

# EXTREME LOCALITY IN MADURESE WH-QUESTIONS

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*Abstract.* This article investigates the apparently three types of *wh*-questions in Madurese—*wh* in situ, overt *wh*-movement, and partial *wh*-movement—and argues that the three are actually instantiations of a single *wh*-in-situ strategy and that the relation between the *wh*-element and its operator obeys extreme locality. An analysis is proposed in which overt long distance and partial *wh*-movement are actually reflexes of A-movement to subject position in a proleptic-object construction. Madurese *wh*-phenomena are situated in term of Cole and Hermon's (1998) typology of *wh*-movement. It is further suggested here that movement across clause boundaries is illicit in Madurese.

## 1. Introduction

It has been claimed on the basis of Indonesian and Malay data such as (1) and (2) that long distance movement (at least as far as one clause) of nominal *wh*-constituents is possible in Javanic languages. The *wh*-phrase *siapa* 'who' binds an empty operator that moves from the most deeply embedded clause into the higher clause. Thus, in (1) and (2) there appears to be a long-distance relation between the *wh*-element and the empty position *e* in the embedded clause.<sup>1</sup>

- (1) Siapa<sub>i</sub> yang [<sub>IP</sub> Ali kira [<sub>CP</sub> (yang) *e*<sub>i</sub> mem-beli mobil]]? (Indonesian)  
who        A think        that        AV-buy        car  
'Who did Ali think bought a car?'
- (2) Siapa<sub>i</sub> [<sub>IP</sub> Ali buktikan [<sub>CP</sub> yang *e*<sub>i</sub> (men-)curi        kereta]]?  
who        A prove        that        (meng-)steal car  
(Malay [Cole & Hermon 1998:(27a)])  
'Who did Ali prove stole the car?'

Data such as (3) and (4), from Madurese and Javanese, seem to confirm this.

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<sup>1</sup> The following abbreviations are used in the morphemic glosses: AV = actor voice, BV = benefactive voice, COMP = complementizer, CS = causative, DEF = definite, LV = locative voice, OV = object voice, PF = perfective, PL = plural, REC = reciprocal, RED = reduplication, REL = relativizer.

- (3) Sapa<sub>i</sub> se [<sub>IP</sub> e-kerā Ali [<sub>CP</sub> (ja'/se) e<sub>i</sub> melle motor]]? (Madurese)  
 who REL OV-think A COMP/REL AV.buy car  
 'Who did Ali think bought a car?'
- (4) Sapa<sub>i</sub> sing [<sub>IP</sub> di-kira Ali [<sub>CP</sub> (nek) e<sub>i</sub> tuku montor]]? (Javanese)  
 who REL OV-think A COMP buy car  
 'Who did Ali think bought a car?'

At first blush, the appropriate analysis of (3) appears to be extraction of a *wh*-phrase from the most deeply embedded position to a position immediately before the particle *se*. In fact, however, these are cleft constructions and would more likely be analyzed as instances of empty operator movement, following Cole, Hermon, and Aman's (to appear) and Paul's (2001) analyses of clefts in Singapore Malay and Malagasy, respectively.<sup>2</sup> Under this analysis, if the empty operator *Op* precedes *se*, the operator-movement structure of (3) would include the analysis in (5), in which an intermediate trace has been included.

- (5) sapa<sub>i</sub> [<sub>Op<sub>i</sub></sub> se [e-kerā Ali [<sub>t<sub>i</sub></sub> (ja') [<sub>t<sub>i</sub></sub> melle motor]]]

However, I will show that, for Madurese, long-distance movement may well be illusory and that extraction from object clauses is unsustainable. If there is long-distance movement at all, it can only occur from sentential subjects.<sup>3</sup> But, in fact, the Madurese data support an analysis in which the relation of the *wh*-element and the "extraction site" must be extremely local; in particular, the two must occur in the same clause. Thus, an overall conclusion of this paper is that movement is banned across clause boundaries in Madurese. Additionally, data from Javanese conform to the radically local, non-movement analysis that I propose here for Madurese.<sup>4</sup> Thus, it might be the case that long-distance movement is a property of no Javanic language.

To make this case, it is necessary to examine the three apparent types of *wh*-questions in Madurese: cleft, partial movement, and in situ (see section

<sup>2</sup> Cole, Hermon, and Aman (to appear) and Paul (2001) provide evidence for the empty-operator analysis of cleft questions for Malay and Malagasy, which likely extends to Madurese and other western Austronesian languages. This is slightly at odds with Cole and Hermon's (1998) analysis, in which the *wh*-phrase itself moves to scopal position. The exact final position of the operator depends on the precise analysis given to the cleft construction. As Paul shows for Malagasy, it depends on the nature of the particle *se* (*no* in Malagasy), which appears to be like a complementizer, though there are differences.

<sup>3</sup> Although it has been claimed by some (e.g., Keenan 1972 on Malagasy, Kroeger 1993 on Tagalog) for Austronesian languages that extraction from clauses is only possible from sentential subjects, Pearson (2001) has proposed that what others have referred to as subject is better analyzed as an A'-extracted topic. Although consideration of this proposal is beyond the scope of this paper and may not extend to Madurese at any rate, it is possible that this alternative might shed additional light on the issues discussed here.

<sup>4</sup> Although these data are not given here, Javanese analogues of some of the Madurese sentences are available in Davies 2000.

2). In section 3, I argue that while the Madurese data appear consistent with long-distance movement from sentential subjects (which has been proposed for other western Austronesian languages), these data are best accounted for by a “proleptic-object” analysis in which the *wh*-element is only a matrix dependent. Data from control structures and adverbs provide additional evidence for the analysis in section 4. These findings are interpreted in light of Cole and Hermon’s (1998) *wh*-typology, which is based, in part, on Malay.

## 2. Question Formation in Madurese

As is true of other Javanic languages, there are two basic strategies for forming questions in Madurese, *in situ* and clefted. *In situ* questions can be formed on any argument or adjunct in a clause.<sup>5</sup>

- (6) a. Siti maca apa?  
 S AV.read what  
 ‘What did Siti read?’  
 b. Hasan nyaba’ buku e kamma?  
 H AV.put book at which  
 ‘Where did Hasan put the book?’  
 c. Ita bosen bi’ sapa?  
 I bored with who  
 ‘Who is Ita bored with?’

