



The typology of Malay reflexives

Peter Cole^{a,b,*}, Gabriella Hermon^{a,b,1}

^aDepartment of Linguistics, University of Delaware, Newark, DE 19716, USA

^bMax Planck Institute for Evolutionary Anthropology, Deutscher Platz 6,
D-04103 Leipzig, Germany

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Abstract

Malay *diri* + pronoun appears on initial examination to be a counter example to the typological claims made in the literature regarding the properties of long distance (LD) reflexives. It has been claimed that (1) LD reflexives are monomorphemic; (2) LD reflexives are subject oriented; (3) 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.

We argue, however, that the apparent exceptionality of *diri* + pronoun is based on a misanalysis: *diri* + pronoun is not, in fact, a LD reflexive. Nor is it merely a pronoun. Rather, the form is not specified in the lexicon as either a pronoun or a reflexive.

The present study examines the interpretations of *diri* + pronoun under ellipsis. As predicted for an anaphoric form lacking the features [α anaphor] and [α pronominal], the possible interpretations under ellipsis are the union of the interpretations of Malay true reflexives and pronouns. Arguments are provided against several alternative analyses.

While the distribution of *diri* + pronoun appears exotic from the perspective of typology, similar forms occur in other Austronesian languages (e.g., Javanese), and have been reported for such familiar languages as Old English and Middle English.

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* Corresponding author. Fax: +1-503-217-8492.

E-mail addresses: pcole@udel.edu (P. Cole), gaby@udel.edu (G. Hermon).

¹ Fax: +1-302-831-6896.

1. Long distance reflexives

From the perspective of linguistic typology, 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 Binding Domain of the reflexive (e.g., as defined in Chomsky, 1986).² In contrast, (3) shows that in Chinese a reflexive can refer to a nonlocal antecedent, one far beyond the confines of its Binding Domain.

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 as in (4):³

- (4) a. LD reflexives are monomorphemic (Pica, 1986).
- b. LD reflexives are subject oriented.⁴
- 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.⁵

² We are not concerned here with the details of the version of the Binding Theory which is employed.

³ See Cole et al. (2001a,b) for a more detailed cross-linguistic survey of the properties of long distance reflexives. While we assume a head movement analysis for LD reflexives in Chinese, head movement plays no role in our analysis of Malay reflexives.

⁴ It is shown in Cole and 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.

⁵ The blocking effect was first described in Huang (1984). The claim that the blocking effect is related to verb agreement was first made in Cole et al. (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.
2SG think 1SG 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*.

In much of the research on LD reflexives since the late 1980s, (4a–c) have been taken to be the defining typological 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. (See Battistella, 1990; Cole et al., 1990, 1993; Cole and Sung, 1994; Cole and Wang, 1996; Cole and Hermon, 1998; Hestvik, 1992; Pica, 1986; 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.)

2. The apparent exceptionality of Malay reflexives

As was described in Cole and Hermon (1998) and Cole et al. (2001a,b), Malay appears to be an exception to (4a–c): The form *diri* + pronoun, widely used as a local reflexive, can occur indefinitely far from its antecedent:

- (5) Ahmad_i tahu Salmah_j akan membeli baju untuk dirinya_{a_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, *dirinya* is not monomorphemic since it is composed of the morphemes *diri* 'reflexive' plus *-nya* '3ps'.^{7,8} Furthermore, *dirinya* is not subject oriented, as is seen in (6):

- (6) Siti_i mengingatkan Mohamed_j yang saya tahu diri_{a_i/j/k}.⁸
 Siti remind Mohamed that 1SG know self.3SG
 seorang penjenayah.
 one criminal
 'Siti reminded Mohamed that I know he/she is a criminal.'

