

# Locality Constraints on Yes/No Questions in Singapore Teochew\*

## 1. Introduction

Our purpose in this paper is to describe the formation of yes/no (Y/N) questions in colloquial Singapore Teochew (ST), a variety of Teochew (Chaozhou) which has borrowed a significant number of lexical items from Malay. While we do not know to what extent the properties of ST questions are shared by other varieties of Teochew (and, more generally, by southern Chinese dialects), we hope that the facts and analyses discussed here will contribute to a more general understanding of question formation in Chinese and across languages. The varieties of Y/N questions which we shall describe are A-Not-A questions, questions employing the question particle ka and postposed negative auxiliary (PNA) questions.

We shall argue that the three types of Y/N questions can be reduced to two types, A-Not-A questions and ka questions. These two types of questions differ markedly in their properties. Ka questions show distributional limitations which indicate that they are derived in a fashion like that of adverbial WH questions, suggesting a movement analysis similar to that proposed by Huang (1982 and 1991) for Mandarin and Taiwanese A-Not-A questions. This is shown by the fact that ka questions can in general occur in embedded clauses and have matrix scope, but when the question occurs inside a syntactic island (e.g. sentential subject or

relative clause) matrix scope is blocked. This is the same pattern found for adverbial WH words.

This pattern, however, does not hold for all ST Y/N questions. Unlike Mandarin and Taiwanese (as reported by Huang (1982 and 1991)), ST A-Not-A questions inside a subordinate clause can have matrix scope even when they occur in an island. Thus, there is no reason to posit for ST A-Not-A questions a movement analysis similar to that required for WH questions. Rather, we propose, in the spirit of McCawley (1994), that ST A-Not-A questions continue in their syntactic properties to reflect their presumed historical source as disjunctive questions (questions which request of the addressee a choice between two possible answers). As McCawley has argued, such questions can acquire a conventionalized use as Y/N questions when the possibilities are restricted to a proposition or its negation. But, unlike what has occurred in Mandarin and Taiwanese A-Not-A questions, the association of such a conventional use with ST A-Not-A questions has not led to a reanalysis of the syntactic properties of the construction. Thus, ST A-Not-A questions have not taken on the syntactic properties seen with ka questions.

## *2. The Formation of Yes/No Questions*

We shall begin by describing how ST Y/N questions are formed. The three ways of forming Y/N questions in ST are illustrated in (1)-(3):

(1) A-Not-A Question

Ah Meng su m suka ji bun zi?  
like not like this CL book

'Does Ah Meng like this book?'

(2) Ka Question<sup>1</sup>

Ah Meng ka suka ji bun zi?  
Q like this CL book

'Does Ah Meng like this book?'

(3) Postposed Negative Auxiliary Question

Ah Meng (oi) suka ji bun zi b-oi?  
will like this CL book not-will

'Will Ah Meng like this book?'

A-Not-A questions are formed by placing a negative copy of the auxiliary or verb immediately after the affirmative verb.<sup>2</sup> In contrast, ka questions are formed by placing the morpheme ka after the subject but before negation (when present)<sup>3</sup>. In PNA questions, the negative form of what, for the sake of convenience, we shall refer to as the auxiliary<sup>4</sup>, occurs at the end of the clause.<sup>5</sup> All three types of Y/N questions can be used for genuine requests for information and can be used in both questions with matrix scope (like (1)-(3)) and in subordinate questions.<sup>6</sup> None of the three displays the properties of English tag questions: For (1)-(3) either a negative or a positive reply is natural and expected, while in tag questions, as is illustrated in (4), the questioner merely asks for confirmation of the truth of the clause preceding the tag question. A negative answer is unexpected.

(4) a. Neutral Question

Q: Did you read the paper?

Expected answer 1: Yes, I did.

Expected Answer 2: No, I didn't.

b. Tag Question

Q: You read the paper, didn't you?

Expected answer: Yes, I did.

Unexpected answer: No, I didn't.