In more formal Madurese, subjects resist *in situ* questioning, and in all registers adjuncts such as *bila* ‘when’ and *arapa* ‘why’ are usually fronted.<sup>6</sup> Clefted questions are formed like the question in (3), with the *wh*-element as the head of the cleft, which is marked with the relative particle *se*.<sup>7</sup> For many (though not all) speakers, only subjects can be clefted. Therefore, the cleft question analogues of (6) require promotion of the *wh*-phrases to subject, as in (7).

- (7) Apa se e-baca Siti?  
 what REL OV-read S  
 ‘What is it that was read by Siti?/What did Siti read?’

In (7), the verb occurs in the object voice, marked by the prefix *e-*. As (8) shows, when in the object voice, a theme or other nonagent is the subject.

<sup>5</sup> In Madurese, as in other Javanic languages, there is no overt tense marking on verbs; therefore, in the absence of a temporal adverb, the tense is indeterminate. The translations given here are simply the most natural, given the lack of any context.

<sup>6</sup> However, in what follows only nonprepositional argument questions will be considered. As Cole and Hermon (1998) have shown for Malay, and as is true for Madurese, the precise nature of nonargument and prepositional questions is a bit difficult to ascertain.

<sup>7</sup> Paul (2001) has argued convincingly that western Austronesian clefts are actually pseudo-clefts in which the propositional clause is a headless relative clause, the same analysis as proposed by Cole, Hermon, and Aman (to appear) for Malay.

- (8) Buku rowa e-baca Siti.  
 book that OV-read S  
 ‘That book was read by Siti./Siti read that book.’

Finally, Madurese includes what has been characterized as partial movement by Saddy (1991) for Indonesian and Cole and Hermon (1998) for Malay. Thus, alongside an embedded in situ question, such as (9), in which *apa* ‘what’ occurs in the most deeply embedded clause, is the “partial movement” question in which the *wh*-phrase appears to occur in the complementizer of the embedded clause (10).<sup>8</sup>

- (9) Hasan a-bala dha’ Atin [ja’ Siti maca apa]?  
 H AV-say to A COMP S AV.read what  
 ‘What did Hasan tell Atin that Siti read?’
- (10) Hasan a-bala dha’ Atin [apa se e-baca Siti]?  
 H AV-say to A what REL OV-read S  
 ‘What did Hasan tell Atin that Siti read?’

In (10), it appears as though *apa* occupies the specifier position of the embedded CP. It should be noted that unlike partial *wh*-movement in languages such as German and Hungarian, there is no overt marker of the scope of the *wh*-phrase. In both the in situ and partial movement questions, the *wh*-phrase has scope over the entire sentence. Whether there is movement to the scopal position at LF is an issue I take up later.

As (11) shows, in situ questions may be more deeply embedded.

- (11) Amir yaken [Hasan a-bala dha’ Atin [ja’ Siti maca apa]]?  
 A sure H AV-say to A COMP S AV.read what  
 ‘What is Amir sure that Hasan told Atin that Siti read?’

With two embedded clauses, there are two possibilities for the partial-movement question, as in (12).

- (12) a. Amir yaken [Hasan a-bala dha’ Atin [apa se e-baca Siti]]?  
 A sure H AV-say to A what REL OV-read S  
 ‘What is Amir sure that Hasan told Atin that Siti read?’
- b. Amir yaken [apa se e-bala-agi Hasan dha’ Atin [e-baca Siti]]?<sup>9</sup>  
 A sure what REL OV-say-BV H to A OV-read S  
 ‘What is Amir sure that Hasan told Atin that Siti read?’

<sup>8</sup> Without question intonation, the strings in both (9) and (10) would mean ‘Hasan told Atin what Siti read’.

<sup>9</sup> The nature of the benefactive morpheme *-agi*, which occurs suffixed to *bala* ‘say’ is discussed more fully in section 3.1.

It should be noted that, as the *wh*-phrase *apa* ‘what’ occurs higher in the structure, there is an important change in verbal morphology. When *apa* appears before the predicate in the most deeply embedded clause, the verb *baca* ‘read’ occurs in the object voice form *ebaca*, as in (12a). When *apa* occurs before the predicate of the intermediate clause, not only is *baca* in object-voice form but the verb of the intermediate clause *balaagi* ‘say’ also occurs in the object-voice form, as in (12b). Verbal morphology will prove to play a crucial role in the analysis, as it does in Saddy’s (1991) analysis of Indonesian and Cole and Hermon’s (1998) analysis of Malay. I discuss these issues at more length later.

Finally, it is possible for the *wh*-phrase to occur in sentence-initial position.

- (13) Apa se e-yaken-ne Amir [(ja’) e-bala-agi Hasan dha’ Atin  
 what REL OV- sure-E A COMP OV-say-BV H to A  
 [e-baca Siti]]?  
 OV-read S  
 ‘What is Amir sure that Hasan told Atin that Siti read?’

Thus, there are three available options for questioning deeply embedded arguments—in situ (11), “partial movement” (12), and the matrix cleft (13). In all instances, the *wh*-operator has scope over the entire sentence.

## 2.1 *Wh-Questions and Islandhood*

To better understand Madurese *wh*-questions and the structure underlying them and whether movement is involved, it is necessary to examine their interaction with syntactic islands, inasmuch as traditionally these have figured importantly in motivating movement analyses.

### 2.1.1 *In situ questions*

As is the case in many languages, and as demonstrated by Saddy (1991) for Indonesian and Cole and Hermon (1998) for Malay, in Madurese *in situ* questions are possible in complex noun phrases (14), coordinate structures (15), and adjuncts (16).

- (14) Ita nampeleng oreng lake’ se tresna sapa?  
 I AV.slap person male REL love who  
 ‘Who did Ita slap the man that loves?’  
 (i.e., Who is the person such that Ita slapped the man that loves that person?)
- (15) Bambang melle buku ban apa?  
 B AV.buy book and what  
 ‘What did Bambang buy a book and?’

- (16) Ali entar dha' toko marena Siti maca apa?  
 A go to store after S AV.read what  
 'What did Ali go to the store after Siti read?'  
 (i.e., What is the thing such that Ali went to the store after Siti read that thing?)