⁶ The 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 The full paradigm is given below:

(i) Diri + Pronoun

| Person | Singular | Plural |
|---------------|-------------------|--|
| First Person | diri saya/diri-ku | diri kami/diri kita |
| Second Person | diri kamu/diri-mu | diri kamu/diri-mu |
| Third Person | diri-nya | diri mereka/diri-nya (occasionally) |

The general structure of these forms is *diri* + personal pronoun. The forms *diri-ku* and *diri-mu* employ *diri-* plus the enclitic pronouns *-ku* and *-mu* (derived from *aku* 'I' and *kamu* 'you,' respectively). *Kami* is first person plural exclusive and *kita* is first person plural inclusive. The distinction is typically not made by Singapore speakers. The form *-nya* is the enclitic form of the third person pronoun (used for both the singular and plural). The independent form, *dia*, is rarely used in conjunction with *diri-* (*diri dia*).

Dirinya (and other members of the above paradigm) can be used as a reflexive in all grammatical functions:

Example (6) shows that *dirinya* can refer to either the matrix subject, *Siti*, or to the matrix object, *Mohamed*.⁹

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 1SG 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,

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- (ii) a. Reflexive Subject
 John fikir [dirinya akan pergi ke K.L. besok].
 John thinks self-3SG will go to K.L. tomorrow
 'John thinks that he will go to Kuala Lumpur tomorrow.
 b. Reflexive Direct Object
 Ahmad nampak dirinya di cermin.
 Ahmad see self-3SG in mirror
 'Ahmad sees himself in the mirror.'
 c. Reflexive Indirect Object
 Siti menunjukkan Mary pada dirinya di cermin.
 Siti show Mary to self-3SG in mirror
 'Siti shows Mary to herself in the mirror.'

When *dirinya* is used inside a noun phrase, it can serve as the complement of the noun, but not as its specifier (possessor):

- (iii) John membaca buku dirinya.
 John read book self-3SG
 'John read a book about himself.'

Example (iii) cannot be interpreted as 'John read his own book.' The later interpretation would be expressed as follows:

- (iv) John membaca bukunya sendiri/buku dia sendiri.
 John read book-3SG alone book he alone
 'John read his own book.'

⁸ In prescriptive Malay and in all varieties of Indonesian with which we are familiar, *yang* is restricted to introducing relative clauses. In Singapore and Malaysia it has come to be used widely as a general complementizer introducing complement clauses as well. Despite the fact that *yang* is restricted to introducing relative clauses in prescriptive Malay, complement clauses introduced by *yang* do not have any adjunct-like properties. For example, extraction from *yang* clauses is well-formed.

⁹ *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.'

we argue that, initial appearances to the contrary, Malay *dirinya* is not, in fact an LD reflexive (as was claimed, e.g., by Huang, 1996). Instead, we contend that *diri* + pronoun is unspecified in the lexicon with regard to the features [α anaphor] and [α pronominal].¹⁰ As a result, *dirinya* can be used both in the environments appropriate for reflexives and in those appropriate for pronouns. Furthermore, we argue that *dirinya* cannot be an 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*. (See Cole et al., 1990 inter alia regarding why phrasal reflexives like English *himself* and Chinese *ta ziji* ‘himself’ do not undergo long distance movement.) 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 unspecified for the features [α pronominal]/[α anaphor], and is not a LD reflexive. (1) Unlike true LD reflexives, *dirinya* can refer to non-c-commanding antecedents, and (2) unlike LD reflexives *dirinya* can refer 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 Bapak Siti]_i tidak suka dirinya_{i/j/k}.
 father Siti not like self.3SG
 ‘Siti’s father does not like her/himself/him.’

Example (8) shows that *dirinya* can refer to the c-commanding noun phrase *bapak Siti*, the non-c-commanding noun phrase *Siti* or to a referent understood from the discourse.

Our purpose in this paper is to examine more closely the properties of the Malay reflexive *dirinya* and to add to our earlier arguments a third and, we believe quite persuasive argument based on the behavior of *dirinya* under VP ellipsis. The VP ellipsis argument will provide semantic evidence that LD *dirinya* lacks the feature content of both pronouns and local reflexives, and that it is not an LD reflexive. We shall also compare the interpretation of *dirinya* with that of the true (local) reflexive *dirinya sendiri* and with that of the long distance reflexive *ziji* in Chinese.

4. VP ellipsis as a test for pronoun versus reflexive

We would like to turn now to an argument based on VP ellipsis and similar processes of ellipsis for the claim that apparent LD reflexives in Malay are not specified as either reflexives or pronouns, and that they, therefore, can be used in the union of the environ-

¹⁰ Our use of two features, [α anaphor] and [α pronominal], rather than a single feature with two values, is for clarity of presentation. We take no position on whether one or two features are needed for Binding.

ments in which reflexives and pronouns can be used. It has long been known (cf. Sag, 1977; Williams, 1977) that, when the antecedent for VP ellipsis contains a reflexive, VP ellipsis exhibits semantic properties which are different from those exhibited when the antecedent contains a pronoun. Consider the possible interpretations of the elliptical VP in (9) and (10):

- (9) John_i said that Susan met him_i in the library and Ted did too.
 (10) John_i looked at himself_i in the mirror and Harry did 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:

- (9') $\lambda x[x \text{ said that Susan met } x \text{ in the library}] (\text{John}) \wedge \lambda x[x \text{ said that Susan met } x \text{ in the library}] (\text{Ted})$

In contrast, under the strict interpretation, John said that Susan met John in the library while Ted also said that Susan met John:

- (9'') $[\text{John said that Susan met } x_1 \text{ in the library} \wedge \text{Ted said that Susan met } x_1 \text{ in the library}]^{x_1 \rightarrow \text{John}}$

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 free variable whose value is supplied via assignment function 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.

- (10') $\lambda x[x \text{ look at } x \text{ in the mirror}] (\text{John}) \wedge \lambda x[x \text{ look at } x \text{ in the mirror}] (\text{Harry})$

It cannot be interpreted to mean that John looked at John and Harry looked at John as well (the strict interpretation). 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.¹¹ If the same semantic facts hold of 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, a reflexive or a form indeterminate between the two.

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*.¹²

- (11) John_j bilang yang Mary nampak dia_j di Singapura; Frank pun.
 John say that Mary see 3SG at Singapore Frank also
 'John said that Mary saw him in Singapore and Frank did so too.'

¹¹ Same caveats are necessary here. It is in fact possible to force a strict reading for reflexives under the right pragmatic conditions. This was noted by Hestvik (1992) with respect to adjuncts:

- (i) Fred defended himself better than his lawyer did.
 Similarly, Heim (1998) noted similar facts with regard to predicates that potentially select guises:
- (ii) Bush voted for himself. And of course, most conservative Americans did as well.
 In addition, Kitagawa (1991) observed the same pattern in ECM sentences:
- (iii) John considers himself a genius, but nobody else does.

While English speakers differ in their judgments regarding (i)–(iii), it is an overstatement to claim unequivocally that English reflexives can have only a sloppy reading.

Just as was seen for English, it is probably true for Malay and Chinese as well that strict readings for reflexives can be forced. We do not believe, however, that this vitiates the value of ellipsis for distinguishing reflexives from pronouns; it is in fact quite difficult to get a strict reading for a reflexive. Thus, the strong propensity for a sloppy reading makes an excellent test for whether a form is a reflexive.

For presentational purposes we shall continue to treat the ellipsis test as though it were absolute. It should be remembered, however, that this is not the case.

¹² The ellipsis in (11) in Malay may not be the same process as VP ellipsis in English. The *pun* construction does have the same properties as English VP ellipsis with respect to the interpretation of clear cases of pronouns and reflexives. Thus, we feel justified in treating it as equivalent to VP ellipsis for our purposes. The paradigm for personal pronouns follows:

(i) Personal Pronouns

| Person | Singular | Plural |
|---------------|-------------------|------------------|
| First Person | saya/aku | kami/kita |
| Second Person | kamu (and others) | kamu |
| Third Person | ia/dia/-nya | mereka/dia orang |

Aku is more colloquial than *saya*. As already mentioned, the distinction between *kami* (exclusive) and *kita* (inclusive) is largely unknown in Singapore. *Ia* is restricted to subjects, while *dia* is well-formed as a subject or a non-subject. All the personal pronouns other than *ia* can be used without variation in form in any grammatical function.

