intransitive verb sentences in

colloquial Indonesian. Since the intransitive use of verbs such as *baca* 'read' is a special case of intransitive verb sentences, *meN−* has been retained in those varieties as a unique morpheme to express this original semantic function. By contrast, in transitive verb sentences, *meN−* already has lost this function in those varieties. As a result, it is no longer strictly required for aspectual reasons. In Standard Formal Malay, however, this function of the prefix presumably has remained in both transitive and intransitive contexts. That is why (some of) Malay speakers detect the progressive (-like) interpretation in both contexts.

7. Conclusions

This paper has proposed a new analysis of the distribution of the active voice markers in Standard Indonesian and Javanese. I have proposed to analyze this "deletion" as a two-step process: Spec-Head Agreement in the syntax and Failure of Vocabulary Insertion in the post-syntactic morphology. More precisely, an NP undergoes movement into the edge of *v*P to check the uninterpretable feature of the *v* head in the syntax. This checking relation causes the change in the feature content of the *v* head. This change, in turn, blocks the active voice prefix from being inserted under *v* in the post-syntactic morphological component; its null counterpart ($Ø_{meN-}$ in Standard Indonesian) is inserted instead as the elsewhere vocabulary item. I have compared this analysis with two recent alternative analyses presented by Cole et

al. (2008) and Aldridge (2008). I have pointed out several empirical and typological problems with these analyses, which I have shown to be naturally resolved under our proposed analysis. I have further compared the proposed analysis with other alternative accounts resorting to NP Accessibility, Relativized Minimality, *pro*-licensing and antipassivization presented by Keenan and Comrie (1977), Soh (1998), Voskuil (2000) and Fortin (in press), and provided empirical arguments against these accounts.

Our analysis has two theoretical implications for the notion of successive cyclicity at the syntax-morphology interface and the phenomenon of deletion in natural language. First, our treatment of the active voice deletion in Standard Indonesian and Kendal Javanese provides direct morphological evidence for the role of *v*P-mediated locality at the syntax-morphology interface. This result is important because direct evidence for *v*P phases has been somewhat hard to come by, in contrast to robust evidence for successive cyclicity via CP phases (McCloskey 1979, 2001; McDaniel 1989; Saddy 1991; Thornton 1995; Chung 1994, 1998; Horvath 1997); see Legate (2003), however, for suggestive evidence for *v*P phases based on parasitic gap licensing, reconstruction effects, and antecedent-contained deletion, which draw on insights from Fox (1998) and Nissenbaum (1998); see also Den Dikken (2006) for a critical reappraisal of Legate's arguments. In this regard, contributions from relatively under-represented languages such as Indonesian and Javanese are significant.

Second, our analysis yields an improved understanding of "deletion", one of the most controversial terms in contemporary studies on the syntax-phonology interface (see Merchant 2001 for a recent survey of various analytical possibilities on deletion based on his detailed case study of sluicing constructions), by treating it as failure of vocabulary insertion in the technical sense of Distributed Morphology (Harley 2005).

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Footnotes

[1] Glosses used in the examples in this paper include the following: Acc, accusative; Appl, applicative; Asp, aspect; AV, active voice; CS, case; Dat, dative; Def, definite; Intr, Intransitive; Neg, negation; Obl, oblique; 3rd.sg, third person singular; Pass, passive; Red, reduplication.

[2] The examples here from Chung (1976) are converted to the current spelling of Indonesian.

[3] In (8a, b), the stem-initial consonant /k/ is dropped in cases where the nasal prefix is realized, as in *ngandhani* 'tell' and *ngéi* 'give'.

[4] As the same reviewer notes, Radford (2004: 310, 311) also proposes that *wh*-agreement phenomena as in Chamorro can be analyzed as the reflex of the EPP-feature checking between a moved element and *v*.

[5] In fact, Soh and Nomoto (2009:152) add that in transitive contexts "the difference in aspectual meanings between sentences with *meN−* and those without is subtle and seems not always available."

Tables

Language	Word Order
Roviana	VSO
Nêlêmwa	VOS
Némi	VOS
Tongan	VSO/VOS
Niuean	VSO/VOS
Samoan	VSO/VOS
Rennellese	VOS/VSO
Tokelau	VSO
E.Futuna/Uvea	VSO/VOS

Table 1: Austronesian Languages with Morphological Ergativity (from Polinsky (2009))