

VP Ellipsis and Malay Reflexives*

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1. Long Distance Reflexives

Reflexive pronouns in Malay have been shown to have locality properties that differ from those in previously described languages (Cole and Hermon 1998). Cross linguistic research suggests that the locality properties of reflexives fall into two groups: While reflexives in English and a variety of other languages must stand in a local relationship to their antecedents, those in Chinese and many other languages manifest what appear to be less strict locality requirements.

(1) *Poirot_i thinks that Mary hurt himself_i.

(2) John_i believes that Bill_j said that Tom_k shaved
himself_{*i/*j/k}.

(3) Zhangsan_i renwei Lisi_j zhidao Wangwu_k xihuan ziji_{i/j/k}.

Zhangsan thinks Lisi knows Wangwu likes self

'Zhangsan thinks Lisi knows Wangwu likes him/himself.'

Examples (1) and (2) show that the antecedent for a reflexive in English must be local, that is, within the Governing Category of the reflexive (e.g. as defined in Chomsky 1986).¹ In contrast, (3) shows that in Chinese a reflexive can refer to a nonlocal antecedent, one far beyond the confines of its Governing Category.

While "long distance" (LD) reflexives in languages like Chinese are not subject to the same limitations as "local" reflexives, certain typological properties of LD reflexives have been identified, which have constituted the basis for the prevailing head movement analysis of LD reflexives. The core properties of LD reflexives are summarized in (4):

- (4)
- a. LD reflexives are monomorphemic.²
 - b. LD reflexives are subject oriented.³
 - c. In languages without subject-verb agreement, LD reflexives manifest the blocking effect, the blocking of a reflexive-antecedent relation due to the presence of an intervening subject with person features different from those of the local subject.⁴

In much of the research on LD reflexives since the late eighties, (4a-c) have been taken to be the defining properties of LD reflexives and have been argued to constitute

the basis for analyzing LD reflexives as derived by the LF head movement of the reflexive to a position in which it stands in a local relationship to its antecedent.⁵

2. The Apparent Exceptionality of Malay Reflexives

As was described in Cole and Hermon (1998) and in our IATL presentation, Malay appears to be an exception to (4a-c): The form *diri*+pronoun, widely used as a reflexive, can occur indefinitely far from its antecedent:

(5) Ahmad_i tahu Salmah_j akan membeli baju untuk diri-nya_{i/j/k}.⁶

Ahmad know Salmah will buy clothes for self-3SG

'Ahmad knows Salmah will buy clothes for him/herself.'

In (5) *dirinya* can refer to either *Ahmad* or *Salmah*. However, to reiterate the arguments in Cole and Hermon (1998), *dirinya* is not monomorphemic since it is composed of the morphemes *diri* 'reflexive' plus *-nya* '3ps'.⁷ Furthermore, *dirinya* is not subject oriented, as is seen in (6):

(6) Siti_i mengingatkan Mohamed_j yang saya tahu dirinya_{i/j/k}.

Siti remind Mohamed that I know self.3SG

seorang penjenayah.

one criminal

'Siti reminded Mohamed that I know he/she is a criminal.'

Example (6) shows that *dirinya* can refer to either the matrix subject, *Siti*, or to the matrix object, *Mohamed*.⁸

Furthermore, Malay LD reflexives fail to manifest the blocking effect:

(7) Aminah_i tahu saya memberi Siti_j buku tentang dirinya_{i/j/k}.

Aminah know I give Siti book about self.3SG

'Aminah knew I gave Siti a book about her/herself.'

In (7) *dirinya* can refer to either the local subject, *Siti*, or the LD subject *Aminah*, despite the fact that a non-third-person pronoun, *saya* 'I', intervenes between *Siti* and *Aminah*.

3. The Indeterminacy of Feature Content Hypothesis

It is argued in Cole and Hermon (1998) that, despite initial appearances, Malay is not a counter example to theories that take (4) to be core characteristics of LD reflexives.

