



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/copyright>



Indonesian clause structure from an Austronesian perspective

Sandra Chung

Cowell Faculty Services, University of California, Santa Cruz, Santa Cruz, CA 95064, USA

Received 15 August 2006; received in revised form 29 March 2007; accepted 16 August 2007

Available online 29 September 2007

Abstract

Although the neutral clauses of standard Indonesian are SVO, the language also permits verb-initial word order, and belongs to a branch of the Austronesian language family that was probably originally verb-initial. An analysis of Indonesian clause structure is investigated which exploits these connections, inspired by Cole and Hermon's analysis of the closely related language Toba Batak. In this analysis, VP must raise to the specifier of T and the subject can then raise to a specifier outside the clause proper. Such an analysis is shown to be inferior to an analysis of standard Indonesian in which SVO clauses are derived by simply raising the subject to the specifier of T. Evidence is presented that in some varieties of standard Indonesian, but not others, verb-initial clauses are derived by raising VP to an even higher specifier. Overall, the investigation serves to highlight some of the empirical considerations that can be brought to bear on 'abstract' analyses of clause structure.

© 2007 Elsevier B.V. All rights reserved.

Keywords: Indonesian; Word order; Verb-initial; SVO

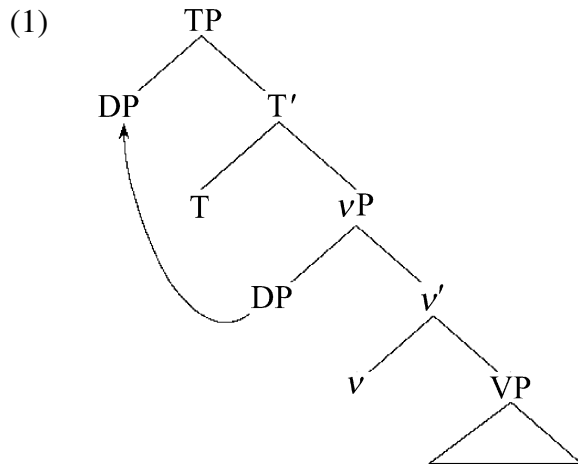
1. Overview

What is the clause structure of standard Indonesian?¹ The neutral word order of clauses is unquestionably SVO. From this very basic fact, one might be tempted to infer that Indonesian has

E-mail address: schung@ucsc.edu.

¹ By *standard Indonesian* I mean the range of varieties recognized as 'standard' by educated native speakers, documented in grammars and instructional materials, and attested in newspaper articles, novels, and other forms of written discourse. Indonesian has many varieties, both standard and colloquial, and their investigation poses some well-known sociolinguistic challenges. Here I take an inclusive approach to the standard language, drawing on previous descriptions as well as speakers' judgments and naturally occurring data. These sources are not always in complete agreement. It may be that the best term for the varieties described here is *standard but nonprescriptive* Indonesian, or what Peter Cole and Gabriella Hermon have called 'near standard' Indonesian. Importantly, these varieties can be distinguished from local Indonesian dialects, such as the colloquial dialect of Jakarta documented by, e.g. Tjung (2006) and Cole et al. (2006) (although informal varieties of standard Indonesian are close to the mesolectal Jakarta dialect of educated speakers; see Tjung, 2006).

the same clause structure as many generative syntacticians now assume for English—the structure shown in (1).



In (1), the subject originates external to the verb phrase, in the specifier of the functional head *v*, and then raises to become the specifier of the clausal head, represented here as *T*. Essentially this structure was first proposed for Indonesian by Guilfoyle et al. (1992).

There are, however, reasons for taking the time to assess the Indonesian evidence with some care. Conceptually, word order does not uniquely determine clause structure even in theories in which the two are tightly correlated (such as Kayne's (1994) antisymmetry theory). From a comparative historical perspective, the indications are that the SVO order found in Indonesian and closely related languages represents an innovation. Indonesian belongs to the Western Malayo-Polynesian sub-branch of the Austronesian language family. But many of the descendents of Western Malayo-Polynesian are verb-initial, including the languages of the Philippine subfamily, and Malagasy, Chamorro, and Palauan, whose subgrouping within Western Malayo-Polynesian is unclear. Of the Western Malayo-Polynesian languages spoken in Indonesia, the Batak languages and Old Javanese are verb-initial (Blust, 2006). Further, the Formosan languages, which are widely believed to constitute a separate branch or branches of the Austronesian family, are – except for Thao and Saisiyat – verb-initial (Blust, 2006). The Austronesian languages spoken at the geographical peripheries of the vast Austronesian area are verb-initial: Malagasy, the Formosan languages, and the Polynesian languages. Consistent with this, Proto-Austronesian is often assumed to be verb-initial (see e.g. Blust, 2006; Pawley and Reid, 1979). And Indonesian itself has verb-initial word order in non-neutral clauses. All these observations raise the question of how Indonesian's SVO word order might have arisen historically.

My aim here is to address a different, but ultimately related question: could one motivate a *synchronic* analysis of Indonesian in which every clause is, at some stage of the derivation, predicate-initial? If so, such an analysis might well unify Indonesian clause structure with the clause structures of the verb-initial Western Malayo-Polynesian languages, and address the historical question of how SVO word order emerged.

Current generative syntactic theory offers a family of analytic routes to predicate-initial word order (see e.g. Kayne, 1994:36). The investigation below focuses on one specific analysis, inspired

Some of the syntactic patterns described in the text are limited to varieties of standard Indonesian that have been characterized as nonprescriptive, spoken, and the like. I identify such varieties as best I can (though precisely what varieties are involved is sometimes the source of disagreement in the literature). When no particular variety is identified, readers should assume that the patterns under discussion hold throughout the standard language (e.g. in both prescriptive and nonprescriptive varieties).

by Cole and Hermon's (in press) analysis of Toba Batak, a language closely related to Indonesian. In this analysis, VP raises to the specifier of T and then the subject raises even higher, to a topic position. I show that despite the initial appeal of analyzing Indonesian this way, the evidence argues against doing so. More generally, Indonesian's SVO clauses are not verb-initial clauses in disguise, but instead have the rather unexceptional structure shown in (1). The path to this conclusion serves to highlight some of the empirical considerations that can be brought to bear on 'abstract' hypotheses about clause structure. I then examine Indonesian's verb-initial clauses, and suggest that they might be derived differently in different varieties of the standard language. The evidence invites the speculation that the varied patterning of these clauses might be a by-product of linguistic change—specifically, of the reanalysis that led to the rise of SVO as the neutral word order.

Section 2 of this paper describes the word order of Indonesian clauses and presents the analysis to be investigated. Section 3 evaluates the claim that VP raises in SVO clauses, and section 4, the claim that the subject is a topic. In sections 6 and 7, I turn to clauses with verb-initial word order. I suggest that in these clauses, the subject ends up in the same position as it does in SVO clauses – namely, the specifier of T, – but VP may well raise to a higher specifier in prescriptive varieties, but not in nonprescriptive varieties, of the standard language. Section 8 concludes.

2. The focus of investigation

2.1. Indonesian word order

As announced already, neutral clauses in Indonesian are SVO. The examples below illustrate this for some representative clause types—transitive clauses in (2a–b), one of the two types of passives in (2c), and a clause with a sentential subject in (2d).²

- (2) a. Mas Jon sudah meny-ewa kamar.
 Jon have Tr-rent room
 Jon has rented a room by now. (Wolff et al., 1992:210) [transitive]
- b. Bapak saya mem-bayar tukang becak satu rupiah.
 father my Tr-pay worker pedicab one rupiah
 My father paid the pedicab driver one rupiah. [transitive applicative]
- c. Kamar-nya di-sewa-nya tadi malam.
 room-the P1-rent-by.him last night
 The room was rented by him last night. (Wolff et al., 1992:210) [passive]
- d. [Bahwa kalong itu binatang yang me-rugikan] sudah-lah terang.
 that flying.fox the animal Comp Tr-harm have-Emp clear
 That the flying fox is an animal which does damage is already clear.
 (Macdonald, 1976:139) [intransitive with sentential subject]

Alongside these, Indonesian also has clauses that are verb-initial. The entire VP – more generally, the predicate XP – can precede the subject, as is shown for a range of clause types in (3). (The predicate XP in these examples is enclosed in brackets. Although the predicate XP is nominal in (3d) and adjectival in (3e), for convenience I will generalize the term *verb-initial* to these clause types as well.)

² The following abbreviations are used in the morpheme-by-morpheme glosses: Appl 'applicative', Cl 'classifier', Comp 'complementizer', Emp 'emphatic', Intr 'intransitive', P1 'di-passive', P2 'zero-passive (also known as the pronominal passive or object preposing)', Q 'question', Tr 'transitive'.

- (3) a. [Sudah meny-ewa kamar] Mas Jon.
 have Tr-rent room Jon
 Jon has rented a room by now. (Wolff et al., 1992:210) [transitive]
- b. [Mem-bayar tukang becak satu rupiah] bapak saya.
 Tr-pay worker pedicab one rupiah father my
 My father paid the pedicab driver one rupiah. [transitive applicative]
- c. [Di-pandangi-nya lama-lama] gambar jantung yang kena panah itu.
 P1-look.at-by.her long.time picture heart Comp be.struck arrow the
 She looked for a long time at the picture of the heart pierced by the arrow.
 (McCune, 1989:290) [passive]
- d. [Mahasiswa Unpad] dia.
 student Unpad she
 She is an Unpad (University of Padjadjaran) student. (Sneddon, 1996:257)
 [intransitive with nominal predicate]
- e. [Cantik sekali] gadis itu.
 pretty very girl that
 That girl is very pretty. (Sneddon, 1996:257) [intransitive with adjectival predicate]

Alternatively, V and its auxiliaries can precede the subject, leaving PP complements and adjuncts stranded at the right. Compare the passive clause in (3c) with the passive clauses below, in which V is followed first by the derived subject (e.g. *surat itu* ‘the letter’ in (4a)) and then by a prepositional phrase.

- (4) a. Kemudian [di-masukkan-nya] surat itu ke dalam blouse-nya.
 later P1-put-by.her letter the to inside blouse-her
 Then she put the letter inside her blouse. (McCune, 1989:312) [passive]
- b. [Sudah di-buat-kan] sepatu khusus bagi dia.
 have P1-make-Appl shoe special for him
 Special shoes have been made for him. (Sneddon, 1996:258) [passive]

(For evidence that the derived subject is indeed outside VP in examples of this type, see section 6.1.)

Verb-initial clauses of types (3) and (4) come with a distinctive intonation pattern and, presumably, distinctive information packaging, though exactly what the latter amounts to is hard to make precise. Some sources suggest that this word order serves to highlight the predicate and background the subject (see e.g. Chung, 1978:340; Kaswanti Purwo, 1989:402). This rough characterization will suffice for our purposes.

More important is the issue of whether the verb-initial options just illustrated are available for all clause types. The examples in (3) make the point that (the entire) VP can precede the subject whether the predicate is transitive, passive, or intransitive. Consistent with this, Sneddon (1996:257) reports that “a transitive verb, whether active or passive, can also occur before the subject” (see also Wolff et al., 1992:33 and, for a different view, Macdonald, 1976:144; Kaswanti Purwo, 1989:350). In contrast, the examples in (5) below reveal that direct objects (i.e. DP complements) of transitive verbs cannot be stranded to the right, and so the word order Verb Subject Other is available only for intransitive clauses.

- (5) a. Me-lihat mereka guru itu.
 Tr-see them teacher the
 The teacher saw them. (Not: *They saw the teacher.)

- b. Mem-bawa buku itu Mas Jon.
Tr-bring book the Mas Jon
Mas Jon brought the book.
- c. #Mem-bawa Mas Jon buku itu.
Tr-bring Mas Jon book the
#The book brought Mas Jon. (Not: Mas Jon brought the book.)

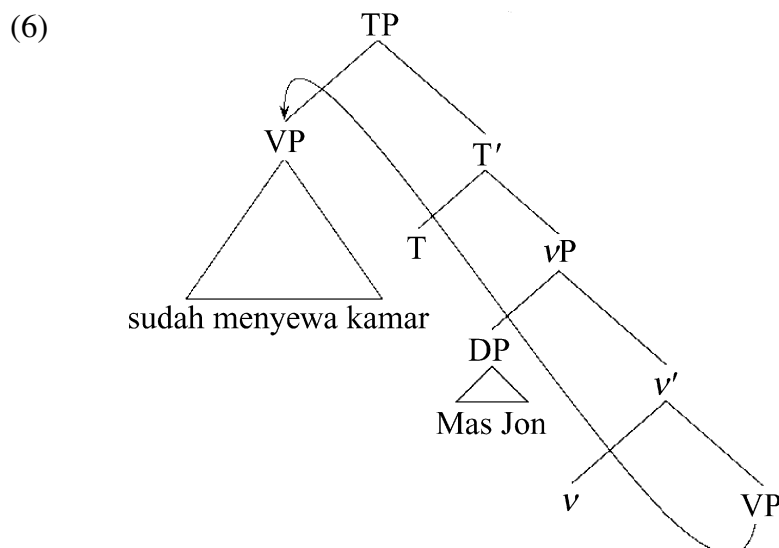
I will return to this observation later.

2.2. VP raising plus something more

The word order patterns just exhibited bring to mind the analyses proposed by Aldridge (2004), Massam (2001), Pearson (2001), Rackowski and Travis (2000), and others for the clause structure of Austronesian languages such as Malagasy, Niuean, Seediq, and Tagalog. In these analyses, which are inspired ultimately by Kayne's (1994) antisymmetry theory, verb-initial word order is produced when VP or some even more inclusive constituent raises, intact or as a remnant, to the specifier of the clausal head.

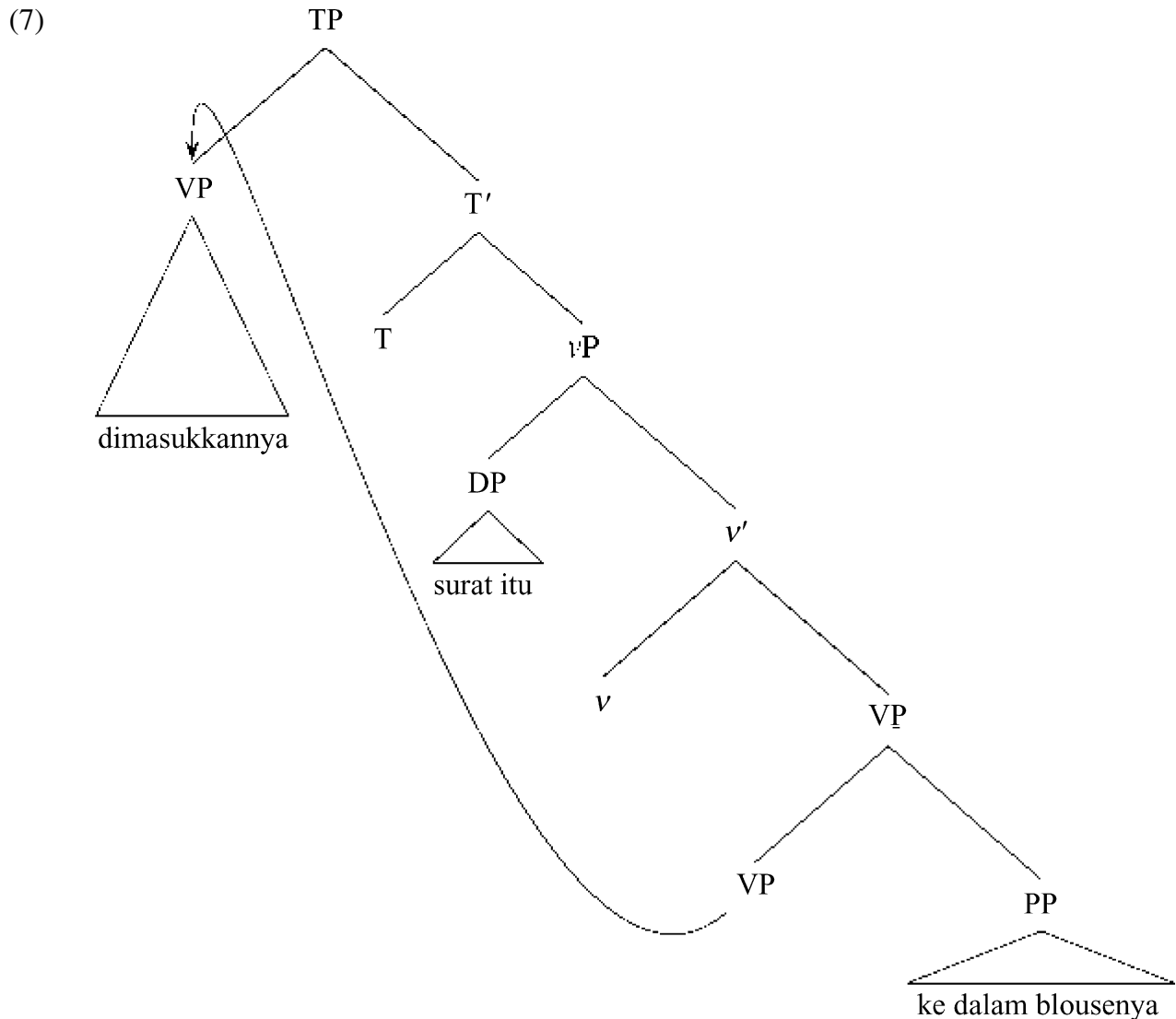
Particularly valuable here is Cole and Hermon's (in press) analysis of the clause structure of Toba Batak, a language of Indonesia which displays both SVO and verb-initial word orders. Cole and Hermon propose that VP – more precisely, the highest verbal projection in the functional layer above VP, which they take to be VoiceP – must raise to the specifier of the clausal head T in the derivation of every Toba Batak clause.³ SVO word order is produced when the subject raises even higher, to the specifier of a functional head Top; when the subject fails to raise, verb-initial word order is the outcome.

If we were to generalize Cole and Hermon's analysis to Indonesian, we would emerge with the following account of clause structure. Indonesian clauses of type (3) would be derived by raising VP to the specifier of T, as sketched below for (3a).



³ For expository simplicity, I henceforth use 'VP' as a cover term for VP or some relevant higher projection in the functional layer separating VP from T, and 'VP raising' to refer to the raising of this projection to the specifier of T. All that is important is that (i) the raised projection must include VP and that (ii) if this projection originally contained the subject, the subject must exit from it before VP raising occurs.

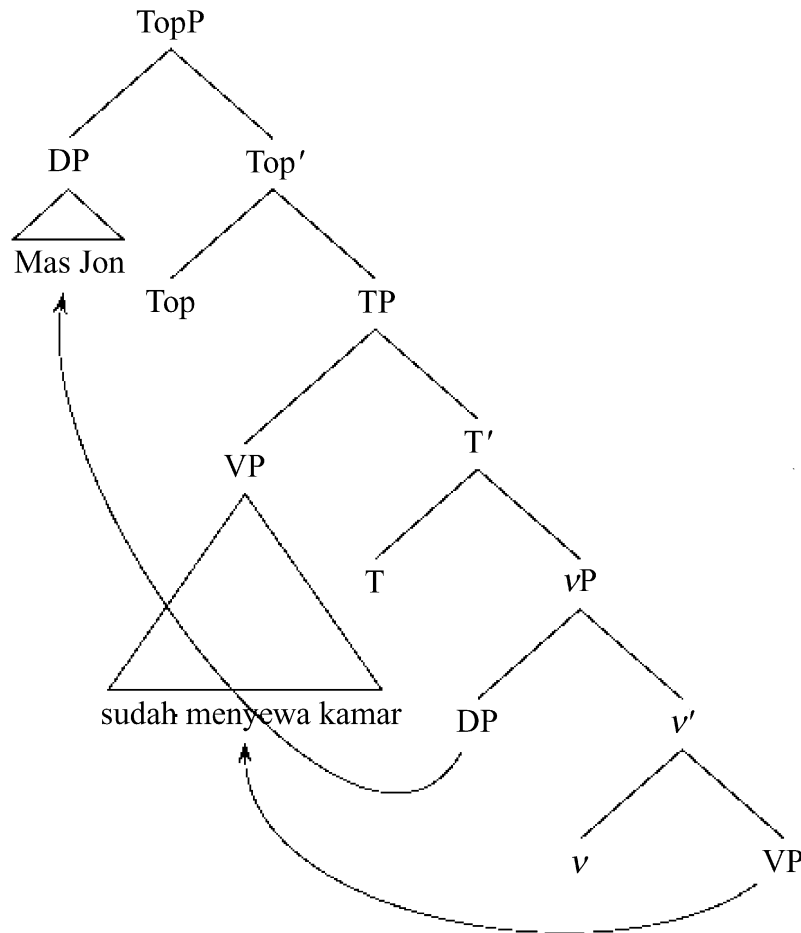
Clauses of type (4) would be derived by first extracting PP complements from VP and then raising the remnant VP to the specifier of T. Just how the initial evacuation of VP would proceed would depend on one's assumptions about movement and phrase structure, including whether the host of adjunction (=the lower segment of an adjunction structure) could be targeted by movement. Assuming for the sake of argument that this is possible, we might suppose that under certain circumstances, PP complements of V could (for whatever reason) left-adjoin to VP. The lowest VP segment would then raise, stranding the constituents adjoined to it, as sketched below for (4a).⁴



Finally, clauses of type (2) would be derived by combining a structure of type (3) or (4) with an abstract (unpronounced) functional head Top, and then raising the subject to become Top's specifier. This is shown below for (2a).

⁴ If hosts of adjunction cannot undergo movement, there are other ways out: for instance, PP complements might raise to become inner specifiers of v, 'tucking in' as proposed by Richards (2001). The theoretical issues and their resolution are largely irrelevant here. For this reason, the rest of the discussion shifts the spotlight away from derivations of type (7) and largely ignores the (technical) question of what might motivate the movements shown in (6–8).

(8)



The typological and comparative appeal of such an account is obvious. Indonesian would have a clause structure just like the clause structure of the closely related Toba Batak, and highly similar to the clause structures of other Austronesian languages for which raising of VP or some more inclusive constituent has been proposed. On the historical side, the door would be open to the hypothesis that Indonesian's SVO word order results from a lexical innovation—the introduction of an abstract head, Top, which requires the subject to raise to its specifier.

Before venturing too far afield, however, we must ask how successful the account is as a synchronic analysis of contemporary standard Indonesian. The account makes two claims about the structure of Indonesian clauses: first, VP raises to the specifier of T, and second, the subject can raise to the specifier of Top, a position for topics that lies outside the clause proper. The next two sections investigate the adequacy of these claims for SVO clauses in particular.

3. Does VP raise in SVO clauses?

Among the sorts of evidence that have been used to motivate VP raising in other languages are mirror-image effects and island effects.

3.1. Mirror-image effects

Pearson (2000) has observed that word order within the Malagasy vP is, in some important respects, the mirror image of the word order within vP in languages like English. For instance, in Malagasy, the goal *follows* the theme in double object constructions, whereas in English, the goal precedes the theme. In Malagasy, a specific direct object occurs to the *right* of adverbials, while a

nonspecific direct object occurs to the left. Although English has no comparable pattern of object shift, in German a specific direct object occurs to the *left* of adverbials, while a nonspecific direct object occurs to the right. Pearson's explanation of these contrasts relies crucially on the assumption that Malagasy clauses involve VP raising. More precisely, in his analysis, VP raising is the first in a series of roll-up movements which successively raise each projection in the functional layer above VP to the left edge of the next higher functional projection, so that the specifiers of lower functional heads – e.g. themes, adverbials – are stranded to the left of the specifiers of higher functional heads – e.g. goals, specific direct objects. The specifiers, in other words, are stranded in inverse order. (See also Rackowski and Travis, 2000, who appeal to VP raising of the roll-up type to account for the order of Malagasy adverbs.)

Pearson's account suggests that we can take the presence of mirror-image effects as evidence that a language's clauses are derived by VP raising of the roll-up type. It then becomes significant that Indonesian supplies no such evidence: the language systematically lacks the mirror-image effects he describes.

In double object constructions in Indonesian, the goal (enclosed in brackets below) *precedes* the theme.

- (9) a. Saya mem-bayar [tukang becak] satu rupiah.
 I Tr-pay worker pedicab one rupiah
 I paid the pedicab driver one rupiah.
 b. Yati me-masak-kan [adik-nya] ikan.
 Yati Tr-cook-Appl yo.si.-her fish
 Yati cooked her younger sister fish.

Double object constructions in which the goal follows the theme are completely ungrammatical.

- (10) a. *Saya mem-bayar satu rupiah [tukang becak].
 I Tr-pay one rupiah worker pedicab
 (I paid the pedicab driver one rupiah.)
 b. *Yati me-masak-kan ikan [adik-nya].
 Yati Tr-cook-Appl fish yo.si.her
 (Yati cooked her younger sister fish.)

Further, in Indonesian the direct object—whether specific or nonspecific—occurs right after the verb, to the left of adverbial phrases. The examples below, accessed via Google on April 9–10, 2006, represent my attempt to illustrate this word order with naturally occurring data.⁵ In the examples in (11), a specific direct object (enclosed in brackets) follows the verb *memperlakukan* 'treat' but precedes the adverbial phrase *dengan baik* 'well'.

- (11) a. Tetapi tidak ada jaminan bahwa majikan itu akan mem-perlakukan
 but not there.be guarantee Comp boss the will Tr-treat
 [anak-anak ini] dengan baik.
 children this with good
 But there is no guarantee that the boss will treat these children well.
 <http://hrw.org/indonesian/reports/2005/indonesia0605/4.htm>

⁵ In an attempt to ensure that the Googled data are indeed instances of standard Indonesian, I cite examples only from web dictionaries, Indonesian news sites (e.g. Kompas), official government sites, and the like.

- b. Dia mem-perlakukan [anak-anak tiri-nya] dengan baik.
 he Tr-treat children step-his with good
 He treats his stepchildren well.
<http://www.seasite.niu.edu/Indonesian/TataBahasa/dictionary/Default.htm>

In (12), a nonspecific direct object under the scope of negation occurs in exactly the same position, following the verb *memperlakukan* but preceding the adverbial phrase *dengan kekerasan* ‘harshly’.

- (12) Tidak mem-perlakukan [orang] dengan kekerasan.
 not Tr-treat person with harshness
 Not to treat (any) people harshly.
<http://www.kompas.com/kompas-cetak/0504/06/Bentara/1661649.htm>

When a direct object follows the adverbial phrase, this is because it has been displaced to the right by Heavy NP Shift. Consider

- (13) Manajemen harus mem-perlakukan dengan baik [orang-orang yang
 management must Tr-treat with good people Comp
 me-lakukan pekerjaan].
 Tr-do work
 The management should treat well (the) people who work for them.
<http://www.kompas.com/kompas-cetak/0402/05/metro/839606.htm>

In all of these respects, Indonesian resembles English, not Malagasy. The absence of mirror-image effects argues that SVO clauses in Indonesian are not derived by VP raising of the roll-up type.

3.2. Island effects

More telling is the evidence from island effects.

Rackowski and Travis (2000) have observed that if Malagasy clauses are derived by raising of VP or some more inclusive constituent to a specifier position, then the raised constituent – because it is a specifier – should be an island. Nonsubject arguments within VP should therefore be inaccessible to wh-movement. This prediction is, of course, correct: nonsubject arguments in Malagasy are famously inaccessible to extraction (see Keenan, 1972 and many others since). The line of thought reveals that we can use island effects as a diagnostic for whether VP raising has occurred. More precisely, the islandhood of VP would be consistent with VP raising. But the discovery that VP is not an island would be evidence that VP has not raised after all (for further commentary, see Aldridge, 2002; Chung, 2006).⁶

⁶ A reviewer observes that there are Austronesian languages (e.g. Tagalog, Toba Batak) in which nonsubject arguments can surface to the right of the subject but nonetheless cannot undergo wh-movement. An analysis which derived clausal word order by assuming that such arguments had exited from VP prior to (remnant) VP raising would need to invoke some additional constraint to explain their inaccessibility to wh-movement. I agree. However, what is at issue here is not unexpected inaccessibility, but unexpected *accessibility*, to wh-movement. A core claim of the VP raising account is that if VP raising has occurred, then the raised VP is an island. From this, it follows that if the raised VP is not an island, then VP raising has not occurred.

Consider, in this light, the formation of Indonesian relative clauses. Relative clauses in Indonesian follow the head NP and are introduced by the complementizer *yang*. Most commonly, the relative clause contains a gap but no overt relative pronoun, a pattern that syntacticians since Chomsky (1977) have attributed to wh-movement of a relative pronoun (or operator) that is null.

Now, subjects can undergo wh-movement in relative clauses, as (14) shows.

- (14) a. Ada [seseorang [yang __ men-cari kamu di sini tadi]].
 there.be someone Comp Tr-look.for you at here awhile.ago
 There was somebody here looking for you. (Wolff et al., 1992:855)
- b. [Celana [yang __ di-beli-nya kemarin]] terlalu kecil.
 trousers Comp P1-buy-by.him yesterday too small
 The trousers that he bought yesterday are too small. (Sneddon, 1996:286)

But according to some highly educated speakers and many grammars of Indonesian (e.g. Sneddon, 1996:286–287), direct objects cannot. On this (prescriptive) view, every relative clause that might have been analyzed as involving extraction of a direct object instead involves extraction of the derived subject of a zero-passive—the type of Indonesian passive in which the verb is not overtly inflected for voice. Relative clauses like (15), that is, would be built not from transitive clauses similar to (16a), but rather from zero-passives similar to (16b).⁷

- (15) [buku [yang saya baca]]
 book Comp I read
 the book that I read
- (16) a. Saya mem-baca buku ini.
 I Tr-read book this
 I read this book.
- b. Buku ini saya baca
 book this I P2.read
 The book was read by me.

Assuming this, the apparent inaccessibility of direct objects to wh-movement might lead one to think that VP's are islands in standard Indonesian.

However, other evidence argues that this conclusion cannot be correct. Musgrave (2001) and Cole and Hermon (2005) have established that there are varieties of standard Indonesian in which direct objects can, in fact, undergo wh-movement. Their evidence comes from relative clauses of type (15) in which the verb clearly has not been passivized, and so the target of wh-movement must be a direct object. Consider

- (17) a. [Orang [yang polisi tangkap __ di pasar]] telah men-curi tas.
 person Comp police arrest in market Past Tr-steal purse
 The man that the police arrested in the market had stolen a purse.
 (Cole and Hermon, 2005:63)

⁷ The transitive prefix *meng-* is absent in relative clauses of type (15). In fact, the absence of the transitive prefix in object relative clauses is characteristic not only of standard Indonesian, but also of many local dialects. For detailed discussion, see Cole and Hermon (2005), Cole et al. (2006), and Cole et al. (this volume).

- b. Ini-lah [buku yang [Badu sudah baca ____]].
this-Emp book Comp Badu have read
This is the book that Badu has read. (Musgrave, 2001:59)
- c. Namun ada [[yang mereka tidak ketahui ____]].
nonetheless there.be Comp they not know
Yet there's (something) that they don't know.
<http://www.kompas.com/kompas-cetak/0501/18/Geliat/1508829.htm>
(accessed on October 22, 2006)
- d. [gulagula [yang anak-anak suka ____] itu]
sweets Comp children like the
the sweets that the children like (Musgrave, 2001:187)
- e. [Buku [yang kami ingin sekali ____]] terlalu mahal.
book Comp we want very too expensive
The book we really want is too expensive. (Cole and Hermon, 2005:65)

One might wonder whether the relative clauses in (17), like the one in (15), could be analyzed in two ways: as active transitive clauses in which the direct object has been extracted, or as zero-passives in which the derived subject has been extracted. What these authors show is that only the first analysis is tenable. In (17a–c), the verbs *tangkap* ‘arrest’, *baca* ‘read’, and *ketahui* ‘know’ cannot be zero-passives, because zero-passives must have a pronominal external argument to the immediate left of the verb, but either there is no such pronominal (17a–b) or else it is not to the verb’s immediate left (17c). In (17d–e), the verbs *suka* ‘like’ and *ingin* ‘want’ cannot be zero-passives, because these psychological verbs idiosyncratically cannot be passivized (see Musgrave, 2001). In these examples, therefore, it must be the direct object that has undergone wh-movement.

There is no consensus on how to characterize the (nonprescriptive) varieties of standard Indonesian that permit relative clauses of type (17).⁸ Musgrave (2001:58) implies that the ability to relativize direct objects is a feature of standard Indonesian which merely runs counter to “received wisdom”; Cole and Hermon describe it as characteristic of spoken varieties of standard Indonesian. Yassir Nasanius Tjung, who has studied this construction extensively, observes (personal communication) that “speakers of the older generation and educated speakers have not fully accepted” relative clauses of type (17). While these characterizations could well be mutually consistent, it remains to be determined which sociolinguistic factors, exactly, define the varieties that fully accept these relative clauses.

In any event, it is clear that direct objects *are* accessible to extraction in (nonprescriptive) varieties of standard Indonesian. The result is significant, given what has already been established about the word order profile of direct objects. Because the direct object cannot be stranded to the right of the subject in a verb-initial clause (see (5)), a VP raising analysis could not allow it to exit from VP prior to (remnant) VP raising; the direct object would have to form part of the raised VP. But then the ability of the direct object to undergo wh-movement in nonprescriptive varieties is evidence that VP’s are not islands in these varieties, and hence—in these varieties—VP raising has not occurred after all.

I conclude that no evidence positively supports, and some evidence tells against, the hypothesis that Indonesian’s SVO clauses are derived by VP raising.

⁸ In particular, these varieties seem not to be limited to the informal varieties of Indonesian in which the transitive prefix *meng-* does not occur.

4. Is the subject a topic in SVO clauses?

Let us next consider the subject of SVO clauses and the claim that it raises to the specifier of Top, a position for topics that lies outside the clause proper. There are two issues to be investigated here. First, do preverbal subjects really end up outside the clause, in what is sometimes called the expanded C system or the left periphery?⁹ And second, are these preverbal subjects actually topics? The following subsections are devoted to these questions.

4.1. *The clause's periphery and intervention effects*

Since at least Chomsky (1986) and Rizzi (1990), syntacticians have held that wh-island effects result from intervention. Assuming that movement must target the nearest constituent of the appropriate sort, the moved wh-phrase of an embedded question will intervene to block a more deeply embedded wh-phrase from being moved past it to a higher specifier of C. This is illustrated in (18).

(18) *How quickly do they know [why Joe fixed it ___]?

More generally, the theory goes, a clause-peripheral specifier (an A' specifier) will intervene to prevent a more deeply embedded constituent from being moved past it to any clause-peripheral specifier (any A' specifier) higher in the structure.

Intervention plays a key role in Pearson's (2005) approach to clause structure and wh-movement in Malagasy. In Pearson's system, the clause-final DP identified by Keenan (1976) and others as the subject of the Malagasy clause is actually a topic, lodged in a clause-peripheral specifier (an A' specifier) which happens to surface at the right. The topic intervenes to prevent any more deeply embedded arguments from being moved past it to clause-peripheral specifiers higher in the structure. Hence, for Pearson, the fact that the Malagasy arguments he analyzes as non-topic arguments are inaccessible to wh-movement is a kind of wh-island effect. (See the discussion at the beginning of section 3.2.)

What is of interest here is that preverbal subjects in Indonesian do not induce any comparable intervention effects. Recall that in (nonprescriptive) varieties of the standard language, direct objects can undergo wh-movement in relative clauses. Given that these constituents must move past the subject, one would imagine that if the subject had raised to a clause-peripheral specifier, it should intervene to block extraction, just as happens in Malagasy. But no such intervention occurs. The contrast with Malagasy argues that preverbal subjects in nonprescriptive varieties of Indonesian are not required to raise to the clause's periphery *at all*. It follows from this that they are not required to raise to the specifier of Top.¹⁰

⁹ In Principles and Parameters theory, the specifiers of Top, C, and the like are called A' (nonargument) specifiers. Because the theoretical rationale for that term has become quite unclear, I will refer to these specifiers instead as clause-peripheral specifiers.

¹⁰ A reviewer asks whether Indonesian has any topics distinct from subjects and if so, whether these induce intervention effects. One construction that involves a topic is discussed below in section 4.2. As far as I know, it is impossible for a nontopic argument to be extracted out of that construction.

4.2. A piece of non-evidence: possessors as topics

Certain word order facts involving possessors might seem, at first glance, to be at odds with the conclusion just reached, so they should be examined carefully.

Possessors in standard Indonesian follow the possessed noun within DP.

- (19) a. [Anak [orang itu]] delapan.
 child person that eight
 That person has eight children. (Wolff et al., 1992:124)
 b. [Rumah [ibu [saya]]] bagus.
 house mother my beautiful
 My mother's house is beautiful. (Wolff et al., 1992:124)

The point of interest: it is possible for the possessor of a subject to surface at the left edge of the clause, seemingly in the normal preverbal position of subjects. In such constructions, the possessor occurs first, followed by the predicate XP and then by (the rest of) the subject—that is, the possessed DP. Within the subject, functioning as a copy of the possessor, is the resumptive pronoun *-nya* (see e.g. Kaswanti Purwo, 1984:69 and Sneddon, 1996:278). Consider the examples below, in which the left-edge possessor and the rest of the subject are enclosed in separate sets of brackets.¹¹

- (20) a. [Orang itu], delapan [anak-nya].
 person that eight child-his
 That person has eight children. (Wolff et al., 1992:125)
 b. [Jakarta] sudah mulai ber-ubah [wajah-nya].
 Jakarta have begin Intr-change face-its
 The face of Jakarta has begun to change. (Sneddon, 1996:279)

Both word order and intonation identify the left-edge possessor in this construction as a topic (Sneddon, 1996:278). The facts would fall into place if the preverbal position in SVO clauses were a clause-peripheral position, the specifier of Top, to which either the subject or its possessor could raise. Raising of the subject, on this view, would leave behind a gap; raising of its possessor would leave behind a resumptive pronoun.

While these observations seem promising, further investigation leads to a different, less conclusive picture. Alongside constructions of type (20), Indonesian also has constructions in which a left-edge possessor is followed first by the rest of the subject and then by the predicate XP. Consider

- (21) a. [Orang itu], [anak-nya] delapan.
 person that child-his eight
 That person has eight children. (Wolff et al., 1992:124)
 b. [Jakarta] [wajah-nya] sudah mulai ber-ubah.
 Jakarta face-its have begin Intr-change
 The face of Jakarta has begun to change. (Sneddon, 1996:278)

¹¹ It has been claimed that sentences like (20), and their relative clause analogues, are possible only when the subject is inalienably possessed (see Verhaar, 1988:32–33, Sneddon, 1996:279–280). The speakers who I consulted in the 1970s evidently did not have this restriction; see the relative clauses in section 6.2 below.

Various considerations—intonation, word order, the presence of the resumptive pronoun *-nya*—argue that the possessor in these examples forms a constituent separate from the rest of the subject, just as it does in (20). But then we no longer have a reason for supposing that the possessor occupies the normal position of a preverbal subject in (20), since the two clearly occupy different positions in (21). The facts, in other words, are now consistent with several different analytic scenarios. In one such scenario, the possessor in (21) raises to a clause-peripheral position, but the preverbal subject *need not, and does not, do so*.

4.3. Familiarity

Let us ask, finally, whether the subjects of SVO clauses have any of the semantic-pragmatic characteristics of topics.

Conventional wisdom holds that topics are familiar—definite or universally quantified. However, standard Indonesian seems not to impose any demand that the subject of an SVO clause must be familiar. Subjects that are apparently internal arguments are not required to be familiar. Consider the indefinite subject in (22), which is taken from a novel.

- (22) Sesuatu meng-gelepar dalam perut-nya.
 something Tr-flutter inside stomach-his
 Something fluttered inside his stomach. (McCune, 1989:296)

Subjects that are external arguments are not required to be familiar, either. In (23a), from a short story, the subject of the unergative verb *berteriak* ‘shout’ is an indefinite; in (23b), from a grammar, and (23c), from a news article, the subjects of the transitive verbs *menghasilkan* ‘produce’ and *melihat* ‘see’ are interrogative phrases.

- (23) a. “Peggyyy, se-cangkir kopi lagi,” seorang ber-teriak.
 Peggy one-cup coffee again someone Intr-shout
 “Peggyyy, another cup of coffee,” someone shouted. (McCune, 1989:310)
- b. Binatang mana-kah meng-hasilkan “wool”?
 animal which?-Q Tr-produce wool
 Which animals provide wool? (Macdonald, 1976:160)
- c. Hal ini mem-pertentangkan mengenai [siapa me-lihat] dan
 matter this Tr-contrast concerning who? Tr-see and
 [siapa yang di-lihat].
 who? Comp Pass-see
 This introduces a contrast with respect to the observer (lit. who sees) and the
 observed (lit. who is seen).
<http://www.kompas.com/kompas-cetak/0304/14/swara/250188.htm>

Examples like these reveal that even in written discourse, the subjects of SVO clauses need not be familiar. This, in turn, suggests that they are not necessarily topics.¹² The line of thought brings us by a different route to the conclusion reached earlier: Indonesian might well have a functional head *Top*, but the subjects of SVO clauses are not required to raise to its specifier.

¹² This conclusion conflicts with Cole et al.’s (2005) claim that in standard Indonesian, the subject must be a topic. Their evidence, which comes from the distribution of *wh*-in-situ, could conceivably be explained in other ways.

5. On the structure of Indonesian's SVO clauses

The evidence of the preceding sections argues that SVO clauses in standard Indonesian do not, in the end, have the structure sketched in (8). We have seen that in nonprescriptive varieties, VP does not raise to the specifier of T. Further, in the standard language more generally, the subject need not raise to the specifier of Top. (The evidence is, in fact, consistent with the claim that the subject *never* raises to the specifier of Top.)

At this point, an advocate of VP raising might be tempted to propose that in *prescriptive* varieties, VP does raise to the specifier of T and the subject raises even higher, to some clause-peripheral position other than the specifier of Top. Such a scenario is conceivable. However, the brute fact is that it is not supported by any positive evidence. (The inaccessibility of direct objects to extraction in prescriptive varieties is merely consistent with such an analysis; see note 6.)

Overall, what positive evidence there is argues that the derivation of SVO clauses in standard Indonesian probably involves no more raising of maximal projections than occurs in English. The conclusion most compatible with these observations is that the language has the unremarkable clause structure shown in (1).

This conclusion has some broader consequences that should be recognized at this point. First of all, if Indonesian has (1) as its clause structure, then there can be no unified clause structure for all Western Malayo-Polynesian languages in which VP crucially must raise to the specifier of T. This is an interesting, extremely important result. Second, related to this, the synchronic analysis of Indonesian clause structure turns out to reveal relatively little about how the language's SVO word order might have arisen historically. Given the prominent role of reanalysis in linguistic change, such a situation is not particularly unusual, but it nonetheless deserves to be acknowledged.

Third, the conclusion that Indonesian has the clause structure in (1) bears indirectly on the issue of whether the language might be morphosyntactically ergative. It is well known that in Indonesian, the two types of passives—the *di*-passive and the zero-passive—occur more frequently than the active in episodic sentences. The passive clauses in the stretches of narrative in (24), for instance, would be most naturally translated into English as active clauses.

- (24) a. Kemudian di-ambil-nya kertas baru, di-coret-coret-nya di muka
 then P1-take-by.her paper new P1-note-by.her in front
 pemuda itu.
 young.one that
 Then she took a new piece of paper and jotted something on it in front of
 the young man. (McCune, 1989:312)
- b. Sebentar kemudian datang se-orang bocah pekerja mem-bawakan
 not.long then come a-Cl boy worker Tr-take
 dua buah topi bambu. Se-buah ia kenakan pada kepala-ku, se-buah
 two Cl hat bamboo one-Cl he P2.put at head-my one-Cl
 di-kenakan-nya sendiri.
 P1-put-by.him self
 In a moment came a boy peddler. He took two bamboo hats, one he put
 on my head, the other he put on his own head. (Kaswanti Purwo, 1989:370)

Since the late 1970s, attempts have been made to account for this pattern by appealing to ergativity—specifically, by proposing that one or both types of passives might be transitive

clauses that are ergative (see e.g. Cartier, 1989; Verhaar, 1989). Such proposals are incompatible with what is known about the typological profile of morphosyntactically ergative languages (i.e. languages whose basic clauses flag intransitive subjects and transitive direct objects in the same way, and transitive subjects in some other way.) Anderson (1976:18–19) originally observed, and subsequent research has largely served to confirm, that morphosyntactic ergativity is found in verb-initial or verb-final languages, but not verb-medial languages. Manning (1996), for instance, observes that “most ergative languages are verb-initial or verb-final.” Dixon (1994) cites several examples of morphosyntactically ergative languages which appear to be verb-medial. At least two of these – Pari, described by Andersen (1988), and the Mayan language Wasteko (Huastec) – are probably better analyzed as having a basic clause structure that is verb-initial. (See England, 1991 on Wasteko.) Given all this, the conclusion that Indonesian clause structure is not verb-initial at *any* stage of the derivation simply serves to confirm what we already know from its neutral word order: morphosyntactic ergativity is probably not the explanation for the high frequency of passives in this language.

This much seems straightforward. Still to be determined is the structure of Indonesian’s clauses with verb-initial order—clauses of types (3) and (4). It is to this set of issues that I turn next.

6. The location of the subject in verb-initial clauses

Given that verb-initial word order is a non-neutral word order in Indonesian, a reasonable starting assumption is that it is derived from the basic clause structure (1) by movement. But what constituents have moved, and where have they moved to?

It is fairly easy to establish that the subject surfaces in the same position in verb-initial clauses as it does in SVO clauses—namely, the specifier of T. Section 6.1 argues that the post-predicate subject, as I will refer to it, does not end up as a subconstituent of VP; section 6.2 argues that it occupies the highest specifier of the clause; and section 6.3 shows that it is not a topic.

6.1. *Hanya* and association with focus

Some evidence that the post-predicate subject does not surface within VP is supplied by the adverbial *hanya* ‘only’ and its association with focus.

Like its English counterpart, *hanya* ‘only’ associates with a focused constituent in its c-command domain. Consider the examples below, in which *hanya* occurs to the left of the verb and its auxiliaries, in a position that I analyze as left-adjoined to VP. In this position, *hanya* can associate with a focused constituent that is a projection of V, as (25) is intended to suggest. (The focus in these examples is enclosed in brackets, and its English translation is italicized.)

- (25) Saya hanya akan [me-rebus pisang ini].
 I only will Tr-boil banana this
 I’m only going to *boil these bananas*.

Hanya can also associate with a focus that is a complement of V or an adjunct to VP.

- (26) a. Saya hanya mem-baca [buku ini].
 I only Tr-read book this
 I read only *this book*.

- b. Kita hanya me-naikkan layang-layang itu [untuk Lisa].
we only Tr-launch kite the for Lisa
We launched the kite only *for Lisa*.
- c. Masakan ini hanya saya buat [dengan cabai].
food this only I P2.make with hot.pepper
I make this food only *with hot peppers*.

But it is impossible for it to associate with a focus that is a preverbal subject, whether the clause is active (as in (27a)) or passive (27b).

- (27) a. *[Wanita itu] hanya akan mem-baca buku ini.
woman the only will Tr-read book this
(Only *the woman* will read this book.)
- b. *[Buku ini] hanya saya baca.
book this only I P2.read
(I read only *this book*.)

This pattern is expected, of course. Given that Indonesian has the clause structure in (1), *hanya*'s c-command domain does not include the specifier of T, so it cannot associate with a focus that occupies that position.

Notice now that *hanya* cannot associate with a focus that is a post-predicate subject (see Chung, 1978). This point emerges especially clearly from the examples in (28). These are passive clauses in which the internal argument occurs to the right of the verb, in a position consistent with its being inside or outside VP. If these clauses were impersonal passives and the internal argument surfaced as a complement of V – or, for that matter, as any kind of subconstituent of VP, – then *hanya* ought to be able to associate with it. On the other hand, if the clauses are personal passives and the internal argument has raised out of VP, then association with the post-predicate subject should be impossible. In fact, association is impossible, as (28) shows.

- (28) a. *Hanya sudah di-baca [buku ini] oleh mereka.
only have P1-read book this by them
(They have read only *this book*.)
- b. *Hanya saya baca [buku ini].
only I P2.read book this
(I read only *this book*.)

The only conclusion consistent with this pattern is that post-predicate subjects, including the derived subjects of passive clauses, must end up in a position outside *hanya*'s c-command domain: they must have raised out of VP.

6.2. Wh-movement and resumption: possessors

Evidence that the post-predicate subject ends up in the highest specifier of the clause comes from wh-movement of possessors.

Indonesian permits possessors of subjects to be relativized via resumption. In such constructions, the possessor – by hypothesis, a null relative pronoun – undergoes wh-movement, leaving behind the resumptive pronoun *-nya* within the possessed DP. Some

representative examples are cited below. Notice that the relative clause is active in (29a) but passive in (29b–c).

- (29) a. Saya ber-temu dengan [anak perempuan [yang buku-nya ada di
I Intr-meet with child female Comp book-her be.at on
atas meja]].
top table
I met the girl whose book is on the table.
- b. [orang [yang mobil-nya di-curi]]
person Comp car-his P1-steal
the person whose car was stolen (Sneddon, 1996:288–289)
- c. Siapa [wanita [yang rumah-nya saya kunjungi]]?
who? woman Comp house-her I P2.visit
Who is the woman whose house I visited?

Sneddon (1996:288–289) analyzes relative clauses of this type as formed from constructions like (21), in which the possessor occupies a clause-peripheral topic position. In our terms, this would mean that wh-movement proceeds in two steps, raising the null relative pronoun first to the specifier of Top, and then to the specifier of C. It makes no difference here whether one adopts this analysis or assumes instead that the null relative pronoun raises in one fell swoop to the specifier of C. What matters is that the possessor of the subject can undergo wh-movement, and this operation leaves behind a resumptive pronoun.

Importantly, the subject is the only constituent whose possessor is accessible to wh-movement in relative clauses. Possessors of nonsubjects cannot undergo wh-movement, even when a resumptive pronoun is left behind, as the following examples are intended to suggest. (30a) and (30b) show that possessors of direct objects are inaccessible to wh-movement; (30c) and (30d) show that possessors of prepositional objects are similarly inaccessible, even when the entire PP has been raised to a clause-peripheral position.

- (30) a. *Siapa [wanita [yang saya meng-unjungi rumah-nya]]?
who? woman Comp I Tr-visit house-her
(Who is the woman whose house I visited?)
- b. *?Ini-lah [orang [yang kita hendak naikkan layang-layang-nya]].
this-Emp person Comp we will launch kite-his
(Here is the person whose kite we're going to fly.)
- c. *Di mana [orang [yang saya pergi ke rumah-nya]]?
at where? person Comp I go to house-his
(Where is the person whose house I went to?)
- d. *Kamu adalah [orang [yang ke rumah-nya dia jalan-jalan]]
you be person Comp to house-his he travel
(You're the one to whose house he is traveling.)

The descriptive generalization that emerges is that the possessor can undergo wh-movement only when the possessed DP that is its mother is the highest specifier of the clause—by assumption, the specifier of T.

It then becomes significant that the possessors of post-predicate subjects are accessible to wh-movement (see Chung, 1978). This movement – as expected – leaves behind a resumptive

pronoun (but see note 11). The examples in (31) illustrate this for various types of relative clauses: an active intransitive clause in (31a) and passive clauses in (31b–c).

- (31) a. Saya ber-temu dengan [anak perempuan [yang ada di atas meja
I Intr-meet with child female Comp be.at on top table
buku-nya]].
book-her
I met the girl whose book is on the table.
- b. [lima puluh empat negara Afrika [yang di-akui
five ten four nation Africa Comp P1-recognize
kedaulatan-nya]]
sovereignty-their
fifty four African nations whose sovereignty is recognized (Sneddon, 1996:289)
- c. Ini-lah [orang [yang hendak kita naikkan layang-layang-nya]].
this-Emp person Comp will we P2.launch kite-his
Here is the person whose kite we're going to fly.

If we continue to hold that possessors are accessible to *wh*-movement only when their host DP is the highest specifier of the clause, then (31) reveals that the post-predicate subject is the highest specifier. This in turn suggests that post-predicate subjects end up in the specifier of T, just like their preverbal analogues in SVO clauses.¹³ At the same time, the evidence argues that VP is *not* the highest specifier of the clause, because if it were, the post-predicate subject could not be. I will return to this last point shortly.

6.3. Familiarity again

The conclusion that the post-predicate subject ends up in the highest specifier of the clause implies that this DP is not in the specifier of Top, since that position lies outside the clause proper. Independent support for this is provided by the fact that post-predicate subjects – just like the subjects of SVO clauses, but unlike topics – are exempt from any familiarity requirement. Post-predicate subjects can be indefinite, for instance; consider (4b), (24), and the examples below.

- (32) a. Di-ambil-nya lagi se-helai serbet kertas.
P1-take-by.him again one-Cl napkin paper
He took another paper napkin. (McCune, 1989:320)
- b. Kemudian di-ambil-nya abu.
then P1-take-by.her ash
Then she took some ashes. (Kaswanti Purwo, 1989:392)

In sum, there is ample justification for the claim that the subject occupies the same position in verb-initial clauses as it does in SVO clauses—the specifier of T.

¹³ In connection with this, note that the external argument of zero-passives such as (31c) is often assumed to occupy the specifier of *v* (see Guilfoyle et al., 1992 and many others since). But if that is so, then in order for the post-predicate subject in examples of this type to be the highest specifier, it must end up even higher.

7. Does VP raise in verb-initial clauses?

Where VP ends up in the hierarchical structure of verb-initial clauses is far less obvious. The following discussion, based on data generously provided by three linguists who are native speakers of Indonesian, represents a preliminary attempt to get at this question.

7.1. Mirror-image effects again

Earlier I observed that if the post-predicate subject in verb-initial clauses ends up in the highest specifier of the clause, then VP cannot occupy that position. It follows from this that verb-initial clauses are not derived by VP raising to the specifier of T.

This conclusion is consistent with the evidence from mirror-image effects. Recall from section 3.1 that mirror-image effects, which we took to be a diagnostic for VP raising of the roll-up type, are not exhibited by Indonesian's SVO clauses. As might be expected by this point, mirror-image effects are also systematically absent from the verb-initial clauses of the language.

In double object constructions in verb-initial clauses, the goal (enclosed in the innermost set of brackets below) *precedes* the theme; see (33a). Constructions in which the goal follows the theme, such as (33b), are ungrammatical.

- (33) a. [Mem-bayar [tukang becak] satu rupiah] bapak saya.
 Tr-pay worker pedicab one rupiah father my
 My father paid the pedicab driver one rupiah.
 b. *[Mem-bayar satu rupiah [tukang becak]] bapak saya.
 Tr-pay one rupiah worker pedicab father my
 (My father paid the pedicab driver one rupiah.)

Further, specific and nonspecific direct objects occur immediately after the verb, to the left of adverbial phrases; see (34a). When a direct object which could not have undergone Heavy NP Shift follows an adverbial phrase, as in (34b), the result is ill-formed.

- (34) a. [Akan mem-perlakukan [anak-anak ini] dengan baik] majikan itu.
 will Tr-treat children these with good boss the
 The boss will treat these children well.
 b. *[Akan mem-perlakukan dengan baik [anak-anak ini]] majikan itu.
 will Tr-treat with good children these boss the
 (The boss will treat these children well.)

These patterns are consistent with the claim that VP does not raise via roll-up movement to a clause-internal specifier in verb-initial clauses. However, if we return to the assumption that such clauses should be derived from the basic clause structure (1) via movement, another possibility suggests itself: VP might raise even higher than the specifier of T, to a position outside the clause proper, in a way analogous to VP preposing in English. (Thanks to Lisa Travis for suggesting this.) Interestingly, evidence from certain prescriptive varieties of Indonesian suggests that such an analysis might well be correct.

7.2. *Wh-movement and resumption: direct objects*

Recall that for some highly educated speakers and many grammars of Indonesian, direct objects cannot be relativized via *wh*-movement (see section 3.2). What concerns us here is that some, but not all, of these speakers allow direct objects to be relativized via resumption. In such cases, a resumptive pronoun *-nya*, corresponding to the direct object, is attached to the verb of the relative clause, as shown in (35).

- (35) a. [masalah ini, [yang sudah lama kami ingin mem-bicarakan-nya]]
 problem this Comp have long we want Tr-discuss-it
 this problem, which we had already wanted to discuss for a long time
 (Kaswanti Purwo, 1984:69)
- b. Saya banyak men-ciptakan [harapan bagi rakyat [yang saya sendiri
 I many Tr-create hope for people Comp I self
 tidak mampu meny-elesaikan-nya]].
 not capable Tr-fulfill-it
 I created many hopes for the people which I myself was not able to fulfill.
 (Sneddon, 1996:289)

The resumptive pronouns in relative clauses of type (35) cannot be a morphological spell-out of *wh*-movement, given that the speakers of these prescriptive varieties do not permit direct objects to undergo *wh*-movement to begin with. Rather, they seem to be a repair strategy. Consistent with the idea that a repair strategy is involved, constructions like (35) exhibit a distance effect, observed originally by Kaswanti Purwo: the greater the distance between the resumptive *-nya* and the null relative operator that binds it, the more acceptable the relative clause (see Kaswanti Purwo, 1984:69 and Verhaar, 1988:32–33). Compare (35) with (36), in which *-nya* is too close to its binder, and unacceptability results.

- (36) *[masalah ini, [yang saya mem-bicarakan-nya kemarin]]
 problem this Comp I Tr-discuss-it yesterday
 (this problem, which I discussed yesterday)

Resumption of this type is, thus, fundamentally different from the resumption involved in relativization of possessors, which I discussed earlier in section 6.2. When a direct object is relativized by resumption, the resumptive pronoun must be ‘distant enough’ from its binder, whereas when a possessor is relativized, the resumptive pronoun and its binder cannot be ‘too distant’.

Now is not the time to ask what overall theory of movement and binding could account for the differences between these two types of resumption.¹⁴ But if we set this larger theoretical issue

¹⁴ Among the issues that such a theory would have to address: (i) why resumption as a repair strategy seems unavailable, or less available, for relativization of other nonsubject DP's, including objects of prepositions, possessors of nonsubjects, and the like, and (ii) whether the resumption involved in relativization of possessors could be analyzed as agreement in some sense. With respect to the second issue, notice that the suffix *-nya* serves as a ‘genitive marker’ – perhaps a kind of possessor agreement – in certain varieties which are colloquial according to Wolff et al. (1992:251) and Javanese-influenced according to Sneddon (1996:145–146).

aside and concentrate exclusively on the use of resumptive pronouns for direct objects, we can make a bit of descriptive headway. Suppose that relative clauses of type (35) contain a null relative operator, base-generated in the specifier of C, which must bind a resumptive direct object pronoun. (This move is intended to differentiate relativization of direct objects from relativization of possessors, which was claimed in section 6.2 to involve *wh*-movement.) Suppose further that ‘distance’ is defined partly in terms of depth of embedding—the number of projections separating the relative operator from the resumptive pronoun it binds. We can then characterize the difference between the acceptable and unacceptable resumptive pronouns in (35–36) as follows. In (35), the resumptive pronouns are contained within an embedded VP—a VP inside the (small clause) complement of the adjective *lama* ‘long’ or the (infinitive) complement of *mampu* ‘capable’. But in (36), the resumptive pronoun occurs in the matrix VP, attached to the main verb. This difference in depth of embedding is responsible for the fact that (35) is acceptable, but (36) is not.

Further evidence that the ‘distance’ that plays a role in resumption involves depth of embedding comes from the following contrast, reported by Verhaar (1988:32–33).

- (37) a. [anak [yang sudah sering kali Ali mem-ukul-nya]]
 child Comp have often time Ali Tr-beat-him
 the boy that Ali has already beaten so often (Verhaar, 1988:32)
 b. *[anak [yang dua hari yang lalu Ali mem-ukul-nya]]
 child Comp two day Comp past Ali Tr-beat-him
 (the boy that Ali beat two days ago)

Although the resumptive pronouns in these examples are separated from the complementizer *yang* by roughly the same number of words, they differ in their depth of embedding. The pronoun in (37a) is contained in an embedded VP, inside the (small clause) complement of the higher predicate *sering kali* ‘often’; the pronoun in (37b) is contained in the matrix VP, attached to the main verb. (In (37b) the adverbial phrase *dua hari yang lalu* ‘two days ago’ is presumably adjoined to the TP of the relative clause.) Tellingly, resumption is acceptable in (37a), but not in (37b).¹⁵

We are now ready to bring resumption to bear on the question of where VP is located in the hierarchical structure of verb-initial clauses. Consider the verb-initial relative clauses below, which were brought to my attention by Bambang Kaswanti Purwo.

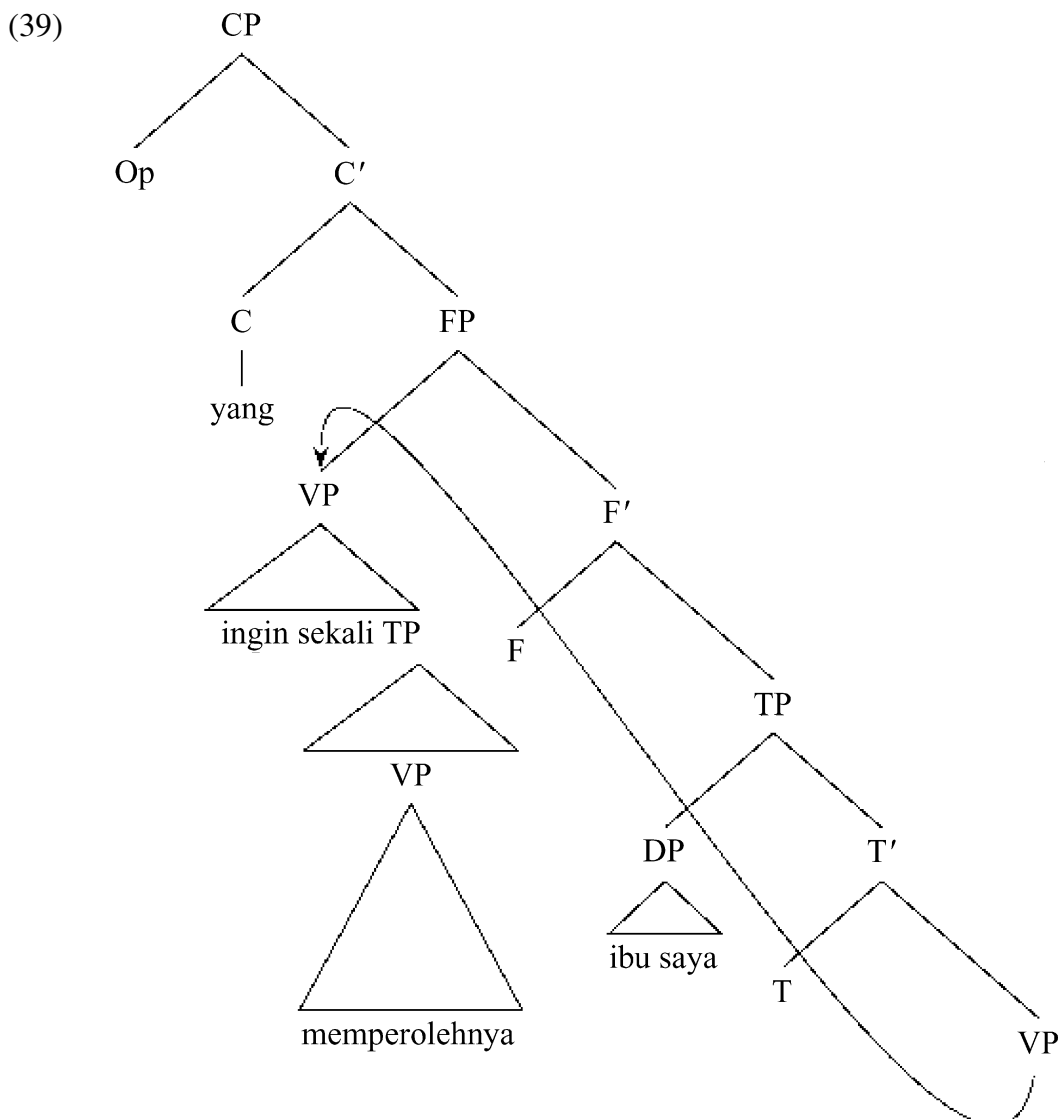
- (38) a. [Buku [yang [ingin sekali] ibu saya mem-peroleh-nya]] terlalu
 book Comp want very mother my Tr-obtain-it too
 mahal.
 expensive
 The book that my mother really wants to get is too expensive.

¹⁵ Though depth of embedding is highlighted here, it probably is not the only contributor to ‘distance’; for some relevant examples, see Sneddon (1996:289).

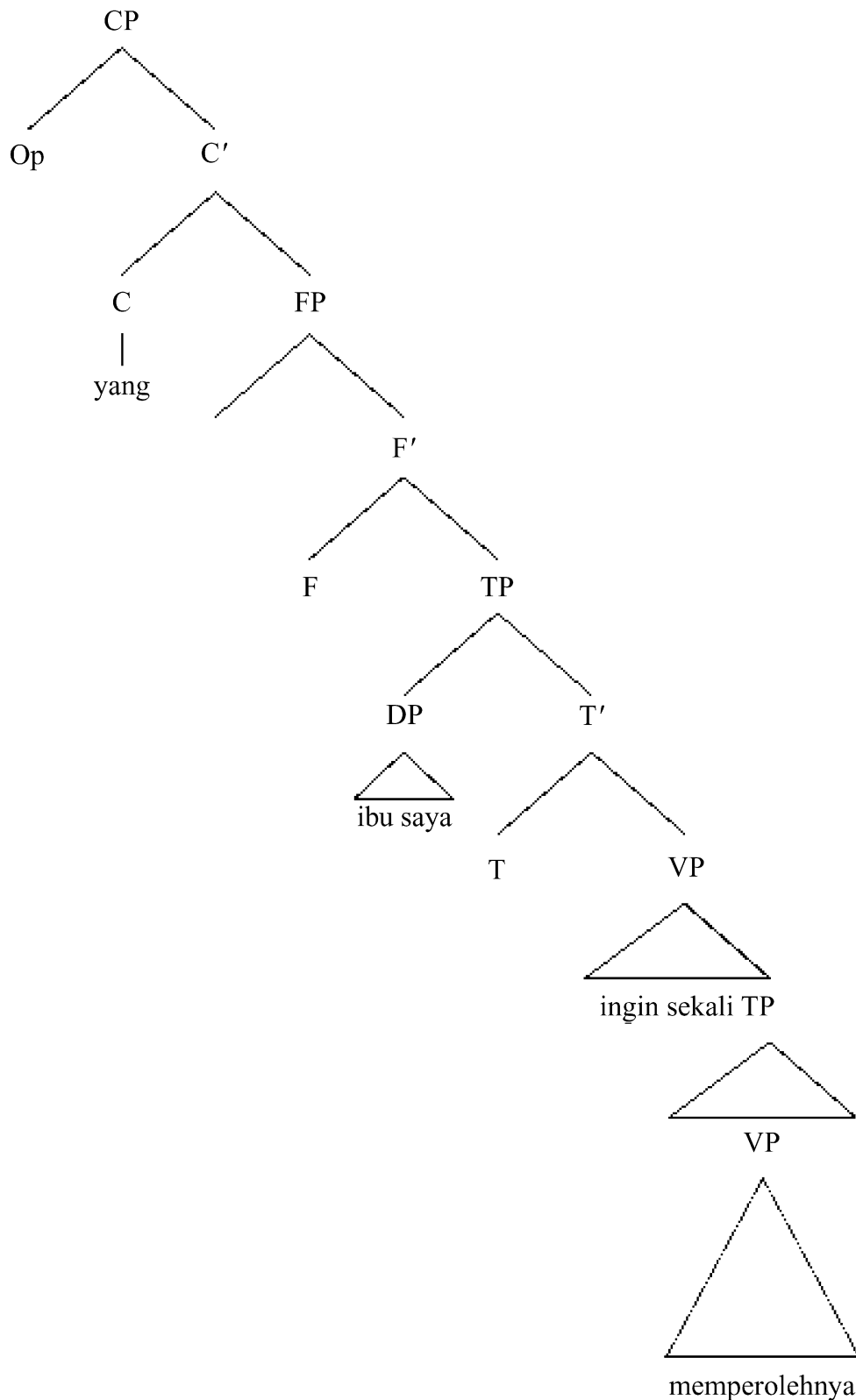
- b. *[Buku [yang [ingin sekali mem-peroleh-nya] ibu saya]] terlalu mahal.
 book Comp want very Tr-obtain-it mother my too
 expensive
 (The book that my mother really wants to get is too expensive.)

In both of these examples, the verb of the relative clause, *ingin* ‘want’, takes an infinitive complement. The key point is that resumption is acceptable in (38a), but not (38b). Why should this be?

The question has an immediate answer if we assume that the VP of verb-initial clauses raises outside the clause proper, to the specifier of some functional head F. To see this, notice that the entire infinitive complement, including the embedded VP and its resumptive pronoun, can either raise as part of the matrix VP (in (38b)) or exit from the matrix VP before (remnant) VP raising occurs (38a). When the infinitive raises as part of the matrix VP, that operation brings the resumptive pronoun closer to the relative operator that binds it, reducing the number of projections between them and therefore lowering the acceptability of resumption. Compare the structures in (39) – after VP raises – and (40) – before raising. (For convenience, vP and some other maximal projections in these trees are systematically omitted.)

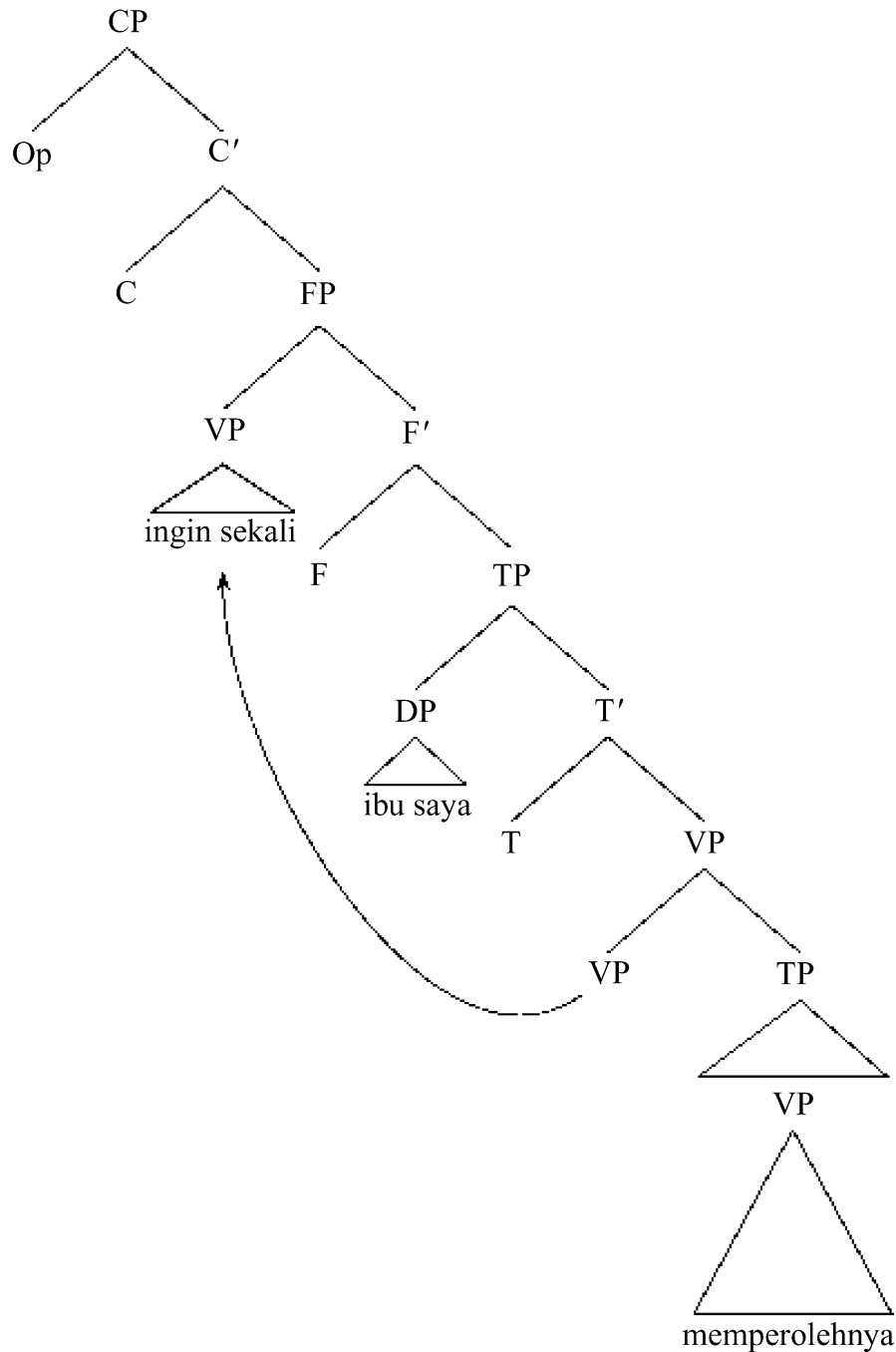


(40)



On the other hand, when the infinitive complement has previously exited from the matrix VP, raising this remnant VP has no impact on the distance between the resumptive pronoun and its binder. As long as the embedded VP remains within the infinitive complement – a reasonable assumption, – the pronoun and its binder are distant enough, and resumption is acceptable. See (41).

(41)



The assumption that VP *raises* is, of course, crucial to the account. If verb-initial clauses were produced by – say – merely reversing the left-to-right order of the subject and VP, without altering hierarchical relations, we would have no way of explaining the ill-formedness of (38b). The problem would be that the resumptive pronoun would be just as hierarchically distant from its binder in (38b) as in (35b). In short, the evidence suggests that in these prescriptive varieties, the VP of verb-initial clauses raises to a specifier outside the clause proper.

7.3. *Wh-movement of direct objects again*

The situation is quite different in the (nonprescriptive) varieties of standard Indonesian that permit direct objects to relativize via *wh*-movement. Recall that in these varieties, relative clauses of the type illustrated above in (17) and below in (42) are allowed.

- (42) Ini-lah [buku [yang mereka sudah baca ____]].
 this-Emp book Comp they have read
 This is the book that they already read.

What is the structure of verb-initial clauses in these varieties? If the VP of such clauses raises to a specifier position outside the clause proper, we would expect the raised VP to be an island, and wh-movement of the direct object to be impossible (cf. the discussion in section 3.2). But significantly, this is not what we find. Speakers who allow direct objects to undergo wh-movement in relative clauses that are SVO, such as (17) and (42), also permit extraction in relative clauses that are verb-initial. Consider the verb-initial relative clauses in (43), which have the intonation pattern characteristic of verb-initial clauses more generally.

- (43) a. [Buku [yang [ingin sekali ____] ibu saya]] terlalu mahal.
 book Comp want very mother my too expensive
 The book that my mother really wants is too expensive.
 b. Ini-lah [buku [yang [sudah baca ____] mereka]].
 this-Emp book Comp have read they
 This is the book that they already read.

To be sure, relative clauses of type (43) are not completely unrestricted. When the argument structure of the embedded verb would permit the null relative pronoun to be construed as subject or direct object, the subject construal must be chosen, and wh-movement of the direct object is blocked. Compare the alternative parses in (44), which reveal that the subject construal must be chosen even when the larger pragmatic context favors the direct object construal.

- (44) a. [Orang [yang ____ [tangkap mereka] di pasar]] telah men-curi tas.
 person Comp arrest them in market Past Tr-steal purse
 The man who arrested them in the market had stolen a purse.
 b. *[Orang [yang [tangkap ____] mereka di pasar]] telah men-curi tas.
 person Comp arrest they in market Past Tr-steal purse
 (The man who they arrested in the market had stolen a purse.)

Nonetheless, the fact that relative clauses of type (43) are permitted at all argues that in these varieties, the VP of verb-initial clauses *cannot* raise to a higher specifier. Rather, these clauses must be related to the basic clause structure (1) in some other way. Various options spring to mind for what the relation might be. Verb-initial clauses might represent a version of the basic clause structure in which the left-to-right order of subject and VP is reversed, but hierarchical relations are not altered; or they might be derived ‘in the phonology’, by the post-syntactic analogue of VP raising. Whatever the details, the conclusion that emerges is that in these (nonprescriptive) varieties, the VP of verb-initial clauses does not raise at all.

8. On the structure of Indonesian’s verb-initial clauses

Given the transparent structure of Indonesian’s SVO clauses, the difficulty of pinpointing the structure of its verb-initial clauses may come as a surprise. I have just argued that the subject of these clauses raises to the specifier of T, but whether or not VP raises to a clause-peripheral specifier depends on the variety. The evidence is limited enough that one might hesitate to accept

this result; certainly, more sustained investigation is called for. But let me assume for the moment that verb-initial clauses do indeed have different structures in different varieties and briefly speculate about how such a situation might have arisen.

The crucial evidence that reveals whether the VP of verb-initial clauses raises comes from relativization of direct objects. But this is an area of Indonesian syntax that is clearly in the midst of change. Although direct objects cannot be the target of *wh*-movement in prescriptive varieties, they can undergo *wh*-movement in nonprescriptive varieties of the standard language, as Musgrave (2001) and Cole and Hermon (2005) have shown. Research by Cole et al. (2006) on the colloquial Jakarta dialect – which is distinct from standard Indonesian – reveals that this change is part of a broader realignment of the Indonesian voice system, in which the prefixless forms of transitive verbs, which signal one type of passive in the standard language, are becoming reanalyzed as active. (For a broader investigation, see Cole et al., *this volume*.) These observations suggest that the fact that verb-initial clauses evidently have different structures in different varieties might be an even more remote consequence of the realignment of the voice system.

Indonesian's verb-initial word order is, of course, a non-neutral word order. Here it is useful to recall the comparative evidence that indicates that the neutral word order of Proto-Austronesian was verb-initial, and the SVO word order of Indonesian and related languages represents an innovation. Assuming this, one might speculate that the reanalysis that mapped SVO word order onto the clause structure in (1) left open several structural options for the historically prior, verb-initial version of the neutral word order. VP raising to a clause-peripheral specifier represents one such possibility; reversing the left-to-right order of subject and predicate in the basic clause structure represents another.

These observations by no means settle the question of how Indonesian's verb-initial clauses should be analyzed. But they may perhaps contribute to an understanding of why the question seems hard to answer. And they point to the need for closer investigation of verb-initial clauses in varieties of standard Indonesian and in the local Indonesian dialects. I hope to have established here that Indonesian's SVO clauses are not verb-initial clauses in disguise. The spotlight is now on the language's (genuinely) verb-initial clauses and their syntax.

Acknowledgements

I am indebted to Bambang Kaswanti Purwo, Yassir Nasanius Tjung, and Juliana Wijaya, who graciously provided judgments, linguistic insights, and valuable commentary on the material discussed in sections 2, 3 and 7. This article could not have been written without their help. I also gratefully acknowledge the speakers who, some 30 years ago, provided judgments reported in sections 3 and 6: Arief Budiman, Toto Dharmadji, Bianti Djiwandono, Ibrahim Hasan, Lisa Siregar, and Kris Sumano. Thanks to the ISMIL 10 audience and two reviewers for comments, and especially to Peter Cole and Gabriella Hermon for their support and encouragement. This paper is inspired by their impressive body of research on the syntax of the languages of Indonesia.

References

- Aldridge, E., 2002. Nominalization and *wh*-movement in Seediq and Tagalog. *Language and Linguistics* 3, 393–427.
- Aldridge, E., 2004. Ergativity and Word Order in Austronesian Languages. Doctoral dissertation, Cornell University, Ithaca, NY.

- Andersen, T., 1988. Ergativity in Pari, a Nilotic OVS language. *Lingua* 79, 289–324.
- Anderson, S., 1976. On the notion of subject in ergative languages. In: Li, C. (Ed.), *Subject and Topic*. Academic Press, New York, pp. 1–23.
- Blust, R., 2006. Austronesian languages. *Encyclopedia Britannica*, <http://www.britannica.com/eb/article-75196>.
- Cartier, A., 1989. De-voiced transitive verb sentences in formal Indonesian. In: Kaswanti Purwo, B. (Ed.), *Serpih-Serpih Telaah Pasif Bahasa Indonesia*. Kanisius, Yogyakarta, pp. 84–145.
- Chomsky, N., 1977. On wh-movement. In: Culicover, P., Wasow, T., Akmajian, A. (Eds.), *Formal Syntax*. Academic Press, New York, pp. 71–132.
- Chomsky, N., 1986. *Barriers*. MIT Press, Cambridge, MA.
- Chung, S., 1978. Stem sentences in Indonesian. *Pacific Linguistics, Series C*, No. 61, 335–365.
- Chung, S., 2006. Properties of VOS languages. In: Everaert, M., van Riemsdijk, H., Goedemans, R., Hollebrandse, B. (Eds.), *The Blackwell Companion to Syntax*. Blackwell, London, pp. 685–720.
- Cole, P., Hermon, G., 2005. Subject and non-subject relativization in Indonesian. *Journal of East Asian Linguistics* 14, 59–88.
- Cole, P., Hermon, G. (in press). VP raising in a VOS language. *Syntax*.
- Cole, P., Hermon, G., Tjung, Y., 2006. Is there *pasif semu* in Jakarta Indonesian? *Oceanic Linguistics* 45, 64–90.
- Cole, P., Hermon, G., Yanti, this volume. Voice in Malay/Indonesian.
- Dixon, R., 1994. *Ergativity*. Cambridge University Press, Cambridge.
- England, N., 1991. Changes in basic word order in Mayan languages. *International Journal of American Linguistics* 57, 446–486.
- Guilfoyle, E., Hung, H., Travis, L., 1992. SPEC of IP and SPEC of VP: two subjects in Austronesian languages. *Natural Language and Linguistic Theory* 10, 375–414.
- Kaswanti Purwo, B., 1984. The categorial system in contemporary Indonesian: pronouns. *NUSA* 19, 55–74.
- Kaswanti Purwo, B., 1989. Voice in Indonesian: a discourse study. In: Kaswanti Purwo, B. (Ed.), *Serpih-Serpih Telaah Pasif Bahasa Indonesia*. Kanisius, Yogyakarta, pp. 344–429.
- Kayne, R., 1994. *Antisymmetry*. MIT Press, Cambridge, MA.
- Keenan, E., 1972. Relative clause formation in Malagasy. In: Peranteau, P., Levi, J., Phares, G. (Eds.), *The Chicago Which Hunt: Papers from the Relative Clause Festival*. Chicago Linguistic Society, Chicago, IL, pp. 169–189.
- Keenan, E., 1976. Remarkable subjects in Malagasy. In: Li, C. (Ed.), *Subject and Topic*. Academic Press, New York, pp. 247–301.
- Macdonald, R., 1976. *Indonesian Reference Grammar*. Georgetown University Press, Washington, DC.
- Manning, C., 1996. *Ergativity: Argument Structure and Grammatical Relations*. CSLI Publications, Stanford, CA.
- Massam, D., 2001. Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19, 153–197.
- McCune, K., 1989. Passive function and the Indonesian passive. In: Kaswanti Purwo, B. (Ed.), *Serpih-Serpih Telaah Pasif Bahasa Indonesia*. Kanisius, Yogyakarta, pp. 282–343.
- Musgrave, S., 2001. *Non-Subject Arguments in Indonesian*. Doctoral dissertation, University of Melbourne, Melbourne, Australia.
- Pawley, A., Reid, L., 1979. The evolution of transitive constructions in Austronesian. In: Naylor, P. (Ed.), *Papers from the 2nd Eastern Conference on Austronesian Languages*. Michigan Papers on South and South East Asia, vol. 15, Ann Arbor, Michigan, pp. 103–130.
- Pearson, M., 2000. Two types of VO languages. In: Svenonius, P. (Ed.), *The Derivation of VO and OV*. John Benjamins, Amsterdam, pp. 327–363.
- Pearson, M., 2001. *The Clause Structure of Malagasy: A Minimalist Approach*. Doctoral dissertation, UCLA, Los Angeles, CA.
- Pearson, M., 2005. The Malagasy subject/topic as an A' element. *Natural Language and Linguistic Theory* 23, 381–457.
- Rackowski, A., Travis, L., 2000. V-initial languages: X or XP movement and adverbial placement. In: Carnie, A., Guilfoyle, E. (Eds.), *The Syntax of Verb Initial Languages*. Oxford University Press, Oxford, pp. 117–141.
- Richards, N., 2001. *Movement in Language: Interactions and Architectures*. Oxford University Press, Oxford.
- Rizzi, L., 1990. *Relativized Minimality*. MIT Press, Cambridge, MA.
- Sneddon, J., 1996. *Indonesian: A Comprehensive Grammar*. Routledge, London.
- Tjung, Y., 2006. *The Formation of Relative Clauses in Jakarta Indonesian: A Subject-Object Asymmetry*. Doctoral dissertation, University of Delaware, Newark, DE.
- Verhaar, J., 1988. Phrase syntax in contemporary Indonesian: noun phrases. *NUSA* 30, 1–45.
- Verhaar, J., 1989. Syntactic ergativity in contemporary Indonesian. In: Kaswanti Purwo, B. (Ed.), *Serpih-Serpih Telaah Pasif Bahasa Indonesia*. Kanisius, Yogyakarta, pp. 200–281.

Wolff, J., Oetomo, D., Fietkiewicz, D., 1992. Beginning Indonesian through Self-Instruction, Books 1–3. Cornell University Southeast Asia Program, Ithaca, NY.

Further reading

Cole, P., Hermon, G., Tjung, Y., 2005. How irregular is WH in situ in Indonesian? *Studies in Language* 29, 553–581.