In (14), the object of the relative clause *sapa* 'who' is questioned with perfectly grammatical results. In (15), *apa* 'what' is the second of two conjoined NPs, and the question is fully grammatical. In (16), the *wh*-phrase is contained in the adverbial clause *marena Siti maca apa* 'after Siti read what', and again grammaticality is not degraded. These data make it clear that Madurese *wh*-in-situ questions are not constrained by Subjacency and the ECP.

### 2.1.2 Cleft questions

On initial inspection it appears that Madurese cleft questions, which include the relativizing particle *se*, are subject to island conditions, just as has been reported for Indonesian (Saddy 1991) and Malay (Cole & Hermon 1998). Thus, clefted analogues of the grammatical in situ questions in (14)–(16), are all ungrammatical, as shown in (17)–(19).<sup>10</sup>

- (17) \*Sapa se Ita tampeleng oreng se tresna?  
 who REL I slap person REL love  
 (i.e., Who did Ita slap the person who loves?)
- (18) \*Apa se Bambang belli buku ban?  
 what REL B buy book and  
 (i.e., What did Bambang buy a book and?)
- (19) \*Apa se Ali entar daq toko marena Siti baca?  
 what REL A go to store after S read  
 (i.e., What did Ali go to the store after Siti read?)

It would appear on the basis of the data in (17)–(19) that the Madurese cleft questions obey the island constraints, which would provide an argument for the long-distance movement analysis of (3). However, such a conclusion is unwarranted.

One reason for this is the existence of an independent constraint on cleft formation in the language. For most speakers, only subjects may be directly

<sup>10</sup> The form of many of the verbs in (17)–(19) is the "bare stem form" rather than that with actor voice (AV) morphology. As I outline later, both Saddy (1991) and Cole and Hermon (1998) argue that in Indonesian and Malay no element may move across a verb with AV morphology. Although not true of all, many speakers of Madurese accept stems such as *tampeleng* 'slap', *baca* 'read', and others in appropriate contexts, so it is not the form of the verb that is responsible for the ungrammaticality of these sentences.

clefted in Madurese.<sup>11</sup> For them, the cleft in (20) is perfectly grammatical whereas that in (21) is ungrammatical.

(20) Siti se maca buku.  
 S REL AV.read book  
 ‘Siti is the one who read the book.’

(21) \*Buku se Siti maca.  
 book REL S AV.read  
 (i.e., The book is what Siti read.)

To cleft the object of ‘read’, it must be the subject of the clause, in which case the verb must be in the object voice, as in (22).<sup>12</sup>

(22) Buku se e-baca Siti.  
 book REL OV-read S  
 ‘The book is what Siti read.’

As cleft questions would naturally be subject to the same conditions as normal clefts, it stands to reason that only subjects can be questioned via the cleft strategy. Therefore, the ungrammaticality of (17) can be traced to the fact that the direct object of the relative clause has been questioned via the cleft; it cannot be the subject inasmuch as the subject of the clause has been relativized. Thus, (17) is not ungrammatical due to an island violation but due to a violation of the language-specific condition on cleft formation. The same reasoning applies *mutatis mutandis* to (18) and (19).

What is more, data such as (23b) appear to indicate that it is actually possible to question out of a sentential subject.

(23) a. (Ja’) Hasan ngeco’ montor lecek.  
 COMP H AV.steal car lie  
 ‘That Hasan stole a car is a lie.’  
 b. Apa se Hasan keco’ lecek?  
 what REL H steal lie  
 ‘What is it a lie that Hasan stole?’  
 (i.e., What is that thing such that it is a lie that Hasan stole that thing?)

<sup>11</sup> Some speakers accept the clefts of PPs and adjuncts, but this seems to be a minority position.

<sup>12</sup> For some but not all speakers, the object can be clefted when the verb occurs in the bare stem form, as in (i).

(i) Buku se Siti baca.  
 book REL S read.  
 ‘The book is what Siti read.’

This construction and Madurese voice in general is examined more closely in section 2.2.

If cleft questions are formed via movement in the overt syntax, in (23b), it appears that *apa* ‘what’ has moved from the sentential subject to sentence-initial position, which would be a Subjacency violation (a Sentential Subject Constraint violation). In fact, however, there is no evidence that *apa* ‘what’ occurs outside of the sentential subject in (23b) as opposed to being at the left edge of the sentential subject.

Thus, although it at first appears that Madurese *wh*-questions obey island constraints—a classic argument for a movement analysis—the data have alternative explanations independent of movement.

### 2.1.3 “Partial movement” questions

Partial movement in Madurese appears to differ in an important way from Indonesian and Malay (as reported by Saddy 1991 and Cole & Hermon 1998): partial movement within a syntactic island does not result in ungrammaticality. As the (b)-examples in the pairs in (24)–(26) illustrate, “partial movement” questions within syntactic islands do not result in a Subjacency violation.

- (24) a. Ita nampeleng [oreng se a-bala ja’ Hasan tresna  
I AV.slap person REL AV-say COMP H love  
dha’ sapa]?  
to who  
‘Who did Ita slap the person who said that Hasan loves?’  
b. Ita nampeleng [oreng se a-bala sapa se e-tresna-e Hasan]?  
I AV.slap person REL AV-say who REL OV-love-E H  
‘Who did Ita slap the person who said that Hasan loves?’
- (25) a. Ali entar dha’ toko [marena Ita mukteagi ja’ Siti maca  
A go to store after I AV.prove COMP S AV.read  
apa]?  
what  
‘What did Ali go to the store after Ita proved that Siti read?’  
b. Ali entar dha’ toko [marena Ita mukteagi apa se e-baca  
A go to store after I AV.prove what REL OV-read  
Siti]?  
S  
‘What did Ali go to the store after Ita proved that Siti read?’
- (26) a. [Ja’ Marlana a-bala ja’ Hasan ngeco’ apa] lecek?  
COMP M AV-say COMP H AV.steal what lie  
‘That Marlana said that Hasan stole what is a lie?’  
b. [Ja’ Marlana a-bala apa se e-keco’ Hasan] lecek?  
COMP M AV-say what REL OV-steal H lie  
‘That Marlana said that Hasan stole what is a lie?’

The bracketed constituents in these examples are a complex noun phrase (24), adjunct clause (25), and a sentential subject (26). As evident in these examples, neither the in situ questions in the (a)-examples nor the partial movement questions in the (b)-examples result in island violations, and all are fully grammatical. This is an important difference from what is reported for Indonesian and Malay, which figures crucially in Cole and Hermon's proposal for *wh*-words in Malay.

## 2.2 *A Constraint on Movement in Indonesian and Malay*

A crucial component of the movement analyses proposed by both Saddy (1991) and Cole and Hermon (1998) is a morphological constraint on the form of the verb. This constraint prohibits movement of any phrase across a verb with actor voice (AV) morphology (the *meng-* prefix in Indonesian and Malay).<sup>13</sup> It should be noted that in the Indonesian and Malay examples in (1) and (2), repeated here, the matrix verb lacks the AV prefix.

- (1) Siapa yang Ali **kira** (yang) mem-beli mobil? (Indonesian)  
 who that A think AV-buy car  
 'Who did Ali think bought a car?'
- (2) Siapa Ali **buktikan** yang (men-)curi kereta? (Malay)  
 who A prove that (meng-)steal car  
 'Who did Ali prove stole the car?'

As (27) and (28) show, both sentences would be ungrammatical were the *meng-* prefix to occur.

- (27) \*Siapa yang [Ali **mengira** [(yang) mem-beli mobil]]?  
 who that A AV.think AV-buy car  
 (i.e., Who did Ali think bought a car?)
- (28) \*Siapa [Ali **mem-buktikan** [yang (men-)curi kereta]]?  
 who A AV-prove that (AV-)steal car  
 (i.e., Who did Ali prove stole the car?)

It is widely claimed that in Indonesian the AV prefix is optional (see Voskuil 2000, Musgrave 2001), and both Saddy and Cole and Hermon maintain that the matrix verbs in the grammatical sentences are active and not "passive."<sup>14</sup>

<sup>13</sup> Voskuil (2000) states a similar constraint on A'-movement of objects in Indonesian.

<sup>14</sup> It is not clear that *passive* is the appropriate term to describe clauses with bare verb stems or object-voice morphology. However, the terminology has wide currency and is a convenient shorthand, so I use it here. At the same time, the sentences in (1) and (2) may be open to a passive analysis. As I will describe, there is a passive structure in Indonesian/Malay (what Sneddon [1996] calls "passive type two") that lacks any verbal morphology and might apply here. This is part of the analysis that I later adopt for Madurese.

So, they opt to formulate the constraint in terms of AV morphology, *meng-*.

At first blush, Madurese appears to show a similar restriction. If (3), the Madurese analogue, occurs in actor voice, the sentence is ungrammatical, as in (29).

(3) Sapa se e-kerā Ali (ja'/se) melle motor?  
 who REL OV-think A COMP/REL AV.buy car  
 'Who did Ali think bought a car?'

(29) \*Sapa se Ali **ngera** (ja'/se) melle motor?  
 who REL A AV.think COMP/REL AV.buy car  
 (i.e., Who did Ali think bought a car?)

Naturally, the ungrammaticality of (29) might be attributed to the fact that it is not the subject of the matrix clause that has been clefted in this question, whereas in (3), it appears that the matrix subject of the object-voice predicate *ekera* has been clefted. But, for some speakers, (30) is a possible grammatical alternative to (3).

(30) Sapa se Ali kera ja' melle motor?  
 who REL A think COMP AV.buy car  
 'Who did Ali think bought a car?'

In (30), the matrix verb *kera* occurs without voice morphology, very similar to the Indonesian and Malay examples in (1) and (2). However, the form in (30) is arguably "passive" in the same way as the object voice form (see Davies, to appear, for evidence).

To better understand this, it is necessary to briefly examine the voice system in Madurese. Consider the data in (31).

- (31) a. Embi' juwa **ngekke'** Ali.  
 goat that AV.bite A  
 'The goat bit Ali.'
- b. Ali embi' juwa kekke'.  
 A goat that bite  
 'The goat bit Ali.'
- c. Ali e-kekke' (bi') embi' juwa.  
 A OV-bite with goat that  
 'The goat bit Ali.'

The data in (31) illustrate the basic voice system in Madurese. Actor voice (AV) morphology occurs on the verb when the agent or actor of a transitive sentence (and some intransitives) occurs as the subject, as in (31a). AV is marked by a nasal prefix (31a) or the prefix *a-* (as with the verb *bala* 'say' in

(9)). Examples (31b,c) are what have sometimes been referred to as passives (especially in Indonesian; Chung 1976, Kana 1986, Sneddon 1996). In both, what is an object with an AV verb, a nonactor, is moved to subject position, just as in the standard analysis of passives in more familiar languages. In the bare verb form the actor (or agent) occurs immediately preverbally, as in (31b). In the object voice (OV) form the actor occurs in postverbal position, as in (31c), optionally marked with a preposition; object voice is invariantly marked by the prefix *e-*. The matrix clause in (30) is analogous to the bare stem form in (31b) and is not active, as has been claimed for the Indonesian and Malay examples. So, in both (3) and (30) the matrix verb is in a passive form and *Ali* is not the subject.

Regardless, however, the important point is that, on the surface, the same kind of constraint posited by Saddy (1991) and Cole and Hermon (1998) appears to be operative in Madurese—that is, no element may move across a verb with the AV prefix. I discuss this constraint again later.

### 3. Against Movement from a Complement Clause

It is now possible to examine data that bear on the appropriate analysis of Madurese questions. To do so, I will consider two possible analyses. One is the familiar and perhaps expected analysis sketched earlier in which an empty operator moves via *wh*-movement from the embedded complement through the lower [Spec,CP] to the matrix [Spec,CP], as in (5), repeated here.

(5) *sapa<sub>i</sub> [Op<sub>i</sub> se [ e<sub>kera</sub> Ali [ t'<sub>i</sub> (ja') [ t<sub>i</sub> melle motor]]]*

The competing analysis makes use of what I refer to here and elsewhere (Davies 2001, Davies & Dubinsky, to appear) as the “proleptic object” construction. In the proleptic-object construction, an apparent argument of the embedded clause is generated as a matrix-clause dependent that binds a null (or overt) pronoun in the embedded clause. An example with the verb *ker* ‘think’ is given in (32).

(32) *Siti ngera Hasan<sub>i</sub> bari' ja' pro<sub>i</sub> melle motor.*  
 S AV.think H yesterday COMP AV.buy car  
 ‘Yesterday Siti thought about Hasan that he bought a car.’

In (32), the proleptic object *Hasan* is coindexed with the embedded pronominal subject.<sup>15</sup> Incorporating the proleptic-object structure into the analysis of the “long distance” *wh*-question yields a structure like that in (33).

<sup>15</sup> Elsewhere (Davies 2001, Davies & Dubinsky to appear), I provide extensive evidence for the nonmovement proleptic-object analysis of sentences like (32) based on, among other things, verb morphology, resumptive pronouns, and idiom chunks. For instance, the proleptic object in

(33)  $sapa_i [Op_i se [t'_i eker a Ali t_i [(ja') [pro_i melle motor]]]]$

In (33), the empty operator is generated as a complement of the verb *ker a*, coindexed with the embedded pronominal subject. It moves to subject position of *ker a* and then into [Spec,CP]. Thus, it is never itself a dependent of the embedded clause.

The following data provide empirical support for the proleptic-object analysis over the long-distance movement analysis.

### 3.1 Obligatory Nature of Object Voice

The first type of evidence in favor of the analysis in (33) over that in (5) is the fact that object voice is obligatory. Some predicates of cognition such as *ker a* 'think' obligatorily take AV morphology when the complement clause follows. Thus, (34a) is grammatical, whereas (34b) is not.

- (34) a. Siti **ngera** ja' Hasan melle motor.  
 S AV.think COMP H AV.buy car  
 'Siti thought Hasan bought a car.'  
 b. \*Siti **ker a** ja' Hasan melle motor.

However, there are a number of predicates of cognition that do not and cannot take AV morphology under the same circumstances, including *yaken* 'be sure', as in (35), and *loppa* 'forget', as in (36).<sup>16</sup>

- (35) Hasan **yaken**/\*ng-yaken ja' Hadi maca sorat.  
 H sure/AV-sure COMP H AV.read letter  
 'Hasan is sure that Hadi read the letter.'

all of these constructions can occur as a prepositional object. Thus, (i), in which *Hasan* occurs as the object of the preposition *parkara* 'about', is synonymous with (32).

- (i) Siti **ngera** parkara Hasan<sub>i</sub> bari' ja' *pro<sub>i</sub>* melle motor.  
 S AV.think about H yesterday COMP AV.buy car  
 'Yesterday Siti thought about Hasan that he bought a car.'

<sup>16</sup> One might propose that the lack of overt voice marking is a morphological irregularity of the class of cognition predicates including *yaken* 'sure', *loppa* 'forget', *enga* 'remember', *kasta* 'regret', and others and further propose that some nonovert voice marking actually occurs with these structures. The ungrammaticality of (37) could then be attributed to the covert AV marker blocking movement. However, I can think of no positive evidence for such an analysis, and these verbs can take overt AV morphology when occurring in conjunction with either the locative or benefactive voice suffixes (*-e* or *-agi*), as in (i).

- (i) Hasan **ng-yaken-ne** Hadi<sub>i</sub> ja' aba'eng<sub>i</sub> maca sorat.  
 H AV-sure-LV H COMP he AV.read letter  
 'Hasan is sure about Hadi that he read the letter.'

- (36) Sengko' loppa/\*ng-loppa ja' Deni entar dha' Malang.  
 I forget/AV-forget COMP D go to M  
 'I forgot that Deni went to Malang.'

There is no AV morphology on a verb such as *yaken*. Thus the movement analysis of questions predicts that it should be possible to move from the lower clause to [Spec,CP] of the higher clause because no AV morphology would be crossed. However, as (37) shows, this prediction is incorrect.

- (37) \*Apa se Hasan yaken ja' e-baca Hadi?  
 what REL H sure COMP OV-read H  
 (i.e., What is Hasan sure that Hadi read?)

In fact, the grammatical form of the question requires the matrix verb to be in the object voice, as in (38).

- (38) Apa se e-yaken-ne Hasan ja' e-baca Hadi?  
 what REL OV-sure-LV H COMP OV-read H  
 'What is Hasan sure that Hadi read?'

These data are consistent with the proleptic-object analysis because in that analysis the question operator first becomes the subject of the matrix clause, and this requires the object-voice form of the predicate.

### 3.2 *Obligatory Voice Suffixes*

The second type of evidence against the long-distance movement analysis also comes from voice morphology. Although not used with the verb *ker*, the majority of predicates require a voice suffix (either the locative voice suffix *-e* or the benefactive voice suffix *-agi*, depending on the predicate) when the proleptic object occurs as subject.<sup>17</sup> This is illustrated in (39) for *yaken* 'sure' and (40) for *bala* 'say'.

- (39) a. Sorat rowa e-yaken-**ne** Hasan ja' e-baca Hadi.  
 letter that OV-sure-LV H COMP OV-read H  
 'Hasan is sure about that letter that Hadi read it.'  
 b. \*Sorat rowa e-yaken Hasan ja' e-baca Hadi.

<sup>17</sup> In some ways, calling these locative and benefactive voice suffixes may be a bit too specific, but I argue elsewhere (Davies, to appear) that these suffixes are part of the voice system and not applicative endings. Locative and benefactive are the prototypical functions for them, so I gloss them that way here.

- (40) a. Bambang e-bala-**agi** Ali ja' ma-becce' sapedha motor.  
 B OV-say-BV A COMP AV.CS-good motorcycle  
 'Ali said about Bambang that he fixed the motorcycle.'  
 b. \*Bambang e-bala Ali ja' ma-becce' sapedha motor.

When the proleptic object of *yaken* occurs as the subject, the suffix *-e* (realized here as *ne*) must appear on the verb, as in (39a), or the sentence is ill-formed (see (39b)). When the proleptic object of *bala* occurs as the subject, the suffix *-agi* is obligatory, as in (40a); thus, (40b) is ungrammatical. It is important to note that this suffix is not required if the subject of the sentence is the embedded complement, as in (41), where the complement of *bala* is a sentential subject and the *-agi* suffix is not present.

- (41) Ja' Bambang ma-becce' sapedha motor e-bala Ali.  
 COMP B AV.CS-good motorcycle OV-say A  
 'Ali said that Bambang fixed the motorcycle.'

Therefore, it is not the case that the suffix *-agi* is obligatory when *bala* occurs in the object voice, only when the proleptic NP surfaces in subject position.

Crucially for the analysis of questions, the voice suffixes for *yaken* and *bala* obligatorily occur. As demonstrated in section 3.1, when the matrix predicate is *yaken*, the suffix *-e* occurs, (38). In a long-distance question with *bala* as matrix predicate, the *-agi* suffix is obligatory; see (42a). If it is absent, the question is ill formed; see (42b).

- (42) a. Sapa se e-bala-agi Ali ja' ma-becce' sapedha motor?  
 who REL OV-say-BV A COMP AV.CS-good motorcycle  
 'Who did Ali say fixed the motorcycle?'  
 b. \*Sapa se e-bala Ali ja' ma-becce' sapedha motor?

Again, the proleptic-object analysis accounts for these data, whereas the movement analysis does not. According to the proleptic-object analysis, the *wh*-phrase must at some point occupy the subject position, and *bala* must be suffixed with *-agi* when the proleptic "object" is the subject. This accounts for the grammaticality of (42a) and the ungrammaticality of (42b). Under the movement analysis, these facts are mysterious. Given that AV morphology is the only barrier to extraction, there is no reason that (42b), which lacks AV morphology, should be ill formed. Thus, again the proleptic-object analysis accounts for facts that the movement analysis cannot.

### 3.3 When AV Morphology Does Not Block Long-Distance Questions

As shown in the previous two sections, the movement analysis incorporating the AV constraint is insufficient to handle the data inasmuch as it fails to rule out some ungrammatical structures (see (37) and (42b)). On the other hand,

the analysis predicts some grammatical sentences to be ill formed. Consider, for example, the sentence in (43).

- (43) Sapa<sub>i</sub> se e-kabar-ragi Ina ja' ter-dokter juwa se  
 who REL OV-news-BV I COMP RED-doctor that REL  
 ng-obad-i ana'-na e<sub>i</sub>?  
 AV-medicine-LV child-DEF  
 'Whose child did Ina spread the news that the doctors cured?'  
 or 'About who was the news spread by Ina that the doctors cured her child?'

In (43), the *wh*-element, *sapa* 'who', refers to the possessor of the object of the embedded clause, *ana'na* 'child-DEF'. What is important here is the fact that verb of the embedded clause occurs in the actor voice. The movement analysis predicts that (43) should be ungrammatical because the moved element appears to have crossed a verb with AV morphology.

Conversely, the data are consistent with the proleptic-object analysis. As is true of most predicates that take a complement clause, *kabarragi* 'spread the news' can take a proleptic object, as shown in (44a), and this object can surface as the subject of the matrix clause, as in (44b).

- (44) a. Ina ngabar-ragi Siti ja' ter-dokter juwa se  
 I AV.news-BV S COMP RED-doctor that REL  
 ng-obad-i ana'-na.  
 AV-medicine-LV child-DEF  
 'Ina spread the news about Siti that the doctors cured her child.'
- b. Siti e-kabar-ragi Ina ja' ter-dokter juwa se  
 S OV-news-BV I COMP RED-doctor that REL  
 ng-obad-i ana'-na.  
 AV-medicine-LV child-DEF  
 'Ina spread the news about Siti that the doctors cured her child.'  
 or 'Siti was spread the news about by Ina that the doctors cured her child.'

The question in (43) parallels the structure in (44b). The difference, of course, is that, whereas in (44b) *Siti* is the proleptic object (which surfaces as subject), in (43) the proleptic object is the empty *wh*-operator. Thus, rather than being an inexplicable fact, the grammaticality of (43) is predicted by the proposed analysis.

### 3.4 Questioning out of Adjuncts

As discussed in section 2.1.2, the inability to question an element out of an adjunct island is a classic argument in favor of movement analyses of long-distance questions. The inability to question arguments of adjuncts via the

cleft strategy may appear to be evidence in favor of the movement analysis in Madurese. In fact, however, in limited cases it appears that arguments of adjunct clauses can be questioned via a cleft in the matrix clause. Consider (45).

- (45) Sapa se e-sessel-le Ebu polana lo' patang a-caca?  
 who REL OV-regret-E mother because not REC AV-talk  
 'Who does Mother regret about because they don't talk to each other?'

In (45), *sapa* 'who' refers to the subject of the adjunct clause *polana lo' patang acaca* 'because [they] do not talk to each other'. The movement analysis of long-distance cleft questions predicts that (45) should be ungrammatical because the *wh*-operator has presumably moved out of an adjunct clause.

The proleptic-object analysis easily accounts for the facts. A predicate such as *sessel* 'regret' can take both a proleptic object and an adjunct clause. This is illustrated in (46b), the proleptic-object equivalent of (46a), in which *sessel* is the matrix verb taking just an adjunct clause.

- (46) a. Ebu manyessel polana na'-kana'-na lo' patang a-caca.  
 mother AV.regret because RED-child-DEF not REC AV-talk  
 'Mother regrets because her children don't talk to each other.'  
 b. Ebu maynessel-le na'-kana'-na polana lo' patang a-caca.  
 mother AV.regret-E RED-child-DEF because not REC AV-talk  
 'Mother regrets about her children because they don't talk to each other.'

In (46b), *na'kana'na* 'her children' is a proleptic object, and the verb *sessel* 'regret' takes the *-e* suffix. The well-formedness of (46b) predicts the grammaticality of (45) under the local, proleptic-object analysis. Given that it is possible to have the proleptic object, it should be possible to have a *wh*-operator generated in this position and subsequently moved to subject position (and on to [Spec,CP]). Again, the proleptic-object analysis provides a straightforward, nonstipulative account of the facts.

The data considered in this section all point to the correctness of an analysis of Madurese long-distance clefted questions that does not involve long-distance *wh*-movement but merely incorporates local movement built on the recognition of the proleptic-object structure.

#### 4. Prediction Denied, Prediction Confirmed

As further confirmation of the correctness of proposed analysis, I examine one prediction of each of the analyses, showing that, whereas the prediction of the movement analysis is disconfirmed, that of the proleptic-object analysis is borne out.

#### 4.1 Questions and Control

In a language such as English, there is no difficulty questioning an argument from the embedded clause of an obligatory control structure, as illustrated by (47).

(47) Whose motorcycle did Ali<sub>i</sub> try [PRO<sub>i</sub> to fix on Wednesday]?

In (47), the object of the embedded clause, *whose motorcycle*, has been questioned. The analogue of this is not possible in Madurese.

First, it is important to note that the possessor of an embedded direct object can be questioned via the cleft strategy in Madurese. This is illustrated in (48).<sup>18</sup>

(48) Sapa se e-sangka Ali [Bambang ma-becce' sapedha motor-ra  
 who REL OV-think A B AV.CS-good motorcycle-DEF  
 are Rebbu]?  
 day Wednesday  
 'Whose motorcycle did Ali think that Bambang fixed on Wednesday?'

In (48), *sapa* 'who' refers to the possessor of the embedded direct object *sapedha motorra* 'the motorcycle'. Thus, there is no restriction against questioning an element in this position, as was similarly illustrated in (43). The movement analysis of long-distance cleft questions predicts then that given the appropriate verbal morphology in the matrix clause (i.e., object voice), it should be possible to form a cleft question on the possessor of an embedded object in a control structure. As I show shortly, this prediction proves false.

The Madurese verb *jajal* 'try' is a subject control verb, as shown in (49).

(49) Ali<sub>i</sub> nyajal [PRO<sub>i</sub> ma-becce' sapedha motor-ra Ina are Rebbu].  
 A AV.try AV.CS-good motorcycle-DEF I day Wednesday  
 'Ali tried to fix Ina's motorcycle on Wednesday.'

Now, the movement analysis predicts that it is impossible to directly question the possessor of the embedded subject with the matrix verb in the actor voice (given the AV constraint), and this, of course, is correct, as (50) shows.

<sup>18</sup> The analysis of (48) is again the proleptic-object construction. Here, the *wh*-operator coindexed with *sapa* is a proleptic object of the verb *sangka* 'think'. This proleptic object is coindexed with a *pro* possessor of *sapedha motorra* 'the motorcycle'. As discussed in section 3.3, embedded possessors can be questioned as long as the matrix predicate admits the proleptic-object structure.

- (50) \*Sapa se Ali<sub>i</sub> nyajal [PRO<sub>i</sub> ma-becce' sapedha motor-ra are  
 who REL A AV.try AV.CS-good motorcycle-DEF day  
 Rebbu]?  
 Wednesday  
 (i.e., Whose motorcycle did Ali try to fix on Wednesday?)

However, *jajal* can occur in the object voice, as illustrated in (51), which is synonymous with (49).

- (51) E-jajal Ali<sub>i</sub> [PRO<sub>i</sub> ma-becce' sapedha motor-ra Ina are Rebbu].  
 ov-try A AV.CS-good motorcycle-DEF I day Wednesday  
 'Ali tried to fix Ina's motorcycle on Wednesday.'

With the AV morphology no longer in a position to block *wh*-movement, the movement analysis predicts that a cleft question patterned on (51), with the *wh*-operator possessor of the embedded object moved to matrix [Spec,CP] should be grammatical. As (52) shows, this prediction is incorrect.

- (52) \*Sapa se e-jajal Ali<sub>i</sub> [PRO<sub>i</sub> ma-becce' sapedha motor-ra are  
 who REL OV-try A AV.CS-good motorcycle-DEF day  
 Rebbu]?  
 Wednesday  
 (i.e., Whose motorcycle did Ali try to fix?)

The inability to question out of control clauses receives no explanation from the movement analysis and thus constitutes another failure of the analysis to adequately account for the Madurese facts.

#### 4.2 The Questioned Element Must Be Subject

A key component of the proleptic-object analysis is the subject status of the *wh*-operator. A prediction of the analysis then is that the questioned element should have the grammatical properties of subjects. One such property is the ability to license the plural adverbial *paddha* 'equal'. *Paddha* occurs in immediate preverbal position and indicates that all of the subjects of the predicate equally participate in the described event. So, in a sentence such as (53), *paddha* indicates that Ali and Bambang are equal participants in hitting Amir.

- (53) Ali ban Bambang paddha nokol Amir.  
 A and B equal AV.hit A  
 'Ali and Bambang both hit Amir.'

Importantly, it is only a plural subject that can license the occurrence of *paddha*. Use of *paddha* with plural objects, as in (54), or plural agents of object voice structures, as in (55), is illicit.

- (54) Amir (\*paddha) nokol Ali ban Bambang.  
 A equal AV.hit A and B  
 ‘Amir hit (\*both) Ali and Bambang.’
- (55) Amir (\*paddha) e-tokol (bi’) Ali ban Bambang.  
 A equal OV-hit by A and B  
 ‘Ali and Bambang (\*both) hit Amir.’

The fact that the plural object of (54) cannot license *paddha* demonstrates that plurality is not a sufficient condition for its occurrence, and the fact that the plural nonsubject agent of (55) cannot license *paddha* shows that the condition is not thematically oriented. However, the plural subject of an object-voice predicate can be a licenser, as in (56).

- (56) Ali ban Bambang paddha e-tokol Amir.  
 A and B equal OV-hit A  
 ‘Amir hit both Ali and Bambang.’

Although synonymous with the intended meaning of (54), only in (56), where the plural theme is subject, is *paddha* licit.

Unsurprisingly, *paddha* can only occur immediately preceding the predicate whose subject is plural. Thus, whereas it is licensed in the embedded clause and so can occur in the embedded clause in (57a), it cannot occur before the matrix predicate because the matrix subject is not plural (see (57b)).

- (57) a. Siti ngera ja’ Ali ban Bambang paddha la mangkat  
 S AV.think COMP A and B equal PF leave  
 dha’ Sorbaja.  
 to Surabaya  
 ‘Siti thought that both Ali and Bambang had left for Surabaya.’
- b. \*Siti paddha ngera ja’ Ali ban Bambang la mangkat  
 S equal AV.think COMP A and B PF leave  
 dha’ Sorbaja.  
 to Surabaya  
 (i.e., Siti thought that both Ali and Bambang had left for Surabaya.)

Naturally, if *Ali ban Bambang* is made the subject of the matrix predicate as is possible in the proleptic-object construction, *paddha* can be licensed in the matrix clause, as in (58), which is propositionally equivalent to (57a).

- (58) Ali ban Bambang paddha e-kera Siti ja’ la mangkat  
 A and B equal OV-think S COMP PF leave  
 dha’ Sorbaja.  
 to Surabaya  
 ‘Siti thought of both Ali and Bambang that they had left for Surabaya.’

Finally, the proleptic-object analysis of long-distance cleft questions predicts that if the *wh*-element is plural it should be possible for *paddha* to appear before the matrix predicate because its trace occupies the matrix subject position. As (59) shows, this prediction is correct.

- (59) Sapa'an se paddha e-kera Siti ja' la mangkat dha' Sorbaja?  
 who.PL REL equal OV-think S COMP PF leave to Surabaya  
 'Who were both thought by Siti to have left for Surabaya?'

Comparing the proleptic-object analysis (see (60)) and the conventional movement analysis (see (61)) reveals why the former but not the latter can account for (59).

- (60) sapa'an<sub>i</sub> [*Op*<sub>i</sub> se [ *t'*<sub>i</sub> paddha eker<sub>a</sub> Siti *t*<sub>i</sub> [ ja' *pro*<sub>i</sub> la mangkat dha'  
 Sorbaja]]]

- (61) sapa'an<sub>i</sub> [*Op*<sub>i</sub> se [ paddha eker<sub>a</sub> Siti [ *t'*<sub>i</sub> ja' *t*<sub>i</sub> la mangkat dha'  
 Sorbaja]]]

In (60), the trace *t'* is in subject position and thus can license *paddha*. However, in (61) there is no element to license *paddha*: the plural *wh*-operator never occupies the matrix subject position.

Thus, the proleptic-object analysis predicts the grammaticality of data that cannot be accounted for under the conventional long-distance movement analysis.

## 5. The Analysis of Madurese *Wh*-Words

Cole and Hermon (1998) propose a typology of *wh*-words in which the three varieties of questions in Malay each take a different configuration of features, accounting for the differences that they report for nominal *wh*-words. Recall that they provide evidence for long-distance *wh*-movement, partial movement, and *wh*-in-situ and need to account for all three. First, Cole and Hermon assume that the interrogative complementizer *Q* is strong universally and resides in the scopal position; movement is motivated by the need to check this strong feature. Further, following Cheng (1991), Aoun and Li (1993), Watanabe (1993), and Tsai (1994), they assume that all question operators are generated as null operators universally and that the *wh*-element is universally a variable. They propose that there are two options for the combination of the operator with the variable. First, the two can be joined in the lexicon resulting in a *wh*-word. This is the option taken for English *wh*-nominals. This forces overt movement of the operator+variable *wh*-word so that the operator can check the strong *Q* feature in scopal position. Alternatively, the operator and the variable can be generated separately. This is the option taken for Chinese *wh*-nominals. The variable is merged in its thematic position and the operator merged at the position of *Q* and checks the

strong Q feature. The *wh*-word thus does not (indeed cannot for reasons of economy) move but remains in situ. The *wh*-word is thus a variable that is unselectively bound, as has been proposed for *wh*-in-situ by a number of researchers (e.g., Pesetsky 1987).

According to Cole and Hermon, Malay differs from both English and Chinese in admitting both options of operator and variable with *wh*-nominals. That is, Malay can take the first option and combine the operator and variable in the lexicon into a single word. When this option is chosen, overt *wh*-movement results, just as in English and like languages. Malay can also select the second option of generating the operator and variable separately, with the result being *wh*-in-situ, as in Chinese and other languages. This accounts for the instances of long-distance movement and *wh*-in-situ.

The final piece of Cole and Hermon's proposal is to handle partial movement. For this, they assume that the operator and the variable have been joined in the lexicon (as in overt movement). However, they further posit a null *wh*-expletive on a par with overt *wh*-expletives that occur in partial-movement structures, such as *was* in German (McDaniel 1989), *mit* in Hungarian (Horvath 1997), and others. They propose that the null *wh*-expletive is merged in an intermediate C position to which the *wh*-word moves in overt syntax. Given that the strong Q feature in scopal position must still be checked off prior to LF to ensure that the derivation converges, the *Op*+variable+*wh*-expletive combination must move to the checking position after Spell-Out. Cole and Hermon propose that this movement accounts for the fact that partial movement shows island effects in Malay (and Indonesian). Cole and Hermon thus account for the three types of *wh*-questions that they identify for Malay.

However, as I have shown, the Madurese facts are slightly at variance. In Madurese, the analogue of the partial-movement structure does not trigger island effects. To account for this difference I propose that there is only one option for Madurese *wh*-words—that in which the operator and variable are generated separately. As neither partial movement nor in situ questions exhibit island effects, there is no motivation for treating the *wh*-word differently in the two structures. Rather I propose to analyze partial-movement questions of nominals in a way identical to relative clauses; the only difference is that with partial-movement questions the head of the relative clause is a *wh*-word. As in the case for relative clauses (which use the same morphology), the head must bind an empty operator that moves to a local relationship with its head. Under this proposal, the *wh*-word is introduced into the structure in the position in which it surfaces. Thus, partial-movement questions are simply special cases of *wh*-in-situ, and are interpreted in the same way as other *wh*-in-situ questions.

Given the analysis, the fact that questions in which the *wh*-word occurs in scopal position obey island constraints does not follow from their undergoing long-distance movement. Rather, the apparent island effects are due to the fact that it is impossible to relativize into these types of structures. The reason

for this is that the relationship between the head noun and operator is not sufficiently local.

## 6. Conclusion

The data examined here lend plausibility to an analysis of Madurese cleft questions that rejects all long distance movement in favor of a radically local relation. The natural question to ask is whether anything is gained under the proposed analysis. The mechanism underlying the “partial” movement aspect of the proposed analysis is, of course, needed in any event to account for the structure of relative clauses. So, its inclusion adds nothing to the grammar of Madurese. Thus, in some respects incorporating this and rejecting movement between clauses results in a simpler grammar. What is more, in recent work *Finer (2000)* adopts the spirit of the analysis proposed here. To account for some otherwise anomalous facts regarding Selayarese clitics, *Finer* proposes that *wh*-constructions involve only “partial” movement together with extraposition of a sentential subject (as in *Davies 2000*). *Finer* also proposes that there is no *wh*-movement out of embedded clauses in Selayarese; that despite appearances there is no successive cyclic *wh*-movement.

What goes begging at this point is any explanation for why these *A'*-relations should be restricted in this way. A promising avenue may be that there is a general ban on any kind of interclausal movement, not just *A'*-movement. In *Davies 2001*, I provide evidence on the basis of Cebuano that the same type of restriction against interclausal movement may obtain in the Philippine languages as well. If this speculation holds up, it might be that many other languages may be open to the same analysis as proposed for Madurese.

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