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.

(11') a. Strict reading

[John say that Mary saw x_1 in Singapore \wedge Frank say that Mary saw x_1 in Singapore] $^{x_1 \rightarrow \text{John}}$

b. Sloppy reading

λx [x say that Mary saw x in Singapore] (John) \wedge λx [x say that Mary saw x in Singapore] (Frank)

This is consistent with the expectation that pronouns can either be interpreted as a variable or assigned an interpretation by an assignment function.

Turning to reflexives, in addition to *diri* + pronoun, Malay employs another reflexive form, *diri* + pronoun *sendiri*.¹³ *Diri* + pronoun *sendiri* differs from *diri* + pronoun in a

¹³ The meaning of *sendiri* in isolation is 'alone.' In many non-standard (basilectal) Malay varieties, *sendiri* can itself be used as a reflexive. (See Gil, 1997.) In the variety under study here, as in prescriptive Malay, this is not the case. The paradigm for *diri* + pronoun *sendiri* is the same as that for *diri* + pronoun except that *sendiri* is added. Like *dirinya*, *dirinya sendiri* can be used as a direct object, indirect object or complement of a noun. As in the case of *dirinya*, *dirinya sendiri* cannot be used as a possessor:

- (ii) John membaca buku dirinya sendiri.
John read book self-3SG alone
'John read a book about himself.'

Sentence (ii) cannot be interpreted as 'John read his own book.' *Dirinya sendiri* differs from *dirinya* in not occurring in subject position:

- (iii) John fikir (yang) dirinya sendiri akan pergi ke K.L. besok.
John think that self-3SG alone will go to K.L. tomorrow.
'John thinks that he himself will go to KL tomorrow.'

While (iii) is a grammatical sentence, *sendiri* is not used as a reflexivizer converting *dirinya* into a true reflexive. Rather (iii) instantiates an additional use of *sendiri* as an emphatic. Thus, the translation of (iii) is 'John thinks that he himself will go to Kuala Lumpur tomorrow.' Note that (iv), in which the pronoun *dia* is substituted for *dirinya*, is also well-formed, and receives the same interpretation as (iii):

- (iv) John fikir (yang) dia sendiri akan pergi ke K.L. besok.
John think that he alone will go to K.L. tomorrow
'John thinks that he himself will go to Kuala Lumpur tomorrow.'

The string *dia sendiri* cannot be interpreted as a reflexive.

- (v) *John nampak dia sendiri di cermin.
John see he alone in mirror
'John sees himself in the mirror.'

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 teach 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 receive a sloppy interpretation:

- (14) John nampak dirinya sendiri di dalam cermin; Frank pun.
 John see self-3SG alone in inside mirror Frank also
 'John saw himself in the mirror and Frank did too.'
- (15) Ali cukur dirinya sendiri di dalam bilik air; Bill pun.
 Ali shave self-3SG alone in inside room water 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.

(14') Strict reading ill-formed; sloppy reading well-formed

a. Strict reading

*[x saw x in the mirror \wedge Frank saw x_1 in the mirror] ^{$x_1 \rightarrow \text{John}$}

b. Sloppy reading

$\lambda x[x \text{ saw } x \text{ in the mirror}] (\text{John}) \wedge \lambda x[x \text{ saw } x \text{ in the mirror}] (\text{Frank})$

Similarly, the only possible interpretation for (15) is that Ali and Bill each shaved themselves. It cannot mean that Bill shaved Ali.

(15') Strict reading ill-formed; sloppy reading well-formed

a. Strict reading

*[x shaved x in the bathroom \wedge Bill shaved x_1 in the bathroom] ^{$x_1 \rightarrow \text{John}$}

b. Sloppy reading

$\lambda x[x \text{ shaved } x \text{ in the bathroom}] (\text{Ali}) \wedge \lambda x[x \text{ shaved } x \text{ in the bathroom}] (\text{Bill})$

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*.

(16) John nampak dirinya di dalam cermin; Frank pun.
 John see self-3SG in 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-3SG in inside room water 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, apparently as in (16').

(16') Both strict and sloppy readings well-formed

a. Strict reading

[John saw x_1 in the mirror \wedge Frank saw x_1 in the mirror] $^{x_1 \rightarrow \text{John}}$

b. Sloppy reading

$\lambda x[x \text{ saw } x \text{ in the mirror}] (\text{John}) \wedge \lambda x[x \text{ saw } x \text{ in the mirror}] (\text{Frank})$

Similarly, (17) can mean either that Bill saw himself or that he saw Ali.¹⁴

(17') Both strict and sloppy readings well-formed

a. Strict reading

[Ali shaved x_1 in the bathroom \wedge Bill shaved x_1 in the bathroom] $^{x_1 \rightarrow \text{Ali}}$

b. Sloppy reading

$\lambda x[x \text{ shaved } x \text{ in the bathroom}] (\text{Ali}) \wedge \lambda x[x \text{ shaved } x \text{ in the bathroom}] (\text{Bill})$

As seen in (18), both strict and sloppy interpretations in a VP ellipsis context also obtain in the nonlocal use of *dirinya*.

(18) Mary fikir John nampak dirinya di dalam cermin; Frank pun.
 Mary think John see self-3SG in inside mirror Frank also
 'Mary thought that John saw himself/her in the mirror and Frank did too.'
 Strict: 'Frank thought that John saw Mary in the mirror.'
 Sloppy: 'Frank thought that John saw Frank in the mirror.'

Are these, in fact, the interpretations predicted by an analysis in which *dirinya* is not specified as either a pronoun and an anaphor? Because *dirinya* is analyzed according to the

¹⁴ 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.

Indeterminacy of Feature Content Hypothesis as lacking the features [α pronominal]/[α anaphor], it would be expected that such a form would receive the union of the interpretations available for the pronoun *dia* and the reflexive *dirinya sendiri*.

- (19) a. Interpretation of *dia*
 { Strict interpretation }
 { Sloppy interpretation }
- b. Interpretation of *dirinya sendiri*
 { Sloppy interpretation }
- c. Union of Interpretations of *dia* and *dirinya sendiri*
 { Strict interpretation }
 { Sloppy interpretation }

Thus, like the pronoun *dia*, it is expected that *dirinya* can receive either the strict or the sloppy interpretation. This is, in fact, the range of interpretations found.

7. Alternative analyses

7.1. The ambiguity analysis

We have shown that the hypothesis that *dirinya* is listed in the lexicon without specification for the features [α pronominal]/[α anaphor] predicts correctly the range of interpretations for sentences containing *dirinya* under VP ellipsis. It might appear that the same predictions would be made 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. This, however, is not the case. 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 with respect to these features, the antecedent VP in VP ellipsis sentences would contain either $\left\{ \begin{array}{l} \textit{dirinya} \\ [+pronoun] \end{array} \right\}$ or $\left\{ \begin{array}{l} \textit{dirinya} \\ [+anaphor] \end{array} \right\}$. 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.¹⁵ 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 $\left\{ \begin{array}{l} \textit{dirinya} \\ [+anaphor] \end{array} \right\}$ occur in the ellipsis VP as well. As a bound anaphor (i.e., a reflexive), the sloppy reading would be the only possibility and the strict reading would be excluded. Since the strict reading does, in fact, occur, as we have just seen in (16) and (17), we conclude that *dirinya* must be unspecified

¹⁵ We assume that “Vehicle Change” in the sense of Fiengo and May (1992) is not possible (at least in these cases).

with regard to the features [α pronominal] and [α anaphor], and cannot be lexically ambiguous with regard to these features.

7.2. 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* in that both strict and sloppy interpretations are possible. This raises the question of whether long distance reflexive 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:¹⁶

- (20) Mali_i shuo Zhangsan kanjian ta_i; Lisi ye zenme shuo.
 Mary said Zhangsan saw her Lisi also thusly said
 'Mary said that Zhangsan saw her and Lisi did so too.'

Like the English translation, sentence (20) can be interpreted to mean either that Lisi said that Zhangsan saw Mary (the strict reading) or that he saw Lisi (the sloppy reading). In contrast, in (21), in which the local reflexive *ta ziji* is employed, only the sloppy reading is possible.

- (21) Mali hen xihuan ta ziji de gege; Zhangsan ye zenme xihuan.
 Mary very like herself's brother Zhangsan also thusly like
 'Mary likes her own brother very much and Zhangsan does so too.'

In (21) Zhangsan can only be understood to like **his own** brother (the sloppy reading). The sentence cannot be understood to mean that he likes Mary's brother.

Sentences (20) and (21) 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* in (22) and Malay *dirinya* in (18), repeated below, are compared.

- (22) Mali_i shuo Zhangsan kanjian ziji_i; Lisi ye zenme shuo.
 Mary said Zhangsan saw self Lisi also thusly said
 'Mary said that Zhangsan saw her and Lisi did so too.'
- (18) Mary fikir John nampak dirinya di dalam cermin; Frank pun.
 Mary think John see self-3SG in inside mirror Frank also
 'Mary thought that John saw himself/her in the mirror and Frank did too.'
 Strict: 'Frank thought that John saw Mary in the mirror.'
 Sloppy: 'Frank thought that John saw Frank in the mirror.'

¹⁶ The ellipsis construction in Chinese which we employ here appears to involve the raising of the verb to a position above the VP prior to ellipsis of the VP. As a consequence of the raising of the verb, it is not deleted by ellipsis. Except for the fact that the verb is not deleted, Chinese ellipsis shows the usual properties of VP ellipsis constructions.

Sentence (22) can only be assigned the sloppy interpretation according to which Lisi said that Zhangsan saw him, and not that Zhangsan saw Mary. Sentence (18) in Malay, however, can have both the sloppy and strict interpretations. 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.¹⁷

7.3. Is *diri* + pronoun a Possessive DP?

We saw earlier that the range of interpretations occurring with *dirinya* under VP ellipsis conforms to the predictions of the Indeterminacy Analysis. As illustrated in (19), repeated below, this analysis predicts that *dirinya* will have the union of the interpretations of a pronoun and a reflexive:

- (19) a. Interpretation of *dia*
- { Strict interpretation }
 { Sloppy interpretation }
- b. Interpretation of *dirinya sendiri*
- { Sloppy interpretation }
- c. Union of Interpretations of *dia* and *dirinya sendiri*
- { Strict interpretation }
 { Sloppy interpretation }
- { Strict interpretation }
 { Sloppy interpretation }

However, as we have already seen, the interpretations in (19c) are equivalent to those of a pronoun (19a). This fact suggests an alternative analysis for *dirinya*. Consider the

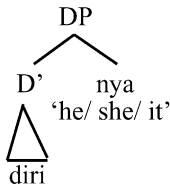
¹⁷ There is considerable variation among speakers with regard to the naturalness of the *ye zenme* + verb construction ((20)–(22)) as a Mandarin equivalent of VP ellipsis. Some speakers who find (20)–(22) unnatural (and therefore hard to evaluate) prefer a *ye yiyang* constructions as in (i)–(ii). (See Cole et al., 2001a,b.)

- (i) Zhangsan_i shuo Lisi changchang kuidai ziji_j; Wangwu ye yiyang.
 Zhangsan say Lisi always mistreat self Wangwu also the same
 Zhangsan_i says that Lisi always mistreats him_j; so does Wangwu [say Lisi mistreats Wangwu].
- (ii) Zhangsan_i shuo Lisi changchang kuidai ta_j; Wangwu ye yiyang.
 Zhangsan say Lisi always mistreat him Wangwu also the same
 Zhangsan_i says that Lisi always mistreats him_j; so does Wangwu_j say Lisi mistreats him_j.

The same results obtain as with the *ye zenme* + verb constructions: When *ziji* 'self' is employed, only the sloppy reading is possible, while when *ta* 'he/she' is used, both strict and sloppy interpretations are available.

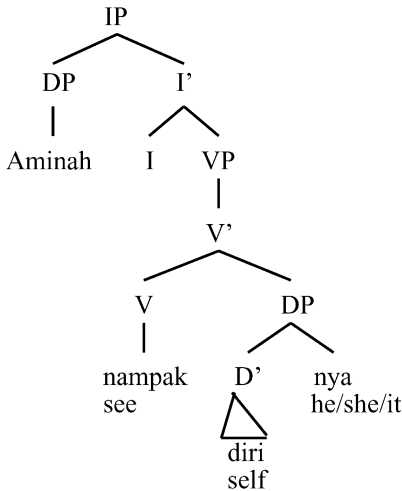
possibility that *diri* + pronoun is not simply a lexical item, but rather has an internal syntactic structure in which the *-nya* is the specifier of DP.¹⁸

(23)



Let us assume that (23) 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 and *diri* is the head of the NP internal to the DP. In addition, let us stipulate that *diri* has the semantics of an identity operator. Then it would be expected that *-nya* could take as an antecedent a c-commanding nominal outside the DP, and that the interpretation of *dirinya* would be that of *-nya*, as in (24):

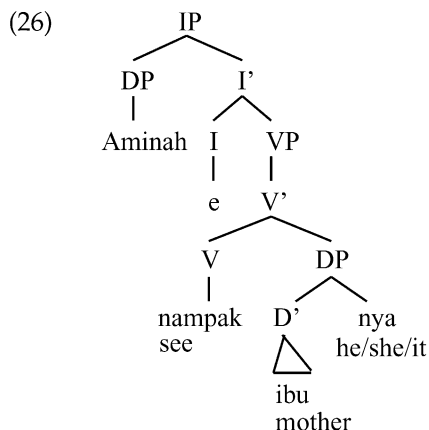
(24)



Thus, the possible antecedents for the pronominal specifier of *dirinya*, *-nya*, would be bound in (24) in the same fashion that the pronominal specifier of *ibu* ‘mother’ is bound in *ibunya* in (25) (the structure for which is shown in (26)):

¹⁸ We assume for the sake of argument that specifiers can be generated on either the left or the right. Thus, *-nya* in (23) 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 (23) originate in a more complex structure internal to the DP (e.g., NP).

- (25) Aminah nampak ibunya.
 Aminah see mother-3SG
 'Aminah saw her mother.'



Furthermore, the proposal that (23) 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-3SG in 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-3SG in 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 under this analysis that even in a local context like (16) and (17) (the relevant part of) *dirinya* is a pronoun.

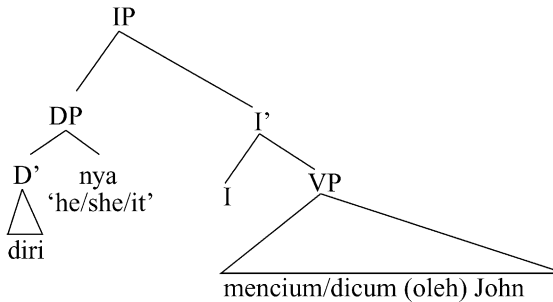
7.3.1. Problems with the Possessive DP account

The Possessive DP account provides a potential alternative to the Indeterminacy Analysis with respect to *dirinya* in object position. The Possessive DP analysis, however, runs into difficulty in accounting for the distribution of *dirinya* in subject position. Consider the following examples:

- (27) Dirinya_{s_ij} mencium John_i.
 self-3SG kiss John
 'He/himself kissed John.'
- (28) Dirinya_{s_ij} dicium (oleh) John_i.
 self-3SG was.kissed by John
 'He/himself himself was kissed by John.'

As is expected, *dirinya* can refer to an individual in the discourse, an interpretation similar to that of the pronoun *dia*. In addition, the Possessive DP Analysis predicts that *dirinya* will have an interpretation in which *-nya* is coindexed with *John*, an interpretation that is in fact lacking. Note that in (23) *-nya* does not c-command any constituent outside the DP in which it occurs:

(29)



Thus, it should be possible for *-nya* (and, hence, *dirinya*) to refer to the direct object in (27) and the agent in (28), just as it is possible for the possessive pronoun to refer to the direct object and the agent in (30) and (31).¹⁹

(30) Anjingnya_i mengigit John_i.
 dog-3SG bit John
 'His dog bit John.'

(31) Anjingnya_i dipukul (oleh) John_i.
 dog-3SG was.hit by John
 'His dog was hit by John.'

The fact that *-nya* does not c-command *John* in (30)–(31) means that these sentences do not violate Condition C of the Binding Theory, and, thus, they are grammatical. Sentences (30)–(31) are to be contrasted with (32)–(33).

(32) *Dia_i mencium John_i.
 she kiss John
 'John kissed her.'

(33) *Dia_i dicium (oleh) John_i.
 she was.kissed by John
 'John was kissed by her.'

In (32)–(33) the subject, *dia*, c-commands *John*, resulting in a Condition C violation when *dia* and *John* are coindexed.

¹⁹ Sentences (30) and (31) are somewhat unnatural, but speakers have no difficulty in understanding *-nya* to mean John.

The Possessive DP Analysis predicts that (27)–(28) should pattern with (30)–(31) rather than with (32)–(33). But, in fact, (27)–(28) shows the same pattern as (32)–(33), and not the pattern seen in (30)–(31). This shows that *dirinya* is not treated by the syntax as a complex DP with a structure like (23), in which the possessor fails to c-command outside the subject DP, but rather as a unitary lexical entry. This is not captured by the Possessive DP Analysis. In contrast, the Indeterminacy Analysis treats *dirinya* as a single form, but one that is not specified as subject to either Condition A or Condition B of the Binding Theory. We conclude that the Indeterminacy Analysis is to be preferred over the Possessive DP Analysis.

8. Conclusions

We conclude that Malay *diri* + pronoun is an anaphoric form that is unspecified with respect to the features [α pronominal]/[α anaphor]. As a result, *dirinya* overlaps with both the pronoun *dia* and the true reflexive *dirinya sendiri*. Anaphoric forms with similar properties occur in other Austronesian languages in the region. For instance, the form *awake dheen*, literally ‘body + 3person.possessive + he’ in the Javanese spoken by Peranakan speakers in Semarang, has properties almost identical to those of Malay *dirinya*. While the distribution reported on here appears exotic from the perspective of English (or, for that matter, Chinese), a similar distribution has been noted by Keenan (1976, 2000) for both Old English and Middle English. We defer to the future the project of determining whether forms like *dirinya* should be considered unusual from a typological perspective, or whether they occur commonly in the languages of the world.

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The Malay language is highly diglossic, so it is important to indicate the speech level under discussion. The Malay reported on here represents the speech of educated native speakers in Singapore, i.e., it is an acrolectal register of Singapore Malay which its speakers consider to be Standard Malay. (That is not to say that this register conforms to all the requirements of the Dewan Bahasa dan Pustaka, the Malaysian language academy, which sets prescriptive standards for Malay in both Malaysia and Singapore. Some departures from prescriptive standards will be noted below.) The same pattern with respect to the reflexive

dirinya seems to hold for educated speakers of Indonesian as well. According to David Gil, educated speakers of Kuala Lumpur Malay also give the same judgments. However, the work of Gil (1994, 1997, 2001) on basilectal varieties of Malay and Indonesian shows that different reflexive forms, typically using *sendiri* alone and not with *dirinya*, have different properties. Thus, we restrict our claims to registers that employ *dirinyaldirinya sendiri*.

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