It should be noted that colloquial ST lacks an equivalent to Mandarin question particle (-ma) questions. While a question form -meh cognate to -ma occurs in literary Teochew, it is absent from the colloquial language spoken in Singapore. It should also be pointed out that PNA questions are not formed in the same manner as Mandarin -ma questions. While -ma is a fixed form, as was already mentioned, a PNA question requires the occurrence of the negative form of a limited class of verbs (e.g. oi in (3)), which, for convenience, we have referred to as auxiliaries. Either the auxiliary employed in the PNA is a negative copy of one which occurs in the sentence to which the PNA is attached, or the sentence is interpreted as though the same auxiliary found in the PNA were covertly present in the sentence to which the PNA is attached. In no case can the auxiliary which occurs in the sentence to which the PNA is attached be different from that found in the PNA:

(5) a. Ah Meng ai lai m-ai?

Ah Meng want come not-want

'Does Ah Meng want to come?'

b. \*Ah Meng oi lai m-ai?

Ah Meng will come not-want

'Does Ah Meng want to come?'

c. Ah Meng oi lai b-oi?

Ah Meng will come not-will

'Will Ah Meng come?'

### 3. Cooccurrence Among Various Types of Y/N Questions

We shall now turn to the cooccurrence possibilities of the three types of Y/N questions. We shall show that Y/N questions can be formed in which both ka and A-Not-A or both ka and PNA occur. The occurrence of ka together with A-Not-A is shown in (6) while ka together with PNA is shown in (7).

(6) A-Not-A and Ka

Ah Meng ka su m suka ji bun zi?

Q like not like this CL book

'Does Ah Meng like this book?'

(7) Postposed Negative Auxiliary and Ka

Ah Meng ka (oi) suka ji bun zi b-oi?

Q will like this CL book not-will

'Will Ah Meng like this book?'

The possibility of cooccurrence of ka with A-Not-A and PNA questions makes it impossible to extend to ST the proposal of Huang (1982 inter alia) that the morpheme cognate to ka in Taiwanese (kam) and A-Not-A are two instantiations of the same form.

In contrast to (6)-(7), A-Not-A cannot be combined with PNA, as is seen in (8):

(8) Ungrammatical A-Not-A and Postposed Negative Auxiliary

- a. \*Ah Meng su m suka ji bun zi b-oi?  
like not like this CL book will-not  
'Will Ah Meng like this book?'
- b. Ah Meng oi suka ji bun zi b-oi?  
will like this CL book will-not  
'Will Ah Meng like this book?'
- c. \*Ah Meng oi su m suka ji bun zi b-oi?  
will like not like this CL book will-not  
'Will Ah Meng like this book?'
- d. \*Ah Meng oi b-oi suka ji bun zi b-oi?  
will will-not like this CL book will-not

These examples show that A-Not-A cannot be combined with PNA regardless of whether it is a main verb or an auxiliary which is reduplicated.

The distribution of question forms observed in (6)-(8) can be explained if we assume that PNA is a postposed variant of the negative auxiliary in A-Not-A questions. Thus, we propose: 1) A-Not-A and PNA questions are derived from a single source in D-structure. 2) Ka on the one hand, and A-Not-A / PNA on the other are derived from distinct elements in the D-structure of the sentence. We posit a structure like (9) as a common source for A-Not-A and PNA questions:<sup>7</sup>

(9) [Ah Meng [<sub>TP</sub> oi [<sub>VP</sub> e]] [<sub>TP</sub> b-oi [<sub>VP</sub> suka ji bun zi]]]

Ah Meng will not-will like this CL book

When the head of TP is an auxiliary (e.g. oi, but not suka), the negative auxiliary is optionally postposed as in (10):

(10) [Ah Meng [<sub>TP</sub>oi [<sub>VP</sub>e]] [<sub>TP</sub>ti [<sub>VP</sub>suka ji bun zi] b-oi<sub>i</sub>]]  
 Ah Meng will like this CL book not-will

Subsequent optional deletion of the auxiliary would yield (11):

(11) [Ah Meng [<sub>TP</sub>e [<sub>VP</sub>e]] [<sub>TP</sub>ti [<sub>VP</sub>suka ji bun zi] b-oi<sub>i</sub>]]  
 Ah Meng will like this CL book not-will

It should be noted that we posit an underlying auxiliary in (11) because (11) is understood as though the auxiliary oi were present. The identity of the deleted auxiliary can be reconstructed from the PNA.

To summarize, the fact that A-Not-A and PNA cannot cooccur in the same sentence is explained by proposing that they derive from a common source in D-structure. Thus, we shall henceforth refer to both A-Not-A and PNA questions as A-Not-A questions.<sup>8</sup>

Just as the non-cooccurrence of A-Not-A and PNA questions suggests that they are derived from a single source, the cooccurrence of A-Not-A and ka questions (illustrated in (6) and (7)) suggests that A-Not-A and ka derive from different sources. Thus, it cannot be the fact that in ST A-Not-A and ka are both manifestations of a single functional category (e.g.[+WH] INFL), as was claimed by Huang for Taiwanese. Rather, we shall claim for ST that only ka questions contain an interrogative functional category, hereafter Q(uestion) P, an analysis similar to that of Huang for Taiwanese kam.<sup>9</sup> A structure for (6) along these lines is given in (12):

(12) [Ah Meng [<sub>QP</sub>ka [<sub>TP</sub>oi [<sub>VP</sub>e]] [<sub>TP</sub>b-oi [<sub>VP</sub>suka ji bun zi]]]]  
 Ah Meng Q will not-will like this CL book

The structure in (12) is based on the assumption that Chinese, like many--perhaps all--other languages, manifests functional categories (here Question Phrase) which are the projection of grammatical morphemes like ka. The structures proposed here provide a representation from which it is predicted that ka can cooccur with A-Not-A and PNA, but A-Not-A and PNA cannot cooccur. As will be seen in the sections which follow, these structures, when elaborated, predict that ka questions will manifest properties similar to those of adverbial WH questions, but that A-Not-A questions will not manifest these properties. Thus, ka questions and not A-Not-A questions will be predicted to have the properties attributed by Huang to A-Not-A questions in Mandarin, and to both kam questions and A-Not-A questions in Taiwanese.

#### *4. Parallels Between the Distribution of Ka and WH Questions*

In the preceding section we argued that ka and A-Not-A questions derive from different sources. We shall now turn to the distribution of these two types of Y/N questions in complex sentences, showing that ka manifests a distribution similar to that of ST adverbial WH question words, while A-Not-A does not. The distributional facts will motivate a further elaboration of the phrase structures proposed.

We shall first examine briefly some restrictions on the distribution of WH words in ST. ST, like other varieties of Chinese, manifests WH in situ: Unlike English and many other languages, on the surface at least, WH words are not fronted, but, rather, are found in the same position as non-WH-arguments of the same type:

(13) a. Affirmative Sentence

Ah Meng pa wa.

Ah Meng beat me

'Ah Meng beats me.'

b. Unfronted WH Question

Ah Meng pa didiang?

Ah Meng beat who

'Who did Ah Meng beat?'

c. Fronted WH Question

\*Didiang Ah Meng pa?

who Ah Meng beat

'Who did Ah Meng beat?'

(14) a. Affirmative Sentence

Ah Meng dor Muikok zorang

Ah Meng at U.S. work

'Ah Meng works in the US.'

b. Unfronted WH Question

Ah Meng dor digor zorang?

Ah Meng at where work

'Where does Ah Meng work?'

c. Fronted WH Question

\*Dor digor Ah Meng zorang?

at where Ah Meng work

'Where does Ah Meng work?'

Although ST, like other varieties of Chinese, manifests WH in situ, there is reason to believe that at least some WH constructions in Chinese involve A' movement, either movement of

the WH form itself in the LF component as in Huang (1982), or movement of a null operator in the syntactic component, as in Aoun and Li (1993) and Watanabe (1992 and 1993). This is because, as was first shown in Huang (1982), certain WH forms in Chinese are excluded from some syntactic configurations, namely from syntactic islands. The exclusion of WH from islands has, since the seminal work of Ross (1967), been interpreted as showing that movement (covert or overt) has occurred.

It should be noted, as was emphasized by Huang (1982), that not all Mandarin WH forms are excluded from islands. The exclusion is limited to certain adverbial forms like weishenme 'why' and zenme 'how'. This was taken by Huang (1982) as an instance of an adjunct/argument asymmetry, but, it has been more recently claimed by Tsai (1994) that the distinction is one of nominal WH versus adverbial WH, and that only the adverbial WH forms are excluded from islands. Leaving aside the differences between Huang's and Tsai's analyses (which are not relevant here), there is evidence that adverbial WH undergo covert movement.<sup>10</sup>

Turning now to ST, as in Mandarin, adverbial WH forms are excluded in sentential subjects and relative clauses:

(15) a. WH Adverbial in Sentential Subject in Mandarin

\*Wo weishenme qu Beijing bijiao hao?

I why go Beijing better

'For me to go to Beijing for which reason is better?'

b. WH Adverbial in Sentential Subject in ST

\*Wa zorni kih Pakiah you hor?

I why go Beijing better

'For me to go to Beijing for which reason is better?'

(16) a. WH Adverbial in Relative Clause in Mandarin

\*Ni renshi weishenme qu Beijing de ren?

you know why go Beijing person

'You know the person who went to Beijing why?'

b. WH Adverbial in Relative Clause in ST

\*Le bak zorni kih Pakiah gai nang?

you know why go Beijing (DE) person

'You know the person who went to Beijing why?'

(17) a. 'How' in Relative Clause in Mandarin

\*Ni renshi zenme xiuli qiche de ren?

you know how repair car person

'You know the man who fixed the car how?'

b. 'How' in Relative Clause in ST

\*Le bak zornimue? xiuli chia gai nang?

you know how repair car person

'You know the man who fixed the car how?'

The ungrammaticality of examples like those of (15-17) has been explained in terms of the ECP: If it is assumed that examples like those of (15-17) involve covert WH movement, the examples are ill-formed because the trace of WH requires antecedent government. Antecedent government, however, is not possible when the trace is within sentential subjects and relative clauses.<sup>11</sup> This is illustrated in a simplified and schematic form in (18)-(19) (in

which it is assumed for convenience that the covert movement is LF WH movement):

(18) LF WH Movement From Sentential Subject

[<sub>CP1</sub> Zorni<sub>i</sub> [<sub>IP</sub> [<sub>NP</sub> [<sub>CP2</sub> t'<sub>i</sub> [<sub>IP</sub> wa t<sub>i</sub> kih Pakiah ]]] [<sub>VP</sub> you hor]]]

(19) LF WH Movement From Relative Clause

[<sub>CP1</sub> Zorni<sub>i</sub> [<sub>IP</sub> le [<sub>VP</sub> bak [<sub>NP</sub> [<sub>CP2</sub> t'<sub>i</sub> [<sub>IP</sub> t<sub>j</sub> t<sub>i</sub> kih Pakiah] gai nang<sub>i</sub>]]]]]

In (18) t<sub>i</sub> is the trace of the WH adjunct zorni. As an adjunct, t<sub>i</sub> is not lexically governed and, hence, must be antecedent governed. The original trace t<sub>i</sub> is antecedent governed by t'<sub>i</sub>, but t'<sub>i</sub> itself also requires antecedent government. Since the subject clause (CP2) is not L-marked, t'<sub>i</sub> cannot be antecedent governed by zorni.<sup>12</sup> Thus, (18) is ill-formed.

Similarly, in (19) the trace t<sub>i</sub> inside the relative clause CP<sub>2</sub> requires antecedent government. But, because the relative clause itself is not L-marked, the intermediate trace t'<sub>i</sub> found in the specifier of CP of the relative clause is not properly governed, and the question is ungrammatical.

We have seen that adverbial WH in situ in ST, like adverbial WH in situ in Mandarin, shows restrictions on the environment in which WH forms can occur, restrictions which constitute evidence that these WH questions involve covert movement from the original IP internal site of WH<sup>13</sup> to the matrix specifier of CP. We shall now see that the types of Y/N questions found in ST are split between those in which the locus of Y/N questioning can occur within island structures and those in which it cannot.

Let us first consider ka questions. In addition to examples like those of (2), in which the locus of questioning is the matrix

clause, questions in which the locus of questioning is the embedded clause are also possible:<sup>14</sup>

(20) Ka Question on Complement Clause

a. [Le sio [i ka suka wa]]  
tha  
jingwui  
yaok  
ka?dek

you think he Q like me  
say  
suppose  
guess  
feel

'Do you think he liked me?'  
say  
suppose  
guess  
feel

b. Mama kia tha le m zai ka oi diakih Awjiu  
mum afraid that you not sure ka will live in Australia

'Mother is afraid that you might decide to live in Australia.'

While ka questioning is possible from embedded clauses, the locus of ka questions cannot be within a sentential subject or an adjunct clause, environments in which, as was just seen, WH in situ is not possible.<sup>15</sup>

(21) Ka Question in Sentential Subject

\*Wa ka kih Pakiah you hor?

I ka go Beijing better

'Is it better for me to go to Beijing?'

(22) Ka Question in Relative Clause

\*Le suka ka kih Pakiah gai nang?

You like ka go Beijing person

'Do you prefer people who go to Beijing?'

While ka questions in ST pattern with adverbial WH in situ in terms of the environments within which the locus of questioning is possible, unlike Mandarin and Taiwanese, as reported by Huang (1991), similar restrictions are not found with A-Not-A questions. Example (23) shows that A-Not-A questions occur in embedded clauses:

(23) A-Not-A Question in Complement Clause

a. [Le sio [i su m suka wa]]

tha

jingwui

yaok

ka?dek

you think he like not like me

say

suppose

guess

feel

'Do you think he likes me?'

say

suppose

guess

feel

b. Bozua tha zongli kih-m-kih Mui Kok?

papers say PM go-not-go US

'Did the paper say whether the PM is going to the US?'

Not only can A-Not-A questions occur in subordinate clauses, but, unlike ka questions, they can occur in sentential subjects and adjunct clauses:

(24) a. A-Not-A Question in Sentential Subject

Wa kih m kih Pakiah you hor?

I go not go Beijing better

'Is it better for me to go to Beijing or not?'

b. A-Not-A Question in Relative Clause<sup>16</sup>

?Le suka tiao m tiaobu gai nang?

you like dance not dance person

'Do you prefer those who dance or those who don't?'

We have shown that there exists an asymmetry in the formation of Y/N questions in ST. While ka questions have distributional restrictions parallel to those on adverbial WH questions, which prevent their occurrence within sentential subjects and relative clauses, the same restrictions do not apply to A-Not-A questions.<sup>17</sup>

In the next section we shall propose explicit structures to account for the differing distributions of ka and A-Not-A questions.

##### *5. The Analysis of Y/N Questions in ST*

The parallel distribution of adverbial WH in situ and ka suggests that an explanation similar to that given for the restrictions on WH in situ should be given for the restrictions on the distribution of ka questions. Following this line of reasoning, covert movement (either in the syntax or the LF component) must apply in the derivation of ka questions. In contrast, in the case of ST A-Not-A questions, movement is not an

appropriate analysis because A-Not-A questions do not display the same distributional restrictions as adverbial WH in situ and ka questions.

As in earlier sections of this paper, we continue to assume (as in (12)) that the morpheme ka heads a phrase, which we have referred to as QP. We shall assume that ka licenses an operator OP as its specifier. It is the specifier of QP which undergoes covert movement, which, following Aoun and Li (1993) and Watanabe (1992 and 1993), we shall take to be movement in the syntax.<sup>18</sup> In accord with this general approach, the proposed structure for ka questions like (2) would be similar to (25):<sup>19</sup>

(25) Structure of Ka Questions

[<sub>CP</sub> OP<sub>i</sub> [ Ah Meng [<sub>QP</sub> t<sub>i</sub> [<sub>Q'</sub> ka<sup>i</sup> [<sub>VP</sub> suka ji bun zi]]]]]

Q            like this CL book

In (25) the position of the operator OP indicates the scope of questioning. The trace of OP (indicated by t<sub>i</sub>) occupies the position of specifier of QP. This specifier is cosuperscripted with the interrogative morpheme ka. The cosuperscripting is intended to indicate an agreement relationship between the specifier of QP and ka, a relationship which is isomorphic to that between a subject and a verb (as distinct from the cosubscripting between t<sub>i</sub> with OP<sub>i</sub>, which indicates operator binding or coreference). The relationship between OP and its trace is identical to the relationship between WH and its trace in languages

displaying overt and covert WH movement (as evidenced by island restrictions on the distribution of WH).

In contrast, the structure of ST A/Not-A questions like (1) does not involve an interrogative functional category like that found in ka questions. Structure (9) (repeated), represents our proposal regarding the structure of A-Not-A questions<sup>20</sup>:

(9) [Ah Meng [<sub>TP</sub>oi [<sub>VP</sub>e] [<sub>TP</sub>b-oi [<sub>VP</sub>suka ji bun zi]]]

Ah Meng will not-will like this CL book

The structure posited in (9) differs from (25) in that no operator/variable structure is proposed. Rather the Y/N question interpretation assigned to (9) is due to a conventionalized use of the structure in question:

(26) [disjunctive question] > [Y/N question].

Stated mechanically, we claim that ST A/Not-A questions continue to display the syntax of disjunctive questions. However, they receive a conventional interpretation as yes/no questions. Put differently, the construction has undergone a semantic shift, but the syntax has not yet caught up with the semantics.<sup>21</sup>

Returning to the islandhood restrictions, structures (25) and (9) provide representations from which the differing distributional restrictions on ka and A-Not-A questions in ST are predicted.

Because ka questions are represented as derived by movement, it is expected that island restrictions will hold. Consider (27), the structure underlying (21):

(27) [<sub>CP1</sub> OP<sub>i</sub> [<sub>IP</sub> [<sub>NP</sub> [<sub>CP2</sub> t'<sub>i</sub> [wa [<sub>QP</sub> t<sub>i</sub> [<sub>Q</sub>, ka<sup>i</sup> [kih Pakiah]]]]]]]  
 [<sub>VP</sub> you hor]]]

In (27) the trace  $t'_i$  is not antecedent governed, and, therefore, the sentence is ungrammatical. Thus, a representation of ka questions similar to (25) predicts that ka questions will not occur in sentential subjects.

Similarly, a representation along the lines of (25) predicts the ungrammaticality of sentences like (22), in which a ka question is found in an relative clause, as seen in (28):

(28) [<sub>CP1</sub> OP<sub>i</sub> [<sub>IP</sub> le [<sub>VP</sub> bak [<sub>NP</sub> [<sub>CP2</sub> t'<sub>i</sub> [<sub>t<sub>j</sub></sub> [<sub>QP</sub> t<sub>i</sub> [<sub>Q'</sub> ka<sup>i</sup> [<sub>kih</sub> Pakiah]]]]]]] gai nang<sub>j</sub>]]]

In (28)  $t'$  is not antecedent governed, and therefore, the sentence is ungrammatical. Again, a representation for ka questions similar to (25) predicts that ka questions will not be found in relative clauses.

Turning now to A-Not-A questions, a non-movement structure along the lines of (9) predicts correctly that A-Not-A questions will be possible in sentential subjects and relative clauses. The relevant structures are given in (29) and (30):

(29) [[ wa [<sub>TP</sub> kih<sub>i</sub> [<sub>VP</sub> t<sub>i</sub> ]] [<sub>TP</sub> m-kih<sub>j</sub> [<sub>VP</sub> t<sub>j</sub> Pakiah ]] ] [<sub>VP</sub> you hor ]]

I go not-go Beijing better

(30) [ le bak [<sub>NP</sub> [<sub>CP</sub> [[ t<sub>k</sub> [<sub>TP</sub> kih<sub>i</sub> [<sub>VP</sub> t<sub>i</sub> ]] [<sub>TP</sub> m-kih<sub>j</sub> [<sub>VP</sub> t<sub>j</sub>

you know go not-go

Pakiah ]]]] gai nang<sub>k</sub> ]]

Beijing person

Structures (29) and (30) are well formed because, as base generated structures, there are no traces which must be properly governed.<sup>22,23</sup>

## 6. *An Alternative Analysis of A-Not-A Questions:*

### *Unselective Binding*

According to the analysis presented above, ST A-Not-A questions differ radically in structure from ka questions and from Mandarin and Taiwanese A-Not-A questions. Building on ideas suggested by McCawley (1994), we have proposed that ST A-Not-A questions do not manifest an operator/variable structure like ka questions, but rather, that they are syntactically similar to disjunctive questions. The Y/N question interpretation is the result of the conventionalization of a Y/N question implicature which occurs in disjunctive questions when the two alternatives are a proposition or its negation. For example in English, (31) has (32) as an implicature:

(31) Do you want to visit me or don't you want to visit me?

(32) Do you want to visit me?

In English, (31) and (32) differ in use in that (32) is a neutral request for information while (31) implies that the questioner suspects that the addressee does not want to visit her. In contrast, ST A-Not-A questions lack the non-neutral implicature associated with (31), and the A-Not-A question is interpreted as a neutral question.

Thus, according to our analysis (which we take to be an extension of McCawley's), ST A-Not-A questions are historically intermediate between true disjunctive questions (with disjunctive question implicatures) and Mandarin/Taiwanese A-Not-A questions. Mandarin/Taiwanese A-Not-A questions have gone a step beyond ST A-



(35) [<sub>CP1</sub> OP<sub>i</sub> [<sub>IP</sub> [<sub>NP</sub> [<sub>CP2</sub> [wa [<sub>QP</sub> Pro<sub>i</sub> [<sub>Q'</sub> [kih m kih Pakiah]]]]]]]

I go not go Beijing

[<sub>VP</sub> you hor]]]

better

(36) [<sub>CP1</sub> OP<sub>i</sub> [<sub>IP</sub> le [<sub>VP</sub> bak [<sub>NP</sub> [<sub>CP2</sub> [<sub>t<sub>j</sub></sub> [<sub>QP</sub> Pro<sub>i</sub> [<sub>Q'</sub> [kih m kih

you know go not go

Pakiah]]]]] gai nang<sub>j</sub>]]]

Beijing person

In (35) and (36), Pro is unselectively bound by OP. Although Pro occurs within an island, the relationship between OP and Pro is not one of movement. Thus, the representation is well-formed.

The unselective binding analysis would appear to be bolstered by the fact that there is strong evidence that unselective binding is the right analysis for nominal WH in situ, at least in certain languages. For instance, Cole and Hermon (1995), argue that unselective binding is the correct account for wh in situ in Malay and Ancash Quechua. This approach is extended to Chinese by Tsai (1994), who argues that nominal WH in situ in Chinese involves unselective binding rather than covert WH movement.<sup>25</sup>

There is, however, reason to believe that unselective binding does not extend naturally to ST Y/N questions. There is evidence that unselective binding is restricted to nominal WH words: It was argued by Tsai (1994), basing himself in part on work on the semantics of WH in situ by Reinhart (1993), that there is an asymmetry between nominal and adverbial WH in Chinese. While nominal WH undergoes unselective binding, and, therefore, is not subject to constraints on movement, adverbial WH cannot employ

unselective binding, which, for reasons discussed by Reinhart, cannot provide an interpretation for non-nominal WH forms. Thus, adverbial WH must obey the constraints on movement. Tsai's analysis predicts correctly that the cut between those WH words which will be subject to island constraints and those which will not, is nouns versus adverbs.

The Tsai/Reinhart proposal is based on universals of semantics, and, hence should apply across languages. It receives striking confirmation from the distribution of overtly moved versus in situ WH in Malay, discussed in Cole and Hermon (1995). For nominal WH, both WH in situ and WH movement are possible. Furthermore, in Malay WH in situ fails to be subject to island conditions. But, for many speakers, adverbial WH violate this generalization. Adverbial WH cannot remain in situ, and must undergo overt WH movement.

Tsai's proposal provides an immediate explanation for the unexpected obligatoriness of overt movement for adverbial WH: WH in situ in Malay involves unselective binding, but only nominal WH can be unselectively bound. Unlike Chinese, for many speakers, Malay lacks a covert movement option. Thus, adverbial WH must undergo overt WH movement.

Returning to ST A-Not-A questions, we, therefore, assume that unselective binding is only an option for nominal WH elements. But it would be difficult to view the Y/N question operator as nominal in character. The locus of questioning in Y/N questions is the verb rather than a nominal argument. This is shown by the possible answers to questions:

(37) a. Question

Le kih m kih Pakiah?

you go not go Beijing

'Are you going to Beijing?'

b Possible Answer

Kih.

go

'Yes.'

Note that the answers to A-Not-A questions are verbal rather than nominal. This is true in Mandarin and Taiwanese as well as ST. Thus, an analysis in terms of unselective binding is inappropriate. Furthermore, an account in terms of unselective binding would need to explain why A-Not-A questions in Mandarin and Taiwanese cannot occur in islands (i.e. do not involve unselective binding), but those in ST can occur in islands (i.e. do involve unselective binding). It would be surprising if the Y/N operator were nominal in the case of ST A-Not-A questions but not in the case of A-Not-A questions in Mandarin and Taiwanese. Thus, we conclude that unselective binding is not a possible analysis for ST A-Not-A questions.

### *7. Some Diachronic Implications*

We have tried in this paper to extend the work of Huang (1982 and 1991) on the structure of Chinese Y/N questions to the colloquial Teochew of Singapore, and to show that considerable insight into ST Y/N questions is provided by Huang's proposal that Chinese Y/N questions involve an operator/variable structure related by movement in a manner similar to what is found in WH

questions. What is particularly interesting about ST is that ST conforms only in part to Huang's generalizations: While ST ka questions show island effects just like Taiwanese kam questions and Mandarin and Taiwanese A-Not-A questions, ST A-Not-A questions can occur freely in islands.

These facts raise a number of interesting questions for Chinese linguistics and for linguistic theory: 1) How does the structure of A-Not-A questions in ST differ from that of A-Not-A questions in Mandarin and Taiwanese so that island effects occur in the latter two dialects but not in ST? 2) How do the structures of A-Not-A questions and ka questions in ST differ? These questions are answered in our analysis by positing that ka questions in all dialects manifest the movement of an operator. In Mandarin and Taiwanese this is true also for A-Not-A questions, but in ST A-Not-A questions have a derivation which does not involve either an operator/variable structure or movement.

While our analysis provides an answer to these two synchronic questions, a third, diachronic, question arises: 3) What is the general typology of Y/N questions in Chinese dialects, and how did the current state of affairs develop historically? Our proposals regarding this question must for the moment be speculative since data has only been collected on a small number of dialects. Viewed, however, from a cross-dialectic perspective the following pattern emerges: 1) While we have not discussed ma question in this paper, in fact no sensitivity to islands is found with ma questions in any dialect. They occur only on the main clause, so embedding is ruled out. 2) Questions employing ka are sensitive to

islands in all known dialects. 3) Dialects differ with regard to the sensitivity of A-Not-A questions to islands.

We shall assume that McCawley is correct in viewing contemporary A-Not-A questions as the conventionalization or grammaticization of what were earlier disjunctive questions or alternative questions. Given this assumption, we would hypothesize that earlier Chinese manifested two types of Y/N questions, ma questions and ka questions (early Mandarin ke). The former was a manifestation of an interrogative main clause complementizer much like ma in contemporary Mandarin. In contrast, the form which developed into ka/kam was the head of an interrogative phrase, just as is the case in ST and Taiwanese today. There were no A-Not-A questions, although disjunctive and alternative (haishi 'or') questions existed.

At a subsequent period, as McCawley suggests, A-Not-A questions began to develop as a conventionalized use of the disjunctive question. In the case of Mandarin and Taiwanese, the conventionalization of disjunctive questions as Y/N questions was accompanied by a full grammaticization of this question type, and A-Not-A questions borrowed the syntactic structure of ka questions, and adopted an operator/variable, movement-based structure. Further, in just these dialects, A-Not-A and ke/kam became alternative instantiations of the head of QP. As a result, the cooccurrence of A-Not-A and ke/kam became impossible. Thus, A-Not-A questions in those dialects came to develop a movement related operator/variable structure. Subsequently, ke was lost in Mandarin

leaving only A-Not-A questions as a manifestation of the movement related operator/variable structure.

In contrast, in ST while A-Not-A questions came to be treated conventionally as Y/N questions, they have not acquired the syntax of ka questions. Thus, from this perspective, ST is intermediate between earlier Chinese, in which A-Not-A questions did not exist as a conventionalized variety of Y/N questions, and Mandarin/Taiwanese, in which A-Not-A questions have been fully assimilated to a pre-existing question type, -ka questions.

#### *8. Conclusions*

To conclude, the facts regarding ST Y/N questions support two important proposals in the literature, Huang's suggestion that certain Chinese Y/N questions manifest a movement related operator/variable structure, and McCawley's suggestion that A-Not-A questions represent the conventionalization and grammