Movement and Locality in Sundanese *Wh*-Questions

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Abstract. Nominal *wh*-questions (nonprepositional arguments) in Indonesian-type languages have received two principal analyses in recent years. Based on the three different surface strategies for forming these questions, Saddy (1991) has proposed distinct in situ, long-distance-movement, and partial-movement analyses for Indonesian. Cole & Hermon (1998) adopt the same general proposal for Malay. Conversely, examining the three parallel structures, Davies (2003) has proposed that there is no interclausal *wh*-movement in Madurese but that all nominal *wh*-arguments are generated in situ. Sundanese presents the same basic structural options as the other three languages. Examining the grammatical characteristics of the long-distance questions, we conclude that, as in Madurese, there is no evidence for interclausal A′-movement in Sundanese and that the apparent cases of long-distance movement are best analyzed as instances of A-movement. These questions thus appear to share some characteristics of nominal *wh*-questions in other western Austronesian languages, such as Malagasy (Keenan 2008) and Tagalog (Gerassimova & Sells 2008).

1. Introduction

As is true of other Indonesian-type languages, Sundanese presents three strategies for nominal *wh*-questions (nonprepositional arguments) in multiclausal structures, each of which is exemplified in (1)–(3).[1]

(1) Ali ng-anggap [Hasan kakara meuli **mobil naon**]? In situ
    Ali AV-assume Hasan recently AV.buy car what
    'What car did Ali assume Hasan had recently bought?'

(2) **Mobil naon** nu di-anggap ku Ali [(nu) kakara di-beuli Long-distance
    car what REL PV-assume by Ali REL recently PV-buy movement
    ku Hasan]?
    by Hasan
    'What car did Ali assume Hasan had recently bought?'

(3) Ali ng-anggap [**mobil naon** nu kakara di-beuli ku Partial movement
    Ali AV-assume car what REL recently PV-buy by
    Hasan]?
    Hasan
    'What car did Ali assume Hasan had recently bought?'

[1] Abbreviations used in the glosses include: AV: actor voice, PV: passive voice, REL: relativizer, DET: determiner, COMP: complementizer, DEF: definite, and PART: particle.

In (1), the *wh*-phrase *mobil naon* 'what car' occurs in situ in the embedded clause. In (2), the *wh*-phrase occurs sentence initially and there is a gap in the embedded clause. And in (3), it occurs in initial position in the embedded clause, again with a gap in the embedded clause. Despite there being three structures, all three sentences have the same interpretation.

These are the same structures that have been reported for other Indonesian-type languages, such as Indonesian (Saddy 1991), Malay (Cole & Hermon 1998), and Madurese (Davies 2003). Two principal analyses of these structures have been proposed in recent years. Saddy and Cole & Hermon have proposed in situ, long-distance movement, and partial movement for the Indonesian/Malay analogues. Conversely, Davies (2003) has proposed that there is no interclausal *wh*-movement in Madurese, instead asserting that all nominal *wh*-elements are generated in the clauses in which they occur. As we show presently, an analysis including long-distance A′-movement faces severe challenges, and so we argue that like Madurese there is no interclausal *wh*-movement in the Sundanese structures. Rather any apparent movement between clauses either is A-movement or is not cross-clausal movement at all. Inasmuch as the long-distance questions are clefts that include a headless relative clause and there are no topicalization structures that arise through movement, we conclude that there is no interclausal A′-movement of any kind in Sundanese.

Before proceeding to the proposal, we identify the analysis of in situ questions and sketch the competing analyses for the sentence-initial *wh*-questions. Focusing on the long-distance-movement structure, in section 3, we present aspects of the Sundanese questions that any analysis must account for. Section 4 presents a comparison of how each of these challenges is met by the A′-movement analysis and our ''no A′-movement'' approach. In section 5, we examine novel evidence from possessor questions, reconstruction, *wh*-adjuncts, and weak crossover, showing that in each instance the ''no A′-movement'' analysis easily accounts for the facts whereas the A′-movement analysis makes predictions inconsistent with the data. We return to the partial-movement structure in section 6. Finally, in section 7, we consider the fact that our proposed analysis rests on the assumption that, as in many western Austronesian languages, only subjects can be questioned by the fronting strategy. We briefly consider two proposals to account for this: Keenan's (1995, 2008) proposal that this need not be stipulated but actually follows from the manner in which predicates are formed in western Austronesian languages, and Cole, Hermon & Yanti's (2008) phase-based approach.

2. The Analyses

There have been two principal analyses of in situ questions in the generative literature: the movement analysis (Huang 1982, Takahashi 1993) and the unselective-binding analysis (Tsai 1994, Cole & Hermon 1998). Without argument, we adopt the unselective-binding analysis proposed by Cole & Hermon for Malay. In this analysis, an operator generated in the matrix scope position binds the

wh-variable, accounting for the scopal properties of the *wh*-phrase, as in (4), in which the embedded *wh*-phrase *buku naon* has matrix scope.

(4) [*wh-Op*$_i$ [Ali ng-anggap [Hasan kakara meuli   Embedded *wh*-phrase
             Ali AV-assume Hasan recently AV.buy
     mobil naon$_i$]]]
     car   what
     'What car did Ali assume Hasan had recently bought?'

The analysis we adopt for *wh*-in situ in Sundanese is the same as in the analyses of Malay and Madurese. Note that it provides a simple explanation for the lack of island effects in in situ questions.[2]

(5) Imas maca   buku [nu di-tulis   ku Asép jang **saha**]?   Relative clause
     Imas AV.read book REL PV-write by Asep for   who
     'Imas read the book that Asep wrote for whom?'

(6) Imas di-carék-an ku bapa [ku sabab   neunggeul **saha**]?   Adjunct clause
     Imas PV-yell-*AN* by father by because AV.hit   who
     'Imas was yelled at by her father because she hit whom?'

In (5), *nu ditulis ku Asép jang saha* 'that Asep wrote for whom' is a dependent of the relative clause. And in (6), *saha* 'who' is a dependent of the adjunct clause *ku sabab neunggeul saha* 'because she hit whom'. Both structures are well-formed wide-scope questions.

   The two analyses differ with respect to the cleft question structures and what type of movement may be involved. For Malay cleft questions, Cole & Hermon (1998, 2000) propose movement of a null *wh*-operator from its base position to the Spec,CP of the headless relative clause that contains it. In a monoclausal structure, the *wh*-phrase moves to the clausal Spec,CP, as illustrated in (7).[3]

(7) [Apa$_i$] [*Op*$_i$ [(yang) Fatimah baca t_i]]?   Malay/Indonesian
     what   REL   Fatimah read
     'What did Fatimah read?'

In the long-distance structure, the operator first moves to the intermediate Spec,CP by A′-movement and then to the higher Spec,CP, as in (8).

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[2] The morpheme *-an* is a multifunctional applicative suffix cognate to Indonesian *-i*.

[3] A cleft structure consists of the clefted element, here the *wh*-phrase *apa* 'what' and a headless relative clause usually introduced by the relative marker *yang*. In (5), *apa* is actually the predicate of the clause and *yang Fatimah baca* 'that Fatimah read' serves as the subject. See Cole, Hermon & Aman 2008 for details of the analysis. See Paul 2001 and Potsdam 2006 for parallel analyses in Malagasy and Davies 2010 for Madurese.

(8) [Apa$_i$] [Op_i [(yang) Hasan harap [t_i [(yang) Fatimah   Malay/Indonesian
    what   REL   Hasan hope   REL   Fatimah
    baca t_i?]]]]
    read
    'What did Hasan hope Fatimah read?'

In the analysis without interclausal A′-movement proposed for Madurese, the *wh*-operator is generated in the clause in which it surfaces and must occupy the subject position, at which point it may then move to Spec,CP. The apparent gap in the embedded clause to which it is thematically linked is a null pronominal *wh*-element. Davies (2003) argues that the *wh*-phrase is generated as a prepositional object in a prolepsis construction. Thus, a long-distance structure has the *wh*-element generated in object position of the matrix clause from which it moves to subject by a passive-like A-movement.

(9) [Sapa$_i$] [Op_i [se t_i e-kera t_i (bi') Hasan [pro_i maca buku   Madurese
    who   REL OV-think   by Hasan   AV   read book
    that
    rowa?]]]
    'Who does Hasan think read that book?'

In what follows we propose that in Sundanese long-distance structures the *wh*-phrase must target the matrix subject position but never undergoes interclausal A′-movement. It may only undergo A-movement. However, unlike Davies's analysis of Madurese, we propose that the Sundanese DP can undergo interclausal raising.

3. The Sundanese *Wh*-Structures

There are a number of properties characteristic of Sundanese *wh*-constructions that any analysis must take into account. We detail these in what follows.

3.1 Voice Marking

First, as is true of (Standard) Malay/Indonesian and Madurese, no verb may appear in the active voice between the *wh*-phrase and its thematic position. In the long-distance structure in (2), repeated in (10), the embedded object *mobil naon* 'what car' is questioned and both the matrix verb *anggap* 'assume' and the embedded verb *baca* 'read' are in the passive. The base position of *mobil naon* is indicated by the underscore. If either verb in (10) were active, the sentence would be ungrammatical, as illustrated in (11), where the active verbs are in bold.

(10) Mobil naon nu di-anggap ku Ali [(nu) kakara   di-beuli _ku Hasan]?
     car   what REL PV-assume by Ali REL recently PV-buy   by Hasan
     'What car did Ali assume Hasan had recently bought?'

(11) a. *Mobil naon nu   Ali **ng-anggap** [(nu) kakara   di-beuli __ku Hasan]?
         car   what REL Ali AV–assume   REL recently PV-buy   by Hasan

   b. *Mobil naon nu   di-anggap ku Ali [(nu) Hasan kakara   **meuli** __]?
         car   what REL PV-assume by Ali   REL Hasan recently AV-buy

   c. *Mobil naon nu   Ali **ng-anggap** [(nu) Hasan kakara   **meuli** __]?
         car   what REL Ali AV–assume   REL Hasan recently AV-buy
      ('What car did Ali assume Hasan had recently bought?')

Note that in (11a) the matrix verb is active *nganggap* 'assume' and in (11b) the embedded verb *meuli* 'buy' is active. In (11c) both are active and the result is unacceptable. The data in (12), with *sangka* 'suspect', and in (13), with *carita* 'say', simply serve to illustrate that this is a general phenomenon and not peculiar to a small set of verbs.[4]

(12) a.   Naon nu   di-sangka ku Ahmad [(nu) di-sumput-keun ku Dédén]?
          what REL PV-suspect by Ahmad   REL PV-hide-*KEUN*   by Deden
          'What did Ahmad suspect Deden hid?'

   b. *Naon nu   Ahmad nyangka   [(nu) di-sumput-keun ku Dédén]?
          what REL Ahmad AV.suspect   REL PV-hide-*KEUN*   by Deden

   c. *Naon nu   di-sangka [(nu) Dédén nyumputkeun]?
          what REL PV-suspect   REL Deden AV.hide-*KEUN*

   d. *Naon nu   Ahmad nyangka   [(nu) Dédén nyumputkeun]?
          what REL Ahmad AV.suspect   REL Deden AV.hide-*KEUN*

(13) a.   Naon nu   di-carita-keun ku Dédén [(nu) di-cét   ku Ahmad]?
          what REL PV-say-*KEUN* by Deden   REL PV-paint by Ahmad
          'What did Deden say Ahmad painted?'

   b. *Naon nu   Dédén nyarita-keun [(nu) di-cét   ku Ahmad]?
          what REL Deden AV.say-*KEUN*   REL PV-paint by Ahmad

   c. *Naon nu   di-carita-keun ku Dédén [(nu) Ahmad nge-cét]?
          what REL PV-say-*KEUN* by Deden   REL Ahmad AV-paint

   d. *Naon nu   Dédén nyarita-keun [(nu) Ahmad nge-cét]?
          what REL Deden AV.say-*KEUN*   REL Ahmad AV-paint

There have been two basic accounts proposed in the literature of Malay and Indonesian to account for similar facts.

3.1.1 *Active-voice constraint*

Saddy (1991) accounts for the parallel phenomenon in Indonesian with a constraint on active voice that rejects as ill-formed any structure in which a nominal moves ''over'' a verb that occurs with the active *meng-* prefix. Saddy (1991:185–186) states the constraint informally as in (14).

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[4] The suffix *-keun* is an applicative suffix cognate to Indonesian *-kan*.

(14) Active-voice constraint for Indonesian/Malay (following Saddy 1991)
      If movement takes place out of a VP, then the [*meng-*] verbal prefix must delete.

Cole & Hermon (1998, 2000) propose the same type of constraint for Singapore Malay. The corresponding rule for Sundanese would be formulated in terms of the active marker *ng(a)-*. However, such a constraint would be insufficient for Sundanese because there are verbs that occur without active voice marking, but movement across them is still ungrammatical. One such predicate is *percaya* 'believe'.

(15) Siti percaya [Ujang bisa ng-oméan **naon**]?
      Siti believe   Ujang   able   AV-fix   what
      'What did Siti believe Ujang was able to fix?'

The sentence in (15) illustrates the in situ question. Moving *naon* into initial position in the matrix clause results in unacceptability, as in (16).

(16) ***Naon** (nu) Siti percaya nu   bisa di-oméan ku Ujang?
       what   REL   Siti believe   REL   able   PV-fix   by Ujang
      (What did Siti believe that Ujang was able to fix?)

The verb must be in the passive voice for the question to be well-formed, as in (17).
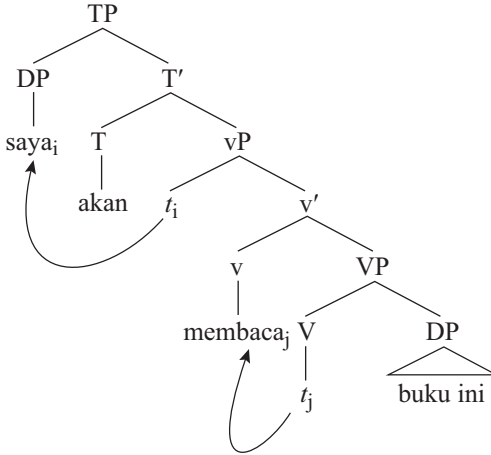
(17) Naon nu   **di-percaya** ku Siti (nu) bisa di-oméan ku Ujang?
      what REL   PV-believe   by Siti REL   able   PV-fix   by Ujang
      'What did Siti believe Ujang was able to fix?'

Therefore, in Sundanese the parallel constraint must be formulated in terms of the verb being in the passive voice in order for movement to take place.
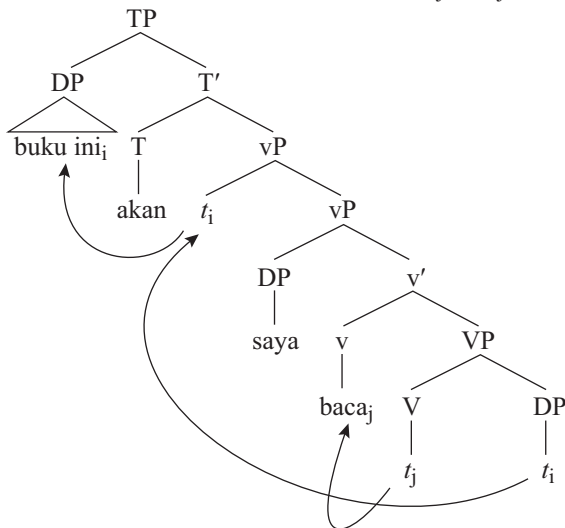
3.1.2 *A phase-based account*

In a recent discussion of these phenomena, Cole, Hermon & Yanti (2008; hereafter, CHY) adopt a different approach to the voice facts for Standard Indonesian. Following a proposal by Rackowski & Richards (2005), CHY propose that active-voice and object-voice morphology signal an Agree relation between the verbal predicate and the nominal that occurs in the outermost Spec,vP (satisfying an EPP feature on v). Active voice is the morphological manifestation of the actor nominal satisfying the EPP feature, as in (18).

(18) a.   Saya akan mem-baca buku ini.   Indonesian
            I   will AV-read   book this
            'I will read this book.'
      b.   [$_{TP}$ saya [$_{T'}$ akan [$_{vP}$ t_i membaca$_j$ [$_{VP}$ t_j buku ini]]]]

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                        TP
                   ┌────┴────┐
                  DP         T'
                   │    ┌─────┴─────┐
                saya_i  T           vP
                        │     ┌─────┴─────┐
                       akan  t_i          v'
                                     ┌────┴────┐
                                     v         VP
                                     │    ┌────┴────┐
                                membaca_j V         DP
                                          │          △
                                         t_j      buku ini
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In (18), the actor, *saya*, is in the outmost Spec,vP, resulting in the *mem-* prefix on the verb. Object voice (signaled by the absence of overt morphology in Standard Indonesian), is illustrated in (19).

(19) a.   Buku ini   akan saya baca.   Indonesian
            book this will I   read
            'This book will be read by me.'
      b.   [$_{TP}$ buku ini$_i$ [$_{T'}$ akan [$_{vP}$ t_i [$_{vP}$ saya baca$_j$ [$_{VP}$ t_j t_i]]]]]

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                        TP
                   ┌────┴────┐
                  DP         T'
                   △    ┌────┴─────┐
             buku ini_i T          vP
                       akan  ┌─────┴─────┐
                            t_i          vP
                                    ┌────┴────┐
                                   DP         v'
                                    │    ┌────┴────┐
                                  saya   v         VP
                                         │    ┌────┴────┐
                                       baca_j V         DP
                                              │          │
                                             t_j        t_i
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In (19), *buku ini* 'this book' is merged as object but moves to Spec,vP before moving to Spec,TP. In both cases, the voice morphology identifies the element that has moved to the edge of the vP phase, and in both cases this would be the analog of A-movement as the element at the phase edge winds up in the subject position. However, in this analysis active-voice and object-voice morphology is not restricted to what has been associated with A-movement. Because a questioned element must move to the edge of the vP phase in order to extract from the vP, voice morphology also reflects A′-movement. Here we illustrate with extraction of an object.[5]

(20) a. Apa yang akan kamu baca?   Indonesian
          what REL will   you   read
          'What will you read?'
    b. apa [Op_i yang [$_{TP}$ akan [$_{vP}$ t_i [$_{vP}$ kamu baca$_j$ [$_{VP}$ t_j t_i]]]]]
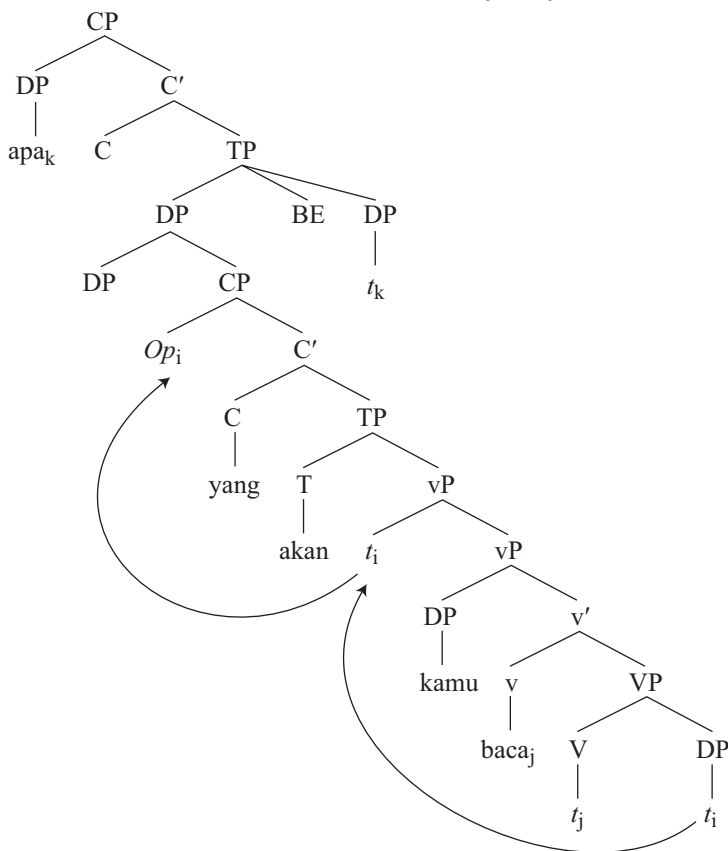
CHY propose (following Chung 1994 and Rackowski & Richards 2005) that in long-distance questions voice morphology signals agreement between the verb and the complement from which the nominal has been extracted. Thus, in long-distance questions, object voice marks the fact that the moved element has been extracted from an object complement rather than indicating the thematic role or grammatical function of the extracted element, as illustrated in (21).

(21) a. Siapa yang Siti pikir mem-beli buku di toko buku? Indonesian
       who REL Siti think AV-buy book in store book
       'Who did Siti think bought books at the book store?'
    b. siapa$_i$ [Op_i yang [$_{vP}$ t_i [$_{vP}$ Siti pikir [$_{CP}$ t_i [$_{TP}$ t_i membeli buku di toko buku]]]]]

Leaving aside certain details, in (21) *Op* moves to the lower Spec,CP, then moves to Spec,vP in the matrix before moving to the matrix Spec,CP. The active voice in the embedded clause reflects the fact that the *Op* is the actor of the embedded clause, and the object voice in the matrix clause reflects the fact that *Op* moves from the object complement to the outermost matrix Spec,vP prior to movement to the matrix Spec,CP.

Despite the fact that the two approaches account for the morphosyntactic facts in distinct ways, they share the assumption that long-distance cleft questions result from A′-movement and not A-movement. We argue in what follows that the Sundanese facts do not support an analysis that includes A′-movement.

3.2 Long-Distance Structures

There are, however, two other classes of complement-taking predicates that appear to allow long-distant movement but exhibit slightly different sets of facts. The first is exemplified by verbs such as *sangka* 'suspect', as in (22).

(22) Imas nyangka [(yén) Ujang geus nga-jual sawah].
    Imas AV.suspect COMP Ujang already AV-sell paddy field
    'Imas suspected that Ujang had sold the paddy field.'

The object of the embedded clause can be questioned in situ (23) or via long-distance movement (24).

(23) Imas nyangka [Ujang geus nga-jual **naon**]?
    Imas AV.suspect Ujang already AV-sell what
    'What did Imas suspect Ujang had sold?'

(24) **Naon** nu di-sangka ku Imas [(nu) di-jual ku Ujang]?
    what REL PV-suspect by Imas REL PV-sell by Ujang
    'What did Imas suspect Ujang had sold?'

Other verbs that exhibit the same behavior as *sangka* are *percaya* 'believe' and *anggap* 'assume', which can all be characterized as raising verbs.[6] This is illustrated in (25) and (26), in which the embedded subject and object, respectively, are raised into the matrix clause.

(25) Asép di-anggap ku Enéng [nga-leungit-keun kongkorong].
      Asep PV-assume by Eneng AV-lost-*KEUN*   necklace
      'Asep was assumed by Eneng to have lost the necklace.'

(26) Kongkorong di-anggap ku Enéng [di-leungit-keun ku Asép].
      necklace   PV-assume by Eneng PV-lost-*KEUN*   by Asep
      'The necklace was assumed by Eneng to have been lost by Asep.'

Note that when *kongkorong* 'necklace', which is merged as the embedded object, is the matrix subject, both the embedded and matrix verbs occur in the passive voice (26).

  The other class of predicates can be exemplified by *carita* 'say', as in (27).

(27) Eri nyarita [(yén) Ahmad bakal nge-cét   imah].
      Eri AV.say   REL Ahmad will AV-paint house
      'Eri said (that) Ahmad will paint the house.'

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  [6] Kurniawan (2010) provides detailed arguments for the raising analysis; therefore, we will review only one of them here. Unlike Madurese (Davies 2005), prolepsis and raising are easily distinguished in Sundanese: prolepsis requires both the occurrence of the complementizer *yén* and an overt resumptive pronoun, as is illustrated in (i).

  (i) Hasan$_i$ di-percaya (ku) Ahmad [yén   manéhna$_i$ bisa nyupiran treuk].
       Hasan PV-believe by Ahmad COMP he   can AV-drive truck
       'Ahmad believes of Hasan$_i$ that he$_i$ can drive a truck.'

The absence of either the complementizer (iia) or the resumptive pronoun (iib) results in ungrammaticality.

  (ii) a. *Hasan$_i$ di-percaya (ku) Ahmad [manéhna$_i$ bisa nyupiran treuk].
          Hasan PV-believe by Ahmad he   can AV-drive truck
          'Ahmad believes of Hasan$_i$ that he$_i$ can drive a truck.'
       b. *Hasan di-percaya (ku) Ahmad [yén   bisa nyupiran treuk].
          Hasan PV-believe by Ahmad COMP can AV-drive truck
          'Ahmad believes of Hasan$_i$ that he$_i$ can drive a truck.'

In a raising structure, the complementizer and the resumptive pronoun are obligatorily absent, as in (iii).

  (iii) Hasan$_i$ di-percaya (ku) Ahmad [bisa nyupiran treuk].
        Hasan PV-believe by Ahmad can AV-drive truck
        'Hasan is believed by Ahmad to be able to drive a truck.'

What is more, an embedded nonsubject can be the target of prolepsis (iv) but not of raising (v).

  (iv) Hasan$_i$ di-percaya (ku) Ahmad [yén   paraji   rék mariksa   pamajikan manéhna$_i$].
       Hasan PV-believe by Ahmad COMP FUT midwife FUT AV.examine wife   he
       'Ahmad believes of Hasan$_i$ that the midwife will examine his$_i$ wife.'

  (v) *Hasan di-percaya (ku) Ahmad [paraji   mariksa   pamajikan].
       Hasan PV-believe by Ahmad midwife AV.examine wife
       ('Hasan$_i$ is believed by Ahmad the midwife to examine his$_i$ wife.')

See Kurniawan 2010 for additional arguments from island effects and epistemic adverbs.

Again, the embedded object can be questioned in situ, as in (28), or with the long-distance structure, as in (29).

(28) Eri nyarita [Ahmad bakal nge-cét **naon**]?
      Eri AV.say Ahmad will   AV-paint what
      'What did Eri say Ahmad will paint?'

(29) **Naon** nu di-carita-**keun** ku Eri nu bakal [di-cét ku Ahmad]?
      what REL PV-say-keun   by Eri REL will PV-paint by Ahmad
      'What did Eri say Ahmad will paint?'

Noteworthy here is the appearance of the applicative suffix *-keun* on the matrix verb. Without this suffix, the sentence is ill-formed, as shown in (30).

(30) *Naon nu di-carita ku Eri nu bakal [di-cét ku Ahmad]?
       what REL PV-say   by Eri REL will PV-paint by Ahmad
       ('What did Eri say Ahmad will paint?')

However, as we illustrated earlier, this suffix is not a requirement for the long-distance questions with the *sangka*-class of verbs. One function of the *-keun* suffix is as an applicative that occurs when prepositional arguments are made direct arguments. With *carita* 'say', it occurs when the topic of discussion occurs as direct object or subject.

(31) Hasan nyarita ka Asép ngeunaan Méli.
      Hasan AV.say to Asep about   Meli
      'Hasan talked to Asep about Meli.'

(32) Hasan nyarita-**keun** Méli ka Asép.
      Hasan AV.say-*KEUN* Meli to Asep
      'Hasan talked about Meli to Asep.'

(33) Méli di-carita-**keun** (ku) Hasan ka Asép.
      Meli PV-say-*KEUN* by Hasan to Asep
      Lit. 'Meli was talked about by Hasan to Asep.'
      'Hasan talked about Meli to Asep.'

In (31), both objects occur in prepositional phrases, and *-keun* is absent. In (32), *Méli*, the topic of discussion, occurs as a direct object and the suffix is present, and in (33) *Méli* is the subject of the passive, and the suffix again occurs obligatorily. So, one factor to be accounted for is the presence of *-keun* with some verbs but not with others.

In what follows, we detail an analysis of Sundanese questions that naturally accounts for all of the characteristics just outlined.

4. The Analyses

Having established some characteristics of Sundanese *wh*-questions, we demonstrate how they follow naturally in an analysis that posits no long-distance A′-movement. In an analysis that includes long-distance A′-movement, however, they require additional stipulation.

4.1 Passive

The first issue of concern is why passive morphology is required on all verbs between the position in which the operator is merged and its surface position. As described earlier, it is possible to formulate a constraint to this effect, ruling out any structures in which an element moves across an active voice verb, or one can assume that passive *di-* is the required morphology when either a nonactor or a nominal extracted from an object complement is at the left edge of the relevant vP phase. Either solution is required in an A′-movement analysis, both in monoclausal and multiclausal structures.

However, passive follows naturally and need not be stipulated either by constraint or in a disjunctive *di-* morphological rule if A′-movement is eschewed, leaving A-movement as the only means for getting the operator into the proper position. If it must be in the subject position of the highest clause, the only way it can move to that argument position is via A-movement. In a monoclausal structure in which the operator is in a nonsubject position, the only means available in Sundanese for moving it to subject position is by passive; thus the passive morphology is expected. In a multiclausal structure, if the operator originates in the embedded clause, the sole mechanism for moving to matrix subject position is raising. Because only subjects can raise, it is also the case that the operator must be in the embedded subject position. This parallels the situation with a declarative raising structure. In (34), *buku éta* 'that book' is merged as the object of the embedded clause, moves to embedded subject position via A-movement, and then raises to the matrix clause.[7]

(34) [Buku éta]$_i$ di-sangka (t'_i) ku Asép t_i di-baca t_i ku Méli.
　　　book DET PV-suspect　　by Asep　PV-read　by Meli
　　　'That book was suspected by Asep to be read by Meli.'

The question in (12a), repeated as (35), precisely parallels the structure in (34).

(35) **Naon** nu　di-sangka　ku Ahmad [(nu) di-sumput-keun ku Dédén]?
　　　what　REL PV-suspect by Ahmad　REL PV-hide-*KEUN*　by Deden
　　　'What did Ahmad suspect that Deden hid?'

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[7] In (34), the intermediate trace t'_i represents the position to which *buku éta* 'that book' raises if (34) is analyzed as raising to object preceding passive. However, whether *buku éta* raises to object or directly to subject makes no difference to the current analysis.

Just as in (34), in (35) both matrix and embedded verbs are in the passive voice. If we take (35) to be a simple case of raising (to subject or object), the structure is a simple case of A-movement. In this way, the passive morphology in both matrix and embedded clauses follows without stipulation in the A-movement analysis.

Additionally, the A′-movement analysis with the active-voice constraint predicts that as long as only passive voice occurs it should be possible for the operator to move across the verb.[8] That, however, turns out not to be true. With many ditransitive verbs, it is possible to passivize either the theme argument (36b) or the goal argument, as in (36c).

(36) a. Asép ngirim buku ka Enéng.
        Asep AV.send book to Eneng
        'Asep sent a book to Eneng.'
     b. Buku éta di-kirim ka Enéng ku Asép.
        book that PV-send to Eneng by Asep
        'The book was sent to Eneng by Asep.'
     c. Enéng di-kirim-an buku éta ku Asép.
        Eneng PV-send-*AN* book that by Asep
        'Eneng was sent the book by Asep.'

Note that with the verb *kirim* 'send', the goal *Enéng* can be passivized as long as the applicative suffix -*an* occurs. Both analyses predict that either the theme or the goal can be questioned, and as (37) shows, this is indeed the case.

(37) a. **Naon** nu   di-kirim ka Enéng ku Asép?
        what REL PV-send to Enéng by Asép
        'What did Asep send to Eneng?'
     b. **Saha** nu   di-kirim-an buku éta ku Asép?
        who   REL PV-send-*AN* book that by Asép
        'Who did Asep send the book?'

Note that when the goal is questioned (37b), the applicative suffix -*an* is required. The A′-movement analysis incorporating the active-voice constraint appears to make an additional prediction, however: with the verb in the passive voice, there should be nothing to prevent a theme object from being questioned. As (38) illustrates, such a structure is ill formed.

(38) ***Naon** nu   Enéng di-kirim-an ku Asép?
        what REL Eneng PV-send-*AN* by Asep
        ('What was Eneng sent by Asep?')

---

[8] It should be noted that an analysis incorporating the disjunctive voice agreement rule does not face this same criticism. This perhaps argues for the superiority Agree analysis.

In (38), we have attempted to question the object of a sentence like (37c). Because there is passive morphology on the verb, the constraint on active morphology will be insufficient to rule out (38) in the A′-analysis. Under the A-movement analysis, in which the *wh*-phrase must be a subject, the ungrammaticality of (38) is easily explained: because *Enéng* fills the subject position, it is unavailable to the *wh*-phrase. However, as indicated in footnote 5, the A′-movement analysis that incorporates the disjunctive Agree analysis of the *di-* passive morphology is immune from this criticism; therefore, we will consider only this A′-movement analysis.[9]

4.2 The Suffix -keun

As shown in section 3.2, two classes of predicates can be distinguished on the basis of whether or not the suffix *-keun* obligatorily appears on the matrix verb in apparent long-distance-movement questions. Although verbs like *carita* 'say', *haréwos* 'whisper', and others require the suffix, verbs such as *sangka* 'suspect' and *percaya* 'believe' do not. The *sangka*-class is made up of raising predicates. With these verbs the embedded subject can raise to the matrix clause, as shown in (39b).

(39) a. Indung-na   percaya Rina geus   nga-bersih-an méja.
        mother-DEF believe Rina already AV-clean-AN   table
        'Mother believes Rina cleaned the table.'
    b. Rina di-percaya ku indung-na   geus   nga-bersih-an méja.
       Rina PV-believe by mother-DEF already AV-clean-AN   table
       'Rina is believed by her mother to have cleaned the table.'

When the embedded subject is an operator rather than a noninterrogative DP, the operator can raise in the same manner, as in the question in (40).

(40) **Saha** nu   di-percaya ku indung-na   (nu) geus   nga-bersih-an méja?
     who   REL PV-believe by mother-DEF REL already AV-clean-AN   table
     'Who is believed by her mother to have cleaned the table?'

---

[9] Although it may appear that the Agree analysis can account for all of the relevant data, things are not completely straightforward. Cole & Hermon (2005) argue strongly for the *meng*-deletion account on the basis of extraction of objects in Bahasa Indonesia relative clauses:

(i) [Buku [yang Budi tidak akan baca *t*]] sangat menarik.
     book   that Budi not   will read   very   interesting
     'The book that Budi will not read is very interesting.'

In (i), the agent *Budi* is separated from the verb *baca* 'read' by the negative *tidak* and the future *akan* 'will', an impermissible word order for the object voice. Cole & Hermon (2005) reason that because of the word order facts the object must be directly relativized and the lack of the meng-prefix is the result of deletion. Thus, on the face of it, it is unclear that the Agree analysis can account for all the cases.

However, A′-movement rather than A-movement of the *wh*-operator would give the same result as under both A- and A′-movement we expect *di*- morphology to surface on the matrix verb.

The *carita*-class presents a different fact pattern. Recall that in declarative, active structures the -*keun* suffix is not required, as illustrated in (41a) with the verb *haréwos* 'whisper'.

(41) a. Enéng nga-haréwos (yén) Méli malsu-keun   buku éta.
        Eneng AV-whisper COMP Meli AV.plagiarize-*KEUN* book DET
        'Eneng whispered that Meli had plagiarized that book.'
    b. Saha nu di-haréwos-**keun** ku Enéng (nu) malsu-keun   buku
        who REL PV-whisper-*KEUN* by Eneng REL AV.plagiarize-*KEUN* book
        éta?
        DET
        'Who did Eneng whisper had plagiarized that book?'

As before with *carita* 'say', with *haréwos* 'whisper' the suffix is obligatory in the question. Without –*keun*, (41b) is ill formed.

Recall from (31)–(33) that the applicative suffix -*keun* occurs when a verb takes a direct argument rather than its usual prepositional argument, as in (33), repeated here as (42).

(42) Méli di-carita-**keun** (ku) Hasan ka Asép.
     Meli PV-say-*KEUN* by Hasan to Asep
     Lit. 'Meli was talked about by Hasan to Asep.'
     'Hasan talked about Meli to Asep.'

Note that in (42), *Méli*, the topic of discussion, is the subject of the clause. Likewise, when the clausal argument occurs as the subject of *carita* or *haréwos*, the suffix is also obligatory.

(43) a. Yén Hasan kakara meuli mobil di-carita-*(**keun**) ku Asép.
        COMP Hasan recently AV.buy car PV-say-*KEUN*   by Asep
        'That Hasan recently bought a car was said by Asep.'
    b. Yén Méli malsu-keun   buku éta di-haréwos-*(**keun**) ku Enéng.
        COMP Meli AV.plagiarize-*KEUN* book DET PV-whisper-*KEUN* by Eneng
        'That Melli plagiarized the book was whispered by Eneng.'

When *carita* and *haréwos* are suffixed with -*keun*, the embedded subject may raise to subject of the matrix clause.

(44) a. Hasan di-carita-**keun** ku Asép kakara meuli mobil.
        Hasan PV-say-*KEUN* by Asep recently AV.buy car
        'That Hasan recently bought a car was said by Asep.'

b. Méli di-haréwos-**keun** ku Enéng malsu-keun   buku éta.
   Meli PV-whisper-*KEUN* by Eneng AV.plagiarize-*KEUN* book DET
   'Eneng whispered about Meli that she plagiarized that book.'

The structure of the *wh*-question in (41b) parallels the raising structure in (44b). And, of course, raising-to-subject is A-movement. Therefore, under the A-movement analysis, the obligatory occurrence of *-keun* in the questions of *carita*-class verbs again follows naturally.

(45) Méli di-haréwos-**keun** ku Enéng (manéhna) malsu-keun   buku éta.
     Meli PV-whisper-*KEUN* by Eneng she   AV.plagiarize-*KEUN* book DET
     'Eneng whispered about Meli that she plagiarized that book.'

  Additionally, passive structures for verbs of this clause do not require *-keun*. As (46a) shows, the goal of *haréwos* 'whisper' can be passivized and *-keun* is not present. However, even when the matrix verb is passive, as in (46b), it is still impossible to question an element from the embedded clause.

(46) a. Asép di-haréwos-an ku Enéng buku éta di-palsu-keun   ku Méli.
         Asep PV-whisper-*AN* by Eneng book DET PV-plagiarize-*KEUN* by Meli
         'Asep was whispered to by Eneng that the book was plagiarized by Meli.'
     b. *Buku naon (nu) Asép di-haréwos-an ku Enéng (nu)
         book what REL Asep PV-whisper-*AN* by Eneng REL
         di-palsu-keun   ku Méli.
         PV-plagiarize-*KEUN* by Meli
         ('What book was Asep whispered to by Eneng had been plagiarized by
         Meli.')

    The facts associated with-*keun* are all predicted under the A-movement analysis of Sundanese questions, but they beg a straightforward account in the A′-movement analysis.

5. Additional Evidence for the A-Movement Analysis

In addition to the arguments above, many of which are similar to those of Davies 2003 for Madurese, there are other data and characteristics that would seem to favor the A-movement analysis over the A′-movement analysis for Sundanese. These are taken in turn in what follows.

5.1 Subjects, Possessors, and A-Movement

Until this point, all cleft questions have targeted the subject of the matrix clause. However, possessors of NPs can also be questioned by the cleft strategy.

(47)   a.   Saha nu mobil-na di-jual   ku Asép?
            who REL car-DEF   PV-sell by Asep
            'Whose car was sold by Asep?'
       b.   saha [CP Op_i [TP [DP mobil-na t_i]$_j$ [vP dijual t_j ku Asép]]]
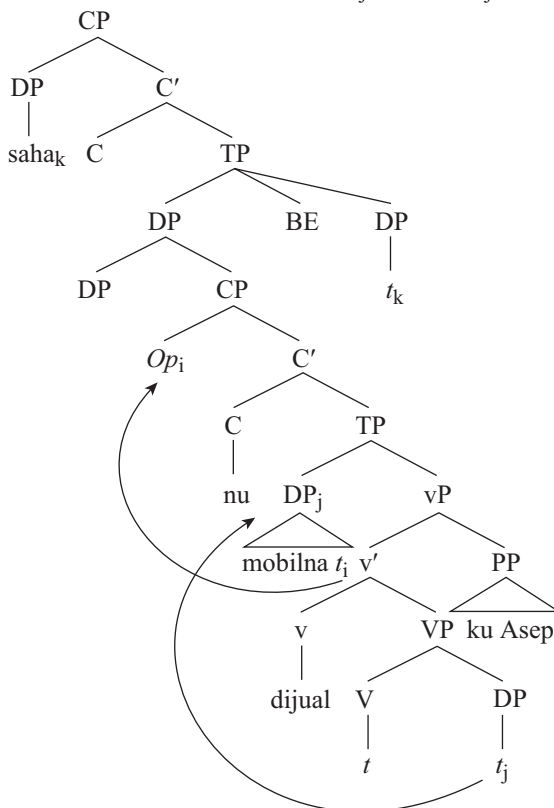

In (47), the *wh*-operator is merged as the possessor of *mobil* 'car' and is extracted. This type of cleft question is only possible when the DP is the subject of the clause.

   Given the subject restriction on this structure, the A- and A′-movement analyses make different predictions regarding the questioning of possessors of embedded dependents. The A′-movement analysis would appear to predict that the possessor of the embedded subject could be questioned as long as the matrix verb is passive. In such a structure, the possessor of embedded subject is extracted to Spec,CP of the embedded clause and then moves to the higher Spec,CP by A′-movement. However, as (48) shows, this structure is not well formed.

(48)   a.   *Saha nu   di-sangka   ku Méli (nu) mobil-na di-jual ku Asép?
            who REL PV-suspect by Meli REL car-POS PV-sell by Asep
            ('Whose car did Meli think was sold by Asep?')

b. [saha$_i$] [Op_i [nu di-sangka ku Méli [t_i [[mobil-na t_i]$_j$ di-jual t_j ku Asép]]]]
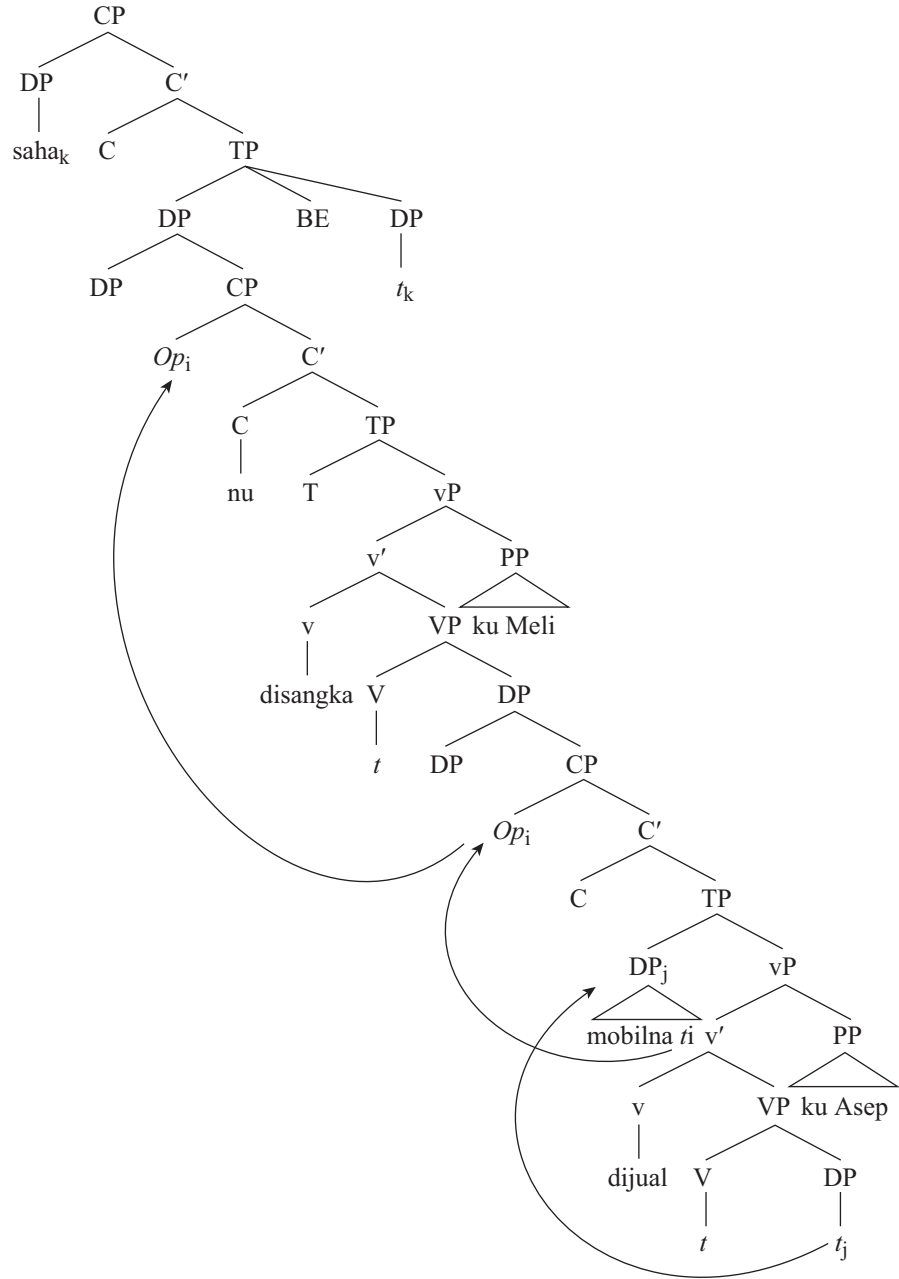
The derivation in (48b) shows the operator moves as part of the DP to subject position in the embedded clause, is extracted to the lower Spec,CP, and is raised to the higher Spec,CP. This obeys the Subject Constraint on extraction of possessors and the passive voice is expected due to extraction from an object clause. Nonetheless the structure is ungrammatical.

However, the ungrammaticality of (48) is expected under the proposed analysis as the only way of moving from the embedded clause to the matrix clause is by raising (A-movement). Once the possessor in the embedded clause is extracted in the embedded clause, there is no means to move it to the matrix clause because it is not the subject. The A-movement analysis predicts that in order for the possessor to be questioned in the matrix clause it is necessary to first raise the entire DP to matrix subject position, as in (49).

(49) a. Saha nu   mobil-na di-sangka   ku Méli di-jual ku Asép?
         who REL car-DEF   PV-suspect by Meli PV-sell by Asep
         'Whose car is thought by Meli to be sold by Asep?'

b. [saha$_i$] [Op_i [nu [mobil-na t_i]$_j$ d$_i$-sangka ku Méli [t_j di-jual t_j ku Asép]]]
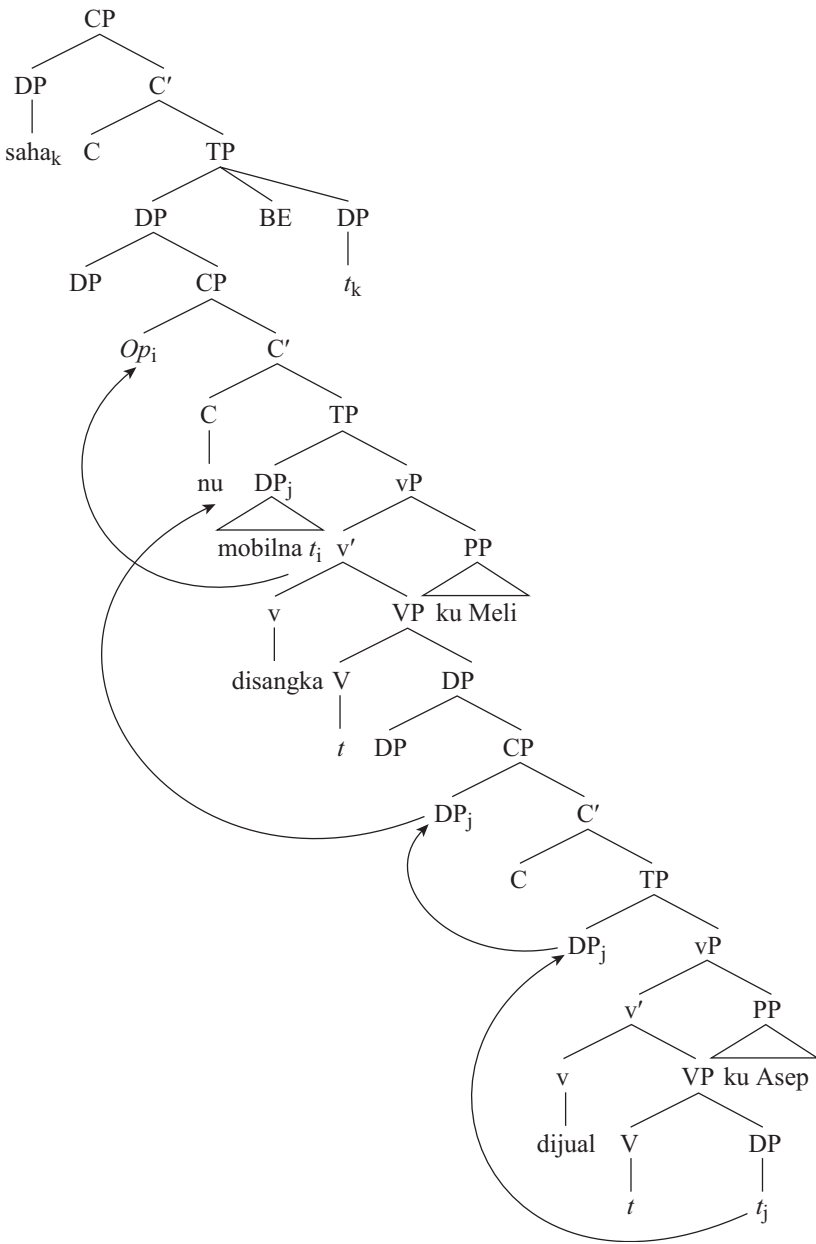
Although (49) is compatible with either analysis, the ungrammatical (48) is compatible only with the A-movement analysis. Again, the facts follow naturally from the proposed analysis.

5.2 Reconstruction

Reconstruction effects have long been associated with A′-dependencies, and the lack of same is generally taken as a property of A-dependencies. Data from both reflexive binding and bound pronouns are relevant here and bear on the proposed analysis.

5.2.1 Reflexives

Compare the interpretations of (50) and (51).

(50) Which picture of herself is it widely assumed that Meredith liked best?

(51) *This picture of herself is believed to be cherished by Meredith.

In (50), *herself* is interpreted as referring to *Meredith*, despite the fact that the necessary structural relationship between *Meredith* and the anaphor does not obtain in the final syntactic structure — that is, *Meredith*, the embedded subject, does not locally c-command *herself*. However, if *which picture of herself* is reconstructed in LF into its premovement position as the embedded object, the proper structural relation holds and the coindexation is possible; thus, the rationale for the reconstruction hypothesis. In the case of raising (51), which is A-movement, the reconstructed interpretation is not possible. This follows if reconstruction cannot be applied to the product of A-movement. If the Sundanese multiclausal *wh*-structure evinces reconstruction effects, this would constitute powerful evidence against our proposed analysis.

   Before proceeding to the evidence, a word or two about Sundanese reflexives is in order. *Dirina sorangan* is the most common reflexive anaphor, illustrated in (52)–(53).

(52) Hasan melong **dirina sorangan** dina kaca eunteung.
       Hasan AV-see self   in   glass mirror
       'Hasan looked at himself in the mirror.'

(53) Hasan nyarita ka Enéng ngeunaan **dirina sorangan.**
       Hasan AV-tell to Eneng about   self
       'Hasan$_i$ talked to Eneng$_j$ about him$_{i/k}$herself$_{j/k}$.'

In (52), *dirina sorangan* is bound by the subject *Hasan*; in (53) it can refer to either *Hasan* or *Enéng*, so there is no subject requirement on binding anaphors. However, aside from prepositionally marked arguments, there is the familiar c-command requirement on binding, as shown in (54)–(55).

(54) Indung-na   Hasan melong **dirina sorangan** dina kaca eunteung.
       mother-DEF Hasan AV-see self   in   glass mirror
       'Hasan's mother looked at herself/*himself in the mirror.'

(55) *Buku nu   di-tulis   ku Asép di-baca ku **dirina sorangan**.
     book REL PV-write by Asep PV-read by self
     Lit. 'The book written by Asep was read by himself.'

In (54), only *indungna Hasan* 'Hasan's mother' can bind the reflexive; the possessor *Hasan* cannot. Likewise, *Asép* is not a possible antecedent in (55).

   As illustrated in (56), reflexives are not clause bounded.

(56) Hasan nyarita ka Enéng yen   **dirina sorangan** kudu geus   balik   ka
     Hasan AV-tell to Eneng COMP self   must already return to
     imah   jam   11.
     home hour 11
     Lit. 'Hasan told Eneng that himself/herself must return home at 11.'

In (56), either the matrix subject *Hasan* or the indirect object *Enéng* can bind the reflexive subject of the embedded clause. Additionally, as is true of a number of closely related languages (Indonesian, Batak, Madurese, etc.), a reflexive anaphor in the subject position of a passive structure may be bound by the postverbal agent of the clause, as illustrated in (57) and (58).

(57) a. Enéng ninggal-i gambar **dirina sorangan**.
       Eneng AV.look-*I* picture self
       'Eneng looked at a picture of herself.'
     b. Gambar **dirina sorangan** di-tinggal-i (ku) Enéng.
       picture self   PV-look-*I*   by Eneng
       'Eneng looked at a picture of herself.'

(58) a. Asép maca   carita **dirina sorangan**.
       Asep AV.read story self
       'Asep read a story about himself.'
     b. Carita **dirina sorangan** di-baca (ku) Asép.
       story self   PV-read by Asep
       'Asep read a story about himself.'

In (57b), the passive clause, *dirina sorangan* corefers with the agent of the clause, *Enéng*. In (58b), the same coreference relationship holds between the anaphor and the agent, *Asép*. Cole & Hermon (2008) examine the parallel facts in Batak and propose an analysis that involves reconstruction of the subject and agent within the clause. Whether this is an appropriate analysis of the Sundanese facts is unclear, but that need not concern us here. What is important is the fact that the passive agent can bind a reflexive in the subject position of the same clause.

   Now consider the raising structures in (59) and (60).

(59) Gambar **dirina sorangan** di-sangka ku Enéng *t′* di-tingal-i *t* ku Asép.
　　 picture self　　　　　 PV-suspect by Eneng　 PV-look-*I*　 by Asep
　　 'Eneng_i suspects that a picture of herself_i/*himself_j was looked at by Asep_j.'

(60) Carita **dirina sorangan** di-anggap ku Asép *t′* di-baca *t* ku Enéng.
　　 story self　　　　　 PV-assume by Asep　 PV-read　 by Eneng
　　 'Asep_j assumes that a story about himself_j/*herself_i was read by Eneng_i.'

In (59), *gambar dirina sorangan* is merged as the object of the embedded clause, is passivized in the lower clause, and raises to the matrix clause, where it winds up as the subject of *disangka* 'be suspected'. Important for current concerns is the fact that (59) is unambiguous and the only possible interpretation is that the reflexive anaphor is bound by the matrix agent, *Enéng*. An interpretation in which it is bound by the agent of the embedded clause, *Asép*, is unacceptable. Thus, it is not the case that *gambar dirina sorangan* undergoes reconstruction into the embedded clause at LF. Example (60) illustrates the same fact. Of course, this is the result that the theory predicts: raising is A-movement and thus cannot trigger reconstruction. So, Sundanese appears to be well behaved in this regard.

　　Now consider multiclausal *wh*-questions. If, contrary to our claim, these structures involve A′-movement, then we would expect to find reconstruction effects of the type found in English in (50). However, this is not the case.

(61) Gambar **dirina sorangan** nu　 mana　nu　 di-sangka　ku Enéng nu
　　 picture self　　　　　 REL　which REL PV-suspect　by Eneng REL
　　 di-tingal-i　ku Asép?
　　 PV-look-*I*　by Asep
　　 'Which picture of herself_i/*himself_j does Eneng_i suspect Asep_j looked at?'

(62) Carita **dirina sorangan** nu　 mana　nu　 di-anggap ku Asép nu　 di-baca
　　 story self　　　　　 REL　which REL PV-assume by Asep REL PV-read
　　 ku Enéng?
　　 by Eneng
　　 'Which story about himself_i/*herself_i does Asep_i suspect Eneng_i read?'

The questions show the same pattern of facts as the raising examples in (59) and (60). In (61), it is only the matrix agent, *Enéng*, that can bind the anaphor; the embedded agent, *Asép*, cannot be interpreted as the antecedent of *dirina sorangan*. And in (62) *dirina sorangan* can only refer to *Asép*, the matrix agent, and not to *Enéng*, the embedded agent. This is not the result that the A′-movement analysis predicts. Either interpretation should be possible. However, the data in (61) and (62) are precisely what is expected assuming the analysis proposed.

　　It should be noted that this same result obtains regardless of whether there is an overt matrix agent.

(63) Gambar **dirina sorangan** nu　mana　nu　di-sangka　nu　di-tingal-i ku
　　 picture　self　　　　　　 REL which REL PV-suspect REL PV-look-*I* by
　　 Asép?
　　 Asep
　　 'Which picture of self$_i$ is it suspected that Asep$_{*i}$ looked at?'

As (63) shows, even when there is no overt matrix agent, the embedded agent
cannot be interpreted as binding the anaphor. The only legitimate antecedent is the
referent of a null agent. Therefore, the binding facts in (61) and (62) cannot be
attributed to some sort of interference on the part of the matrix agent; rather, they
are simply due to the fact that the conditions for reconstruction are not met. There
is no A′-dependency.

　　 Thus, the lack of reconstruction effects with reflexive anaphors provides yet
another data domain in which the proposed analysis, which eschews A′-movement,
naturally accounts for the facts whereas the A′-movement analysis fails to do so.

5.2.2 *Bound-variable pronouns*

Bound-variable pronouns also exhibit reconstruction effects. Just as *her* is bound by
every mother in (64), it can also be bound by *every mother* in (65).

(64) Every mother is afraid of such news about her child.

(65) What news about her child is every mother afraid of?

In (64), *every mother* c-commands and can bind the pronoun *her*, giving the bound-
variable interpretation. In (65), despite the fact that *every mother* does not c-command
her in the surface structure, the same binding relationship can hold, thus illustrating
reconstruction effects.

　　 Things work differently in Sundanese. In the declarative in (66), *tiap indung* 'every
mother' binds the (null) pronominal possessor of *budak* 'child'.

(66) Tiap　 indung$_i$ nga-rasa hariwang kana béja　goréng ngeunaan
　　 every mother AV-feel　worry　　 to　　 news bad　　 about
　　 budak-na *pro$_{i/j}$*.
　　 child-DEF
　　 'Every mother is worried about bad news regarding her child.'

Unsurprisingly, this same circumstance obtains in the in situ question in (67).

(67) Tiap　 indung$_i$ nga-rasa hariwang kana béja　naon ngeunaan budak-na *pro$_{i/j}$*?
　　 every mother AV-feel　worry　　 to　　 news what about　　 child-DEF
　　 'What news is every mother worried about regarding her child?'

However, in (68), the null pronominal possessor of *budak* refers to a specific person or persons known from the discourse context; it cannot be bound by *tiap indung*.

(68) Béja naon ngeunaan budak-na *pro*$_{*i/j}$ nu di-hariwang-keun ku tiap
      news what about   child-DEF   REL PV-worry-*KEUN*   by every
      indung$_i$?
      mother
      'What news about the child is every mother worried about?'

These results following naturally in the proposed analysis but are unexpected if *beja naon ngeunaan budakna* 'what news about her/his child' is fronted via A′-movement. The data in (69) illustrate the same facts.

(69) a. Tiap milyunér$_i$ nyarita-keun carita suksés ngeunaan kahirupan
         every millionaire AV.tell-*KEUN* story success about   life
         ngora-na *pro*$_{i/j}$.
         young-DEF
         'Every millionaire told a success story about his/her youth.'
     b. Tiap milyunér$_i$ nyarita-keun carita naon ngeunaan kahirupan
         every millionaire AV.tell-*KEUN* story what about   life
         ngora-na *pro*$_{i/j}$?
         young-DEF
         'What story about his/her youth did every millionaire tell?'
     c. Carita naon ngeunaan kahirupan ngora-na *pro*$_{*i/j}$ di-carita-keun ku
         story what about   life   young-DEF   PV-tell-*KEUN* by
         tiap   milyunér$_i$?
         every millionaire
         'What story about his/her youth did every millionaire tell?'

Again, the absence of reconstruction effects with reflexives and bound-variable pronouns is predicted in an analysis eschewing A′-movement in clefted *wh*-questions.

5.3 Wh-*Adjuncts*

Thus far we have focused on *wh*-nominals and evidence that they do not undergo long-distance *wh*-movement in Sundanese. But what about *wh*-adjuncts? Long-distance movement of *wh*-adjuncts would significantly undermine our proposal. We now examine the behavior of these elements.

In simple clauses, Sundanese *wh*-adjuncts exhibit two structural options. They either occur in situ, as in (70a)–(72a), or fronted, as in (70b)–(72b).

(70) a. Hasan rék datang **iraha**?
         Hasan will come   when
         'When will Hasan arrive?'

    b. **Iraha** Hasan rék datang?
      When Hasan will come
      'When will Hasan arrive?'

(71) a. Amang nga-bongkar panto téh   **maké naon**?
      uncle AV-break   door PART AV.use what
      'What did Uncle break the door with?'
    b. **Maké naon** amang nga-bong kar panto téh?
      AV.use what uncle AV-break door PART
      'What did Uncle break the door with?'

(72) a. Siti mawa   samping téh   **keur saha**?
      Siti AV.bring sarong PART for   who
      'Who did Siti bring the sarong for?'
    b. **Keur saha** Siti mawa   samping téh?
      for   who Siti AV.bring sarong   PART
      'Who did Siti bring the sarong for?'

Although in some instances the fronted or in situ version may strike speakers as more natural, both are judged acceptable. The word order in the (b) variants here lends some plausibility to the notion that *wh*-movement is at work fronting *wh*-phrases.

   However, the situation is different in multiclausal structures. As the data in (73)–(75) demonstrate, adjuncts in embedded clauses can only be questioned in situ; they cannot occur in sentence-initial position.

(73) a. Ali ng-anggap yén   Hasan rék datang **iraha**?
      Ali AV-assume COMP Hasan will come   when
      'When did Ali assume that Hasan would arrive?'
    b. *****Iraha**$_i$ Ali ng-anggap yén   Hasan rék datang t_i?
      when   Ali AV-assume COMP Hasan will come

(74) a. Bapa ng-omong yén   amang nga-bongkar panto **maké   naon**?
      father AV-say   COMP uncle AV-break   door AV.use what
      'What did Father say that Uncle broke the door with?'
    b. *****Maké naon**$_i$ bapa ngomong yén   amang ngabongkar panto t_i?
      AV.use what father AV-say   COMP uncle AV-break   door

(75) a. Imas nga-harep-keun yén   Siti mawa   samping téh   **keur saha**?
      Imas AV-expect-*KEUN* COMP Siti AV.bring sarong PART for   who
      'Who did Imas expect that Siti brought the sarong for?'
    b. *****Keur saha**$_i$ Imas nga-harep-keun yén   Siti mawa   samping téh t_i?
      for   who Imas AV-expect-*KEUN* COMP Siti AV.bring sarong   PART

The (a) variants of (73)–(75), in which the *wh*-element occurs in the embedded clause, are fully acceptable wide-scope questions. The (b) variants, in which they have been moved to initial position in the matrix clause, are ungrammatical with the intended interpretation. It is therefore reasonable to conclude that just as there is no long-distance movement of *wh*-nominals in Sundanese, neither is there long-distance movement of *wh*-adjuncts.

What then accounts for the fronting of the *wh*-adjuncts in the monoclausal structures in (73b)–(75b)? We would argue that it is the same mechanism in operation with *wh*-nominals: a ban on *wh*-movement in the language. The discussion of *wh*-nominals described in sections 3 and 4 showed that the structural options available to *wh*-nominals are precisely the same as their non-*wh* counterparts. This is obvious for in situ questions. But recall that *wh*-nominals can only escape an embedded clause when raising (A-movement) is possible, just as with non-*wh* nominals. The same is true of *wh*-adjuncts.

Wh-adjuncts are limited to those positions open to their non-*wh* counterparts. In simple clauses, adjuncts can occur in situ (a) or fronted (b), as in (76)–(78).

(76) a. Hasan rék datang **isukan**.
         Hasan will come   tomorrow
         'Hasan will come tomorrow.'
     b. **Isukan**   Hasan rék datang.
         tomorrow Hasan will come
         'Hasan will come tomorrow.'

(77) a. Amang nga-bongkar panto téh   **maké obéng**.
         uncle AV-break   door PART AV.use screwdriver
         'Uncle broke the door with a screwdriver.'
     b. **Maké obéng,**   amang nga-bongkar panto téh.
         AV.use screwdriver uncle AV-break   door PART
         'Uncle broke the door with a screwdriver.'

(78) a. Siti mawa   samping téh   **keur Aki**.
         Siti AV.bring sarong PART for   grandfather
         'Siti brought a sarong for grandfather.'
     b. **Keur Aki,**   Siti mawa   samping téh.
         for   grandfather Siti AV.bring sarong   PART
         'Siti brought a sarong for grandfather.'

Adjuncts in embedded clauses are restricted to occurring in the embedded clause.

(79) a. Ali nyarita yén   Hasan rék datang **isukan**.
          Ali AV.say COMP Hasan will come   tomorrow
          'Ali said that Hasan would come tomorrow.'
     b. ***Isukan**$_i$ Ali nyarita yén   Hasan rék datang t_i.
          tomorrow Ali AV.say COMP Hasan will COME

(80) a. Bapa ng-omong yén   amang nga-bongkar panto téh   **maké**
         father AV-say   COMP uncle AV-break   door PART AV.use
         obéng.
         screwdriver
         'Father said that Uncle broke the door with a screwdriver.'

  b. *__Maké obéng___i   bapa ngomong yén   amang nga-bongkar
      AV.use screwdriver father AV-say   COMP uncle   AV-break
      panto téh t_i.
      door PART

(81) a. Imas nga-harep-keun yén   Siti mawa   samping téh   **keur**
         Imas AV-expect-*KEUN* COMP Siti AV.bring sarong   PART for
         Aki.
         grandfather
         'Imas expected that Siti brought a sarong for Grandfather.'

  b. *__Keur Aki___i,   Imas nga-harep-keun yén   Siti mawa   samping
      for   grandfather Imas AV-expect-*KEUN* COMP Siti AV.bring sarong
      téh t_i.
      PART

In (79)–(81), the (a) variants, in which the adjunct occurs in the embedded clause, are acceptable, whereas the (b) variants, in which the adjunct occurs in sentence-initial position, are ungrammatical.

5.4 Weak Crossover

One prediction of the lack of A′-movement is that Sundanese should evince no weak crossover effects.[10] Descriptively, weak crossover rules out the possibility of coreference between *who* and *his* in (82).

(82) *Who$_i$ does Ali assume his$_i$ mother loves t_i?

Weak crossover rules out binding of both a pronoun and a following variable by the same operator. If *wh*-nominals are fronted by A-movement rather than A′-movement, there will be no variable involved; therefore, there should be no weak crossover effects in Sundanese *wh*-questions. This is, in fact, the case.

(83) Saha$_i$ nu   di-sangka ku Ali nu   di-pikaresep ku indung-na *pro*$_{i/j}$?
      who   REL PV-suspect by Ali REL PV-like   by mother-DEF
      'Who did Ali suspect his mother liked?'

---

[10] We are grateful to an anonymous referee for pointing out this prediction of our analysis.

(84) Lalaki mana$_i$ nu   di-sangka ku Ali nu   di-pikaresep ku indung-na
     man   where REL PV-suspect by Ali REL PV-like   by mother-DEF
     manehna$_{i/j}$?
     him/her
     'Which man did Ali suspect his mother liked?'

Unlike the English structure (82), coreference of *saha* 'who' and the possessor of *indung* 'mother' is well formed in Sundanese (83) (although not obligatory). Likewise, coreference between *lalaki mana* 'which man' and *manehna* 'he' is perfectly acceptable in (84).

   In sum, the facts concerning the questioning of possessors, the lack of expected reconstruction effects, the ill-formedness of extraction of adjuncts from embedded clauses, and the absence of weak crossover phenomena all follow in an analysis in which there is no interclausal *wh*-movement.

6. Partial Movement

The third structure that must be considered is the so-called partial-movement structure, in which the *wh*-phrase occurs neither in situ nor in sentence-initial position, as in (85) and (86).

(85) Ali ng-anggap [**mobil naon** nu   kakara   di-beuli ku Hasan]?
     Ali AV-assume car   what REL recently PV-buy by Hasan
     'What car did Ali assume Hasan had recently bought?'

(86) Siti nyarita [**naon** nu   bakal di-cét   ku Ahmad]?
     Siti AV.say what REL will PV-paint by Ahmad
     'What did Siti say Ahmad will paint?'

In (85), *mobil naon* 'what car' occurs in initial position of the complement clause as does *naon* 'what' in (86). Both are merged as the objects of their respective clauses.[11]

   The question that should be asked is whether these structures have properties significantly different from the other question structures. The parallel constructions in Indonesian and Malay are reported to have a special property. Specifically, Saddy (1991) and Cole & Hermon (1998) report that unlike in situ questions, partial-movement questions are not immune to island effects. The following are Indonesian examples from Saddy (1991). The in situ questions are fully grammatical, but the partial-movement counterparts are reported to be ungrammatical. Saddy (1991) suggests that this provides evidence of operator movement in LF with partial-movement questions, as illustrated in (84) and (85).

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[11] Of course, more precisely, it is not the *wh*-phrase itself but the operator with which it is coindexed that is merged in object position and subsequently moved.

(87) a.   Kamu men-cemburui Bill [karena   **siapa** berbicara dengan Tom].
        you   AV-be.jealous Bill because who   speak   with   Tom
        'Who did you get jealous of Bill because spoke with Tom?'
   b. *Kamu men-cemburui Bill [karena   **siapa_i yang** *t*_i berbicara dengan
        you   AV-be.jealous Bill because   who   REL   speak   with
        Tom].
        Tom
        'Who did you get jealous of Bill because spoke with Tom?'

(88) a.   Kamu kira   (bahwa) [_{DP} cerita bahwa Jon mengeritik **siapa** itu]
        you   think COMP   story COMP Jon AV.criticize who   that
        di-jual.
        PV-sell
        'Who do you think that the story that Jon was criticized was sold?'
   b. *Kamu kira   (bahwa) [_{DP} cerita bahwa **siapa_i yang** Jon mengeritik *t*_i
        you   think COMP   story COMP who   REL   Jon AV.criticize
        itu] di-jual.
        that PV-sell
        'Who do you think that the story that Jon was criticized was sold?'

Examples (87a) and (88a) are perfectly acceptable because there is no LF movement with in situ questions. However, (87b) and (88b) are ungrammatical, because the island structures — an adjunct clause and complex NP, respectively — block covert movement to the scopal position in LF.

   The same facts do not obtain in Sundanese. As the following data show, partial-movement questions are possible in islands in Sundanese. Example (89) illustrates an adjunct island, and (90) a relative clause. Despite the translations, all are wide-scope questions.

(89) a.   Imas di-carék-an ku bapa-na   [ku lantaran embung nga-béja-keun
        Imas PV-yell-AN by father-DEF by because decline AV-news-KEUN
        [yén   Asép neunggeul **saha**]]?
        COMP Asep AV.hit who
        'Imas was yelled at by her father because she wouldn't tell Asep hit who?'
   b.   Imas di-carék-an ku bapa-na   [ku lantaran embung nga-béja-keun
        Imas PV-yell-AN by father-DEF by because decline AV-news-KEUN
        [**saha** nu   di-tenggeul ku Asép]]?
        who REL PV-hit   by Asep
        'Imas was yelled at by her father because she wouldn't tell who was hit by Asep?'

(90) a. Imas nyaho   jelema [nu nyangka [yén Méli malsu-keun
        Imas AV.know person REL AV.suspect COMP Meli AV.plagiarize-*KEUN*
        naon]]?
        what
        'Imas knows the person who suspects Meli plagiarized what?'
    b. Imas nyaho   jelema [nu nyangka [**naon** nu di-palsu-keun
        Imas AV.know person REL AV.suspect what REL OV.plagiarize-*KEUN*
        ku Méli]]?
        by Meli
        'Imas knows the person who suspects what was plagiarized by Meli?'

Examples (89a) and (90a) are simply examples of in situ questions in an adjunct island and a relative clause island, respectively; we consider these no further. The (b) sentences are the partial-movement constructions. In (89b), the object of the embedded clause is questioned, and the *wh*-phrase *saha* 'who' occurs in clause-initial rather than clause-final object position. In (90b), the object of the deeply embedded clause, *naon* 'what', is again questioned, and again it occurs in the initial position of that clause in the fully grammatical sentence. The sentence in (89b) thus shows that partial-movement questions are possible in adjunct islands, and (90b) shows the same for relative clause islands.

   Thus, there is no evidence that any kind of A′-movement takes place in partial-movement questions. As suggested by Davies (2003) for Madurese, which displays the same constellation of facts, the *wh*-phrase in partial-movement questions should simply be treated as in in situ questions: the *wh*-variable is unselectively bound by an operator in the scopal position of the sentences, thus accounting for the fact that partial-movement question are immune to island effects in the same way as are in situ questions.

7. Conclusion

Although the constellation of facts associated with Sundanese *wh*-questions differs from that of Madurese in some regards, just as proposed for Madurese (Davies 2003), the most explanatory analysis is one that countenances A-movement but not A′-movement.

   A number of characteristics that follow naturally in the proposed analysis may require special stipulations under an A′-movement approach. The behaviors connected with the raising and prolepsis structures have an easy account in the A-movement-only analysis. And although the reconstruction, *wh*-adjunct, and weak crossover facts described in section 5 may not constitute definitive evidence against the A′-movement analysis, they follow naturally in, and are predicted by, the A-movement-only analysis. Under an analysis embracing A′-movement, the grammar will require special statements to account for the facts. Additionally, the ungrammaticality of long-distance questioning of possessors is predicted by the A-movement analysis because possessors cannot undergo A-movement apart from their hosts. Given the admissibility of clefted questions with subjects of possessors, the

A′-movement analysis predicts that the ungrammatical structures should be acceptable. Again the grammar will require a special stipulation.

The proposed analysis is not free of stipulation, of course. Where the A′-movement analysis requires a constraint barring movement across an active verb or some other mechnaism, the A-movement analysis requires a ''subjects only'' constraint — that is, the operator coindexed with the *wh*-phrase in clefted questions must be the subject of the highest clause. However, the subject stipulation parallels the kind of condition familiar from other languages since Keenan & Comrie's (1977) groundbreaking work on the Accessibility Hierarchy. Conversely, the active voice stipulation is relevant to only a handful of closely related languages. In the A-movement analysis, the question of why active voice is disallowed never really arises.

But the question of ''why subjects'' remains. The subjects-only condition is a well-documented tendency in western Austronesian languages (see, e.g., Schachter & Otanes 1972 for Tagalog, Keenan 1976 for Malagasy, and Arka 2003 for Balinese). Although a convincing account for it has proved elusive, the unique voice systems that are a common feature of these languages are often cited as playing a role. But ultimately, in most analyses, the subjects-only condition simply stands as a stipulation. At first blush, that appears to be the case in the analysis adopted here.

Keenan (2008), however, proposes that no such stipulation is necessary for Malagasy. Rather ''subjects only'' follows from the manner in which predicates are formed, which is tied crucially to the voice morphology. Keenan (1995, 2008) proposes a Predicate Building analysis in which the voice morphology acts as a function over the verbal root, deriving the syntactic predicates: ''Syntactically, voice morphology builds predicates, determining the number and case of the [DPs] they combine with'' (Keenan 1995:208). Thus, actor voice combines with a transitive root that derives a predicate requiring two arguments with specific thematic role-case features. We illustrate the basic approach applying it to Sundanese data.

First, a transitive root such as *inum* 'drink', which includes an agent role and a theme role, merges with the actor-voice morpheme *ng* to build a two-place predicate (P2) that requires an accusative DP (the theme) and a nominative DP (the agent) as in (91) (using Keenan's [2008] notation).
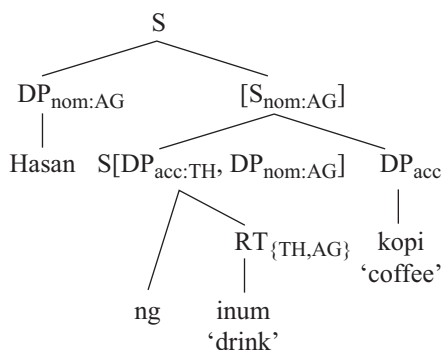
(91) $\quad\quad\quad\quad\quad\quad S[DP_{acc:TH}, DP_{nom:AG}]$

$$RT_{\{TH,AG\}}$$

$$ng \quad\quad inum$$
$$\text{'drink'}$$
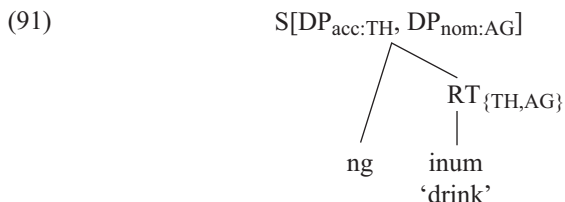
The P2 $S[DP_{acc:TH}, DP\ DP_{nom:AG}]$ merges with a DP_{acc}, which satisfies (or checks) the inner case and category features, deriving an intransitive predicate (P1) as in (92).

(92)

$$S[DP_{nom:AG}]$$

$$S[DP_{acc:TH}, DP_{nom:AG}] \qquad DP_{acc}$$

$$RT_{\{TH,AG\}} \qquad \text{kopi}$$
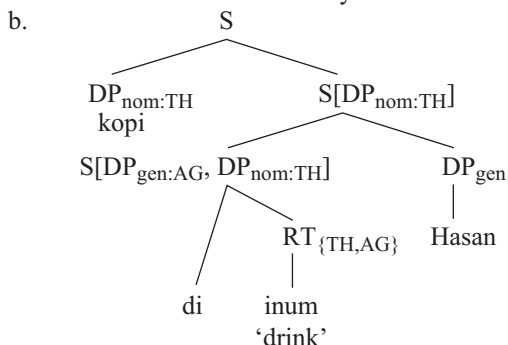$$\text{'coffee'}$$
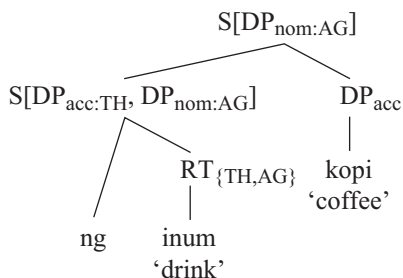
ng   inum
'drink'

This P1 merges with a DP_{nom}, which checks the remaining category and case features, deriving the fully saturated predicate that makes up the sentence *Hasan nginum kopi* 'Hasan drinks coffee'.

(93)

$$S$$

$$DP_{nom:AG} \qquad [S_{nom:AG}]$$

Hasan $$S[DP_{acc:TH}, DP_{nom:AG}] \qquad DP_{acc}$$

$$RT_{\{TH,AG\}} \qquad \text{kopi}$$
$$\text{'coffee'}$$

ng   inum
'drink'

Merging the same transitive root with the passive voice morpheme *di-* derives a P2 with a $DP_{gen:AG}$, $DP_{nom:TH}$ specification. Thus, the sentence in (94a) would be represented as in (94b).

(94) a.   Kopi   éta di-inum (ku) Hasan.
          coffee that PV-drink by Hasan
          'The coffee was drunk by Hasan.'

     b.   S

$$DP_{nom:TH} \qquad S[DP_{nom:TH}]$$
kopi

$$S[DP_{gen:AG}, DP_{nom:TH}] \qquad DP_{gen}$$

$$RT_{\{TH,AG\}} \qquad \text{Hasan}$$

di   inum
'drink'

This approach essentially treats voice as derivational rather than inflectional. In fact, the appropriate characterization of this morphology has long been debated in the literature of western Austronesian languages, including the issue of whether ''voice'' is the most appropriate label. Although it is a minority view, the proposition that voice is derivational has been argued for Formosan languages (Starosta 1986, 2002) and Tagalog and other Philippine languages (Reid 1992, Starosta 2002, Himmelmann 2007). Additionally, Verhaar (1984) refers to Indonesian voice as derivational, and Holmer (1996) has suggested that voice marking in Seediq, a Formosan language, is both derivational and inflectional. Reid (1992) points to the indeterminacy of whether voice is inflectional or derivation, while asserting (77–78) that ''voice affixation…is probably still derivational not only in Tagalog but in all Philippine languages.'' He also notes that the Tagalog morphology has been reconstructed in Proto-Austronesian as derivational. Moreover, actor-voice morphology does appear to play a role in deriving predicates from nominal roots in Sundanese (and other Indonesian-type languages), as illustrated in (95).

(95) sawah 'rice paddy' → nyawah 'work in a rice paddy'
     sangu 'rice '   → nyangu 'cook rice'
     kaca 'glass/mirror' → ngaca 'use a mirror'
     kantor 'office'   → ngantor 'work in an office'

Thus, although by no means the dominant view, this derivational nature does lend some plausibility to Keenan's Predicate Building approach.

Of particular relevance to the subjects-only issue is Keenan's assertion that predicates may combine to form complex predicates. As with the simple predicates, these complex predicates are P1s that combine with an NP to form a sentence. Keenan (2008) argues that all embedding structures, including raising and control structures, are built in this manner. The voice morphology responsible for building these predicates indicates the role(s) of the DP, which is the subject DP of the complex P1. Thus, in the Sundanese analogue in (96), *kopi éta* combines with the complex *dicoba diinum ku Hasan* to form the sentence.

(96) Kopi éta [di-coba-an di-inum (ku) Hasan].
     coffee that PV-try-*AN* PV-drink by Hasan
     'Hasan tried to drink the coffee.'

Keenan argues that questions and relative clauses are constructed in the same manner, thus deriving the subjects-only condition in Malagasy. In more recent work, Gerassimova & Sells (2008) suggest this type of analysis is appropriate for Tagalog. They are thus able to account for the subjects-only condition on argument *wh*-questions and relative clauses in a straightforward manner without recourse to A′-movement.

It is clear that this Predicate Building approach is at odds with analyses making the assumptions that underlie work in minimalism and its antecedents. Among other things, it flouts the Uniformity of Theta Assignment Hypothesis (Baker 1988) as

Keenan's proposal thematic role-DP pairings are determined by the predicates derived through their combination with voice morphemes rather than in terms of phrase-structure representations. What needs to be addressed is whether deriving the subjects-only condition for any western Austronesian languages warrants the different set of required assumptions.

Rackowski and Richards (2005) and Cole, Hermon & Yanti (2008) assert that the approach to voice in their proposals derives the subjects-only condition (or the appearance of the subjects-only condition). As described in section 3.1.2, these proposals are couched in minimalist principles and so do not require such an adjustment of assumptions. When nonactive morphology (object voice and passive in Standard Indonesian) occurs on a verb, a nonactor (nonagent) DP moves to the highest Spec,vP position and is thus visible to processes in the next phase. Because the actor DP is not a the phase edge, it is not visible in the TP phase and therefore cannot move to Spec,TP. The result is the appearance of a subjects-only condition on extraction.

For this phase-based approach to have explanatory value, it is crucial that both traditional A-movement and A′-movement trigger the same voice agreement morphology. If the morphology were only the result of A′-movement, the morphology would never reflect movement to Spec,TP and the notion ''subject'' would be irrelevant to extraction. If, on the other hand, the morphology were only associated with A-movement (to Spec,TP), any association of this morphology with extraction would simply reflect the fact that the extracted element had to move to Spec,TP to be eligible for extraction: the subjects-only condition would merely be stipulated not derived from other facts. As we argued, Sundanese evinces none of the properties characteristic of A′-movement; therefore, the morphology required for extraction of DPs reflects A-movement, and the subjects-only condition must be stipulated.[12]

We have shown that interclausal A′-movement is not in evidence in Sundanese long-distance clefts. Rather, apparent instances of long-distance wh-movement are restricted to raising predicates (and thus involve A-movement). The same has been claimed explicitly for Tagalog (Gerassimova 2005, Gerassimova & Sells 2008) and Selayarese (Finer 2003). Keenan (2008) and Paul (2003) have argued there is no A′-movement involved in these structures in Malagasy, and Paul & Rabaovololona (1998) have shown that the class of raising predicates is quite extensive, citing over 50 predicates that admit raising-to-object. However, this is not to say that all Western Austronesian languages display the same constellation of grammatical facts. If some

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[12] It might be argued that once the nonagent DP is at the left-edge of vP, it is the only element eligible to move to Spec,TP to check the EPP feature on T, which under assumption must be checked in a Spec-head relation. The subjects-only condition would then, in fact, reflect the fact that operator must pass through Spec,TP. However, what is unclear is why only the element in the highest Spec,vP can move to Spec,TP. Such a restriction is not present in most languages (e.g., English): presumably, a wh-element must presumably take the same path to the left-edge of vP in order to be visible to the next phase, yet it does not prevent a different DP from checking the EPP feature on T. Therefore, some language-particular stipulation regarding movement to Spec,TP or some as-of-yet unidentified assumption about the nature of the voice morphology is necessary in such an account of the subjects-only restriction in order to view the restriction as anything other than a stipulation.

related languages diverge from this pattern — that is, if structures other than raising and prolepsis are indicated, different analyses will clearly be needed to account for fronted long-distance questions in some Western Austronesian languages.

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