Rather, we argue that, initial appearance to the contrary, Malay *dirinya* is not, in fact an LD reflexive.⁹ It is claimed in Cole and Hermon (1998) that the word *diri*+pronoun is indeterminate between a local reflexive and a pronoun. That is, we claim that *diri*+pronoun is unspecified in the lexicon with regard to the features [anaphor] and

[+ pronominal]. These features are filled in subsequent to lexical insertion. When *dirinya* is inserted in an environment in which it is coindexed with a c-commanding nominal within its Governing Category, the choice of the feature specification [+ pronominal] is blocked because the resulting phrase marker would violate Part B of the Binding Theory. Similarly, when there is no c-commanding antecedent within the Governing Category, the feature specification [+ anaphor] is ruled out since the resulting structure would violate Part A of the Binding Theory. While *dirinya* can take on the feature specification of a (local) reflexive or of a pronominal, *dirinya* cannot be LD reflexive: When *dirinya* is used with a nonlocal antecedent, the fact that it is not monomorphemic prevents it from undergoing X^0 movement as does a true LD reflexive like Chinese *ziji*.¹⁰ Thus, like LD reflexives, *dirinya* can take either local or LD antecedents. However, unlike LD reflexives, *dirinya* lacks the core properties of LD reflexives listed in (4).

Two arguments were given by Cole and Hermon (1998) that *dirinya* is indeterminate between a pronoun and a reflexive, and is not a LD reflexive. We showed in that article that, unlike LD reflexives, *dirinya* can refer to non-c-commanding antecedents and to antecedents that are present in the discourse but which do not occur in the same sentence as *dirinya*. These properties of *dirinya* are both illustrated in (8).

(8) [_{NP} Bapa Siti]_i tidak suka dirinya_{i/j/k}.

father Siti not like self.3SG

'Siti's father does not like her/himself/him.'

True long distance reflexives in languages like Chinese differ from Malay in that they require c-commanding antecedents in the same sentence.

Our purpose in this paper is to add to these arguments a third argument based on VP ellipsis. The VP ellipsis argument will provide additional evidence that LD *dirinya* is indeterminate between a pronoun and a local reflexive, and that it is not a LD reflexive.

4. VP Ellipsis as a Test for Pronoun Versus Reflexive

We would like to turn now to an argument based on VP Ellipsis for the claim that apparent LD reflexives in Malay really can have the feature content of pronouns. It has long been known (cf. Sag 1977) that, when the antecedent for VP ellipsis contains a reflexive, VP ellipsis exhibits syntactic behavior which is different from that exhibited when the antecedent contains a pronoun. Consider the possible interpretations of the *do so* VP in (9) and (10):

(9) John_i said that Susan met him_i in the library and Ted did so too.

(10) John_i looked at himself_i in the mirror and Harry did so too.

In (9) the omitted VP is ambiguous between two interpretations. Under the **sloppy** interpretation, John said that Susan met John in the library while Ted said that Susan met Ted in the library. In contrast, under the **strict** interpretation, John said that Susan met John in the library while Ted also said that Susan met John. That is, under the sloppy interpretation, the pronoun *him* is interpreted as a logical variable bound by the matrix subject, while under the strict interpretation it is interpreted as a logical constant referring to a specific individual, namely John.

Turning now to (10), in this sentence only the sloppy reading is possible: Sentence (10) can only be interpreted to mean that John looked at John and Harry looked at Harry. It cannot be interpreted to mean that John looked at John and Harry looked at John as well. Thus, in English, VP ellipsis distinguishes between pronouns and reflexives: Pronouns can receive either a strict or a sloppy interpretation under ellipsis while reflexives receive only a sloppy reading. If the same syntactic behavior holds in Malay (as we shall show is the case), VP ellipsis can be used to test whether a particular form in that language is a pronoun or a reflexive.

5. VP Ellipsis in Malay

Turning now to Malay, we shall first show that for clear instances of pronouns and reflexives, Malay exhibits the same syntactic behavior as English. Let us first consider the behavior under ellipsis of the pronoun *dia*.

(11) John_i bilang yang Mary nampak dia_i di Singapura; Frank pun.

say that Mary see him at Singapore Frank also
'John said that Mary saw him in Singapore and Frank did so too.'

In (11), just as in English, the elliptical VP can be given either a strict or a sloppy interpretation. Thus, (11) can be interpreted to mean Frank said that Mary saw Frank himself or that Mary saw John. This is consistent with the expectation that pronouns can be interpreted either as a variable or as a constant.

Turning to reflexives, in addition to *diri*+pronoun, Malay employs another reflexive form, *diri*+pronoun *sendiri*.¹¹ *Diri*+pronoun *sendiri* differs from *diri*+pronoun in a number of ways. First, unlike *diri*+pronoun, *diri*+pronoun *sendiri* is restricted to local use:

- (12) Fatimah_i tahu Ali_j mengajar dirinya sendiri*_{i,j}.
 Fatimah know Ali is teaching self.3SG alone
 'Fatimah knows that Ali is teaching himself.'

In (12) *dirinya sendiri* can refer to *Ali* but not to *Fatimah*. Furthermore, in contrast to *dirinya*, *dirinya sendiri* requires a c-commanding antecedent, as is shown in (13).

- (13) [Ibu Ali]_i telah menyiram air di dirinya sendiri_i, *_j.
 mother Ali already splash water on self.3SG alone
 'Ali's mother already splashed water onto herself.'

In (13), *dirinya sendiri* can refer only to the c-commanding NP *ibu Ali* and not to the non-c-commanding *Ali*.

Returning to VP ellipsis, unlike the pronoun *dia*, the reflexive *dirinya sendiri* can only be interpreted as a variable:

- (14) John nampak dirinya sendiri di dalam cermin; Frank pun.
 John see self-3psg alone at inside mirror Frank also
 'John saw himself/him in the mirror and Frank did too.'

- (15) Ali cukur dirinya sendiri di dalam bilik air; Bill pun.
 Ali shave self-3psg alone at inside bathroom Bill also
 'Ali shaved himself in the bathroom. Bill too shaved himself in the bathroom.'

Sentence (14) can only be interpreted to mean that John saw John and Frank saw Frank in the mirror. It cannot mean that Frank saw John. Similarly, the only possible interpretation for (15) is that Ali and Bill each shaved themselves. It cannot mean that Bill shaved Ali.

6. The Status of Diri+Pronoun

We have seen that VP ellipsis distinguishes between clear instances of pronouns and reflexives in Malay just as it does in English. We shall now examine the status of *dirinya*. Does *dirinya* behave like a pronoun or like a reflexive?

- (16) John nampak dirinya di dalam cermin; Frank pun.
 John see self-3psg at inside mirror Frank also
 'John saw himself/him in the mirror and Frank did too.'
- (17) Ali cukur dirinya di dalam bilik air; Bill pun.
 Ali shave self-3psg at inside bathroom Bill also
 'Ali shaved himself/him in the bathroom. Bill did so too.'

Sentences (16) and (17) differ from (14) and (15) in that (16) and (17) contain the form *dirinya* where (14) and (15) contain *dirinya sendiri*. Sentences (16) and (17) allow the strict interpretation excluded by (14) and (15). Thus, (16) can mean either that Frank saw himself or that he saw John. Similarly, (17) can mean either that Bill saw himself or that he saw Ali.¹²

Are these, in fact, the interpretations predicted by an analysis in which *dirinya* is indeterminate in the lexicon between a pronoun and an anaphor? Let us consider the derivation of (16) on the readings in which *dirinya* is interpreted as referring to *John*. For the sake of concreteness, we shall assume that (16) is generated as (16'):¹³

(16') John_i nampak dirinya_i di dalam cermin; Frank pun nampak dirinya di dalam cermin.

John see self-3psg at inside mirror Frank also see self-3psg at inside mirror
'John saw himself/him in the mirror and Frank saw himself in the mirror too.'

In order for VP ellipsis to apply, the VPs of the two clauses must be identical. Following our analysis, we assume that in both clauses *dirinya* is inserted without any specification for the features [anaphor] and [pronominal] and that these features play no role in determining if the sentence satisfies the identity requirement. Let us now examine the range of interpretations predicted. We have assumed that *dirinya* in the antecedent clause has the same index as that of the subject of the clause, *John*. Thus, *dirinya* in the antecedent VP must receive the feature [+ anaphor] (since it is coindexed with a c-commanding antecedent within its Governing Category). As a result, *dirinya* in the antecedent clause is interpreted as a variable bound by *John*.

In order to satisfy the identity requirement, the VP of the ellipsis clause must be identical to the VP in the antecedent clause. Unlike the situation with regard to the antecedent clause, in the case of the ellipsis clause *dirinya* can be either [+ pronominal] or [anaphor] (since, by hypothesis, identity with respect to these features is not a factor in determining whether the VPs are identical). If, on the one hand, the feature [+ pronominal] is chosen, then *dirinya* in the ellipsis clause will be interpreted as a constant (the strict reading), and, in order to satisfy the requirement that the VPs be identical, the arguments of the ellipsis VP must pick out the same individuals as those of the antecedent VP (in this case, John). But if, on the other hand, the feature [+ anaphor] is chosen, *dirinya* will be interpreted as a variable (the sloppy reading). When a VP contains a variable rather than a constant or a referring expression, the identity requirement for VP ellipsis is satisfied by the fact that the relevant argument is a

variable, which, by definition, lacks reference (just as is the case for a garden variety reflexive like *himself* or Malay *dirinya sendiri*).

We have shown that the hypothesis that *dirinya* is listed in the lexicon without specification for the feature [pronominal] and [anapor] predicts correctly the range of interpretations for sentences containing *dirinya* under VP ellipsis. Note that these predictions would not be made correctly by the seemingly similar hypothesis that *dirinya* is lexically ambiguous between a reading in which it is a pronoun and another in which it is an anaphor. We take lexical ambiguity to mean that the item in question has two lexical entries, as do *bank* 'edge of a river' and *bank* 'financial institution'. If *dirinya* were ambiguous rather than indeterminate, the antecedent VP in VP ellipsis sentences would contain either $\begin{matrix} \textit{dirinya} \\ [+pronoun] \end{matrix}$ or $\begin{matrix} \textit{dirinya} \\ [+anaphor] \end{matrix}$. If the former were chosen, *dirinya* in the antecedent VP could not refer to the subject of its own clause since to do so would violate Binding Theory. But if the latter were chosen, while *dirinya* in the antecedent VP could refer to its own subject, the identity requirement on VP ellipsis would require that $\begin{matrix} \textit{dirinya} \\ [+anaphor] \end{matrix}$ be inserted in the ellipsis VP as well. This would force *dirinya* to be a variable in the ellipsis clause, thereby eliminating the strict reading. Since the strict reading does, in fact, occur, we conclude that *dirinya* must be unspecified in the lexicon with regard to the features [pronoun] and [anaphor], and cannot be lexically ambiguous with regard to these features.

7. The Properties of Diri+Pronoun Versus Those of True LD Reflexives

We have shown that the properties of *dirinya* under VP ellipsis are like those of the pronoun *dia* rather than those of the local reflexive *dirinya sendiri*. This raises the question of whether long distance reflexives across languages behave like reflexives or like pronouns. While it is not within the scope of this paper to provide a survey of the properties of LD reflexives in a variety of languages, we would like to contrast the behavior of Malay *dirinya* with that of Chinese *ziji*.

In Chinese, just as in English, there is a clear difference in the properties of pronouns and local reflexives under VP ellipsis:

(18) Zhangsan_i shuo Lisi changchang kuidai ta_i; Wangwu ye yiyang.

Zhangsan say Lisi always mistreat him Wangwu also the same
'Zhangsan_i says that Lisi always mistreats him_i; so does Wangwu.'

Like the English translation, sentence (18) can be interpreted to mean either that Wangwu says that Lisi mistreats Zhangsan (the strict reading) or that he says Lisi mistreats Wangwu himself (the sloppy reading). In contrast, in (19), in which the local reflexive *ta ziji* is employed, only the sloppy reading is possible.

(19) [S₁ Zhangsan kanjian ta ziji]; [S₂ Lisi ye yiyang].

Zhangsan saw him self Lisi also the same
'Zhangsan saw himself and so did Lisi.'

In (19) Lisi can only be understood to have seen himself (the sloppy reading). The sentence cannot be understood to mean that he saw Zhangsan.

Sentences (18) and (19) parallel the equivalent sentences in Malay ((11) and (14)/(15)). No difference in behavior has been shown so far for Chinese and Malay. A contrast, however, is seen when the Chinese LD reflexive *ziji* and Malay *dirinya* are compared. Consider (20):

(20) Zhangsan_i shuo Lisi changchang kuidai ziji; Wangwu ye yiyang.

Zhangsan say Lisi always mistreat self Wangwu also the same
'Zhangsan_i says that Lisi always mistreats him_i; so does Wangwu [say Lisi mistreats Wangwu].

Sentence (20) can only be assigned the sloppy interpretation according to which Wangwu said that Lisi mistreats Wangwu, and not that Wangwu mistreats Zhangsan. Thus, Chinese LD reflexives pattern with local reflexives rather than with pronouns. That is, they stand in contrast with Malay *dirinya*, which patterns with pronouns.

8. Is *Diri*+Pronoun Always a Pronoun?

We have shown in the previous section that *dirinya* can have the feature content of a pronoun. Since pronouns do not display the core properties of LD reflexives listed in (4), it is unsurprising that *dirinya* does not display these properties. On the assumption that local uses of *dirinya* must have the feature content of a reflexive, we have argued that *dirinya* must occur in sentences as either [+anaphor] or [+pronominal]. We have not, however, considered the possibility that *dirinya* always has the feature content of a pronoun. We would like to turn to that possibility now. We shall show that, while initially plausible, this is not the correct analysis for *dirinya*.

The proposal that *dirinya* is always a pronoun would appear at first to be *prima facie* incorrect since the form can be used as a local reflexive in sentences like (21):

(21) Aminah nampak *dirinya* di dalam cermin.

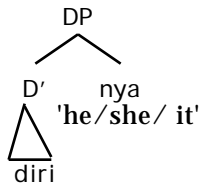
Aminah saw self.3ps in inside mirror

'Aminah saw herself in the mirror.'

If *dirinya* is not a reflexive, there would appear to be no explanation for the grammaticality of (21).

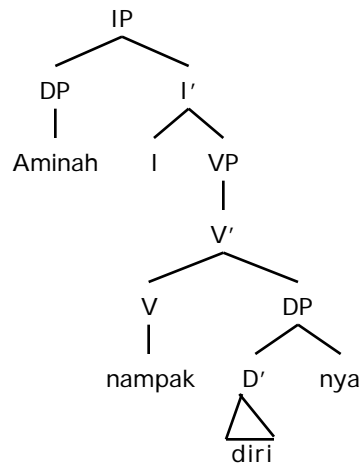
However, on closer examination, the proposal that *dirinya* is always pronominal appears quite plausible. Consider the possibility that *diri*+pronoun is not simply a lexical item, but rather has an internal syntactic structure in which the pronoun is the specifier of DP:¹⁴

(22)



Let us assume that (22) constitutes a Complete Functional Complex (CFC) (or the equivalent in other versions of the Binding Theory). Let us assume, furthermore, that *-nya* is a pronoun.¹⁵ Then it would be expected that *-nya* could take as an antecedent a c-commanding nominal outside the DP as in (23):

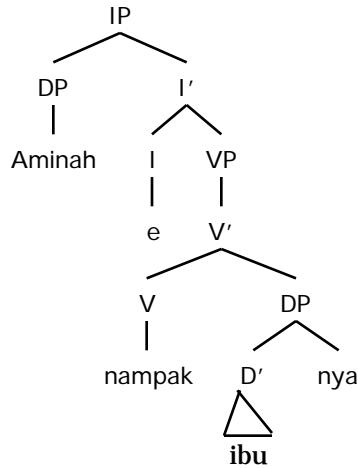
(23)



Thus, the possible antecedents for the pronominal specifier of *dirinya*, *-nya*, would be bound in (21) in the same fashion that the pronominal specifier of *ibu* 'mother' is bound in *ibunya* in (24) (the structure for which is shown in (25)):

(24) Aminah nampak ibu-nya.
 Aminah saw mother-3ps
 'Aminah saw her mother.'

(25)



Furthermore, the proposal that (22) is a CFC is strengthened by the fact that VP ellipsis of VPs containing *dirinya* in **local** contexts results in ambiguity between a strict and a sloppy reading, as was shown in (16)-(17) (repeated).

(16) John nampak dirinya di dalam cermin; Frank pun.
 John see self-3psg at inside mirror Frank also
 'John saw himself/him in the mirror and Frank did too.'

(17) Ali cukur dirinya di dalam bilik air; Bill pun.
 Ali shave self-3psg at inside bathroom Bill also
 'Ali shaved himself/him in the bathroom. Bill did so too.'

If it is assumed that the instance of *dirinya* in the elliptical VP in (16)-(17) must be identical in **all** features with its antecedent, it would follow that even in a local context like (16) and (17) (the relevant part of) *dirinya* is [+pronominal].¹⁶

9. Problems With the Pronominal Account

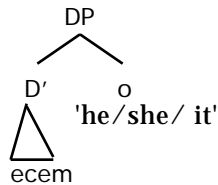
The account described in the previous section, while initially plausible, runs into problems when confronted with cross linguistic data. As we shall see, the pronominal account makes incorrect cross linguistic predictions about the properties of reflexives in languages other than Malay. Note that *diri*+pronoun in Malay would seem to have the same internal structure as reflexives in a variety of other languages. For instance, the Hebrew reflexive *ecem* 'self' +

pronoun (e.g. *acmi* 'myself', *acmo* 'himself') seems to have the same internal structure as *diri*+pronoun:

(26) *acm-o*

'reflexive 3ps'

(27)



However, *acmo* displays all the characteristics expected of an anaphor: It requires a c-commanding antecedent and does not allow antecedents outside the sentence:

(28) [_{NP} Hayedel shel Miriam]raa et acmo ba rei.

the.child of Miriam saw self.3psm in.the mirror.

'Miriam's child saw himself in the mirror.'

Furthermore, Hebrew reflexives allow only a sloppy interpretation under VP ellipsis when the deleted VP contains a reflexive. Compare (29), in which the deleted VP contains a pronoun, and (30), in which it contains a reflexive.

(29) David kana la naalayim xadashot ve ani gam.

David bought to.3psf shoes new and I too

'David bought her new shoes and I did too.'

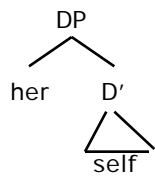
(30) David kana le acmo naalayim xadashot ve ani gam.

David bought to self.3psm shoes new and I too

'David bought himself new shoes and I did too.'

In (29), in which the antecedent VP contains a pronoun, the strict interpretation, in which I bought shoes for the same individual that David bought shoes, is well formed. In contrast, in (30), the sloppy reading, in which David bought shoes for himself and I bought shoes for myself, is the only possibility: Sentence (30) cannot mean that I bought shoes for David. Thus, the proposal that in structures like (22) or (27) the DP constitutes a CFC makes incorrect predictions about the properties of reflexives in languages other than Malay. Note that the incorrect predictions are not restricted to Hebrew. On the assumption that the structure for English reflexives is (31), this proposal makes false predictions for English as well:

(31)

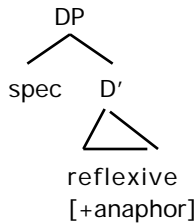


As in the case of Hebrew, it would be predicted incorrectly that *herself* would exhibit the same syntactic behavior as Malay *dirinya*.¹⁷

10. Feature Percolation and the Featural Content of *Dirinya*

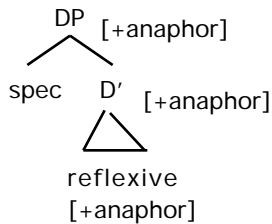
The fact that reflexive DPs like (27) in Hebrew and (31) in English behave like anaphors suggests that in a structure like (32)

(32)



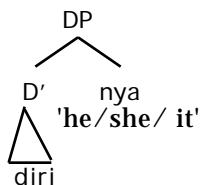
the feature content of the reflexive is percolated to the containing DP:

(33)



On the assumption that the reflexive is the head of the structure, it would be expected on the basis of the feature percolation literature (e.g. Cole, Hermon and Sung 1993) that the features of the reflexive would be percolated to the containing structure. This would explain the properties of English and Hebrew reflexives, and would predict that if Malay *dirinya* has a structure like (22) (repeated)

(22)



the anaphoric or pronominal properties of the DP would be due to the percolation of the properties of the head, *diri*. Such an analysis is incompatible with one in which (22) is a CFC. It is, however, completely compatible with an analysis in which *diri* is indeterminate lexically with regard to the features [pronominal] and [anaphor]. When *diri* is [+ pronominal], the feature [+pronominal] is percolated to the containing DP, while when it is [+anaphor] it is that feature which is percolated to DP. Thus, despite its initial plausibility, the hypothesis that *dirinya* is a separate CFC must be rejected.

11. Conclusions

We conclude that Malay *diri*+pronoun, while appearing on initial examination to be a counter example to the factual claims made in the literature regarding the properties of LD reflexives, is not, in fact, a LD reflexive. Nor is it merely a pronoun. Rather, as was argued on different grounds in Cole and Hermon (1998), the form is indeterminate in feature content between the features of a pronoun and those of a (local) reflexive.

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The Malay reported on here represents the speech of educated native speakers in Singapore. The same pattern seems to hold for educated speakers of Indonesian. According to David Gil, educated speakers of Kuala Lumpur Malay also give the same judgements. However, the work of Gil (1994) and (1997) on basilectal varieties of Malay and Indonesian shows that reflexive forms with rather different properties occur in basilectal dialects. The range of such forms is a matter that demands careful investigation.

¹ We are not concerned here with the details of the version of the Binding Theory which is employed.

² Properties (4a) and (4b) were first noted by Pierre Pica (1987), who showed that they follow from the LF head movement theory of LD reflexives.

³ It is shown in Cole & Wang (1996) that, at least with respect to Mandarin Chinese, subject orientation can be reduced to c-command, and that non-subject antecedents for reflexives are possible just when the noun phrase in question c-commands the LF position of the reflexive.

⁴ The blocking effect was first described in Y. H. Huang (1984). The claim that the blocking effect is related to verb agreement was first made in Cole, Hermon, & Sung (1993), which provides a detailed

discussion of the relationship of the Blocking Effect and subject-verb agreement. An example of the blocking effect in Chinese is given in (i):

(i) Ni_i renwei wo_j zhidao ziji_{*i/j} de taitai shi yige da hao ren.

you think I know self POSS wife is one big good man

'You thought that I knew that my own wife was a very good person.'

In (i) *ziji* must refer to *wo* 'I' rather than to *ni* 'you'. Note that the local subject, *wo*, differs in person features from the LD subject, *ni*.

⁵ See Battistella (1990), Cole, Hermon and Sung (1990), Cole Hermon and Sung (1993), Cole and Sung (1994), Cole and Wang (1996), Cole and Hermon (1998), Hestvik (1992), Pica (1987) and Sung (1990) inter alia for a variety of arguments that the facts of (4) should be explained by the LF head movement of the reflexive.

⁶The index *k* on *dirinya* indicates that *dirinya* can refer to someone in the discourse other than Siti or Siti's father. We shall discuss this reading later in the paper.

⁷ Most of our examples employ the third-person form of the reflexive, *dirinya*. In fact, the reflexive occurs in all person, e.g. *diri saya* 'myself', *diri kamu* 'yourself' etc. Unless we explicitly state otherwise, the properties we attribute to *dirinya* are true of the entire paradigm.

⁸ *Dirinya* is an explicitly third person form, so *dirinya* cannot refer to the embedded subject, *saya* 'I'. If a third person subject were substituted for *saya*, *dirinya* could refer to that nominal as well. Of course, if the first person form of the reflexive, *diri saya*, were employed, the reflexive could only refer to *saya* 'I'.

⁹ The claim that Malay *dirinya* is an LD reflexive, and hence, a counter example to (4) was made explicitly by Y. Huang (1996).

¹⁰ See Cole, Hermon and Sung (1990) inter alia regarding why phrasal reflexives like English *himself* and Chinese *ta ziji* 'himself' do not undergo long distance movement.

¹¹ The meaning of *sendiri* in isolation is 'alone'. In many non-standard Malay dialects, *sendiri* can itself be used as a reflexive. (See Gil 1997.) In the dialect under study here, this is not the case.

¹² There exists an additional reading in which *dirinya* refers to some individual in the discourse other than John and Frank in (16) and Ali and Bill in (17). This reading is not relevant to our discussion here.

¹³ A deletion treatment of VP ellipsis is employed in order to facilitate the demonstration of the properties of the indeterminacy analysis. Our analysis of *dirinya*, however, is not tied in any way to deletion.

¹⁴ We assume that specifiers can be generated on either the left or the right. Thus, *-nya* in (22) is the specifier of the head *diri*. We do not show the internal structure of the D' in because it is not important to us here whether the various elements of (22) originate in a more complex structure internal to the DP (e.g. NP).

¹⁵ The normal use of *-nya* is as a pronoun:

(i) *Saya nampak-nya.*

I see-3ps

'I saw him/her/it.'

¹⁶ In our earlier discussion, it was necessary to assume that the features [pronominal] and [anaphor] were not relevant for identity.

¹⁷ Examples are well known so, to conserve space, we will not provide them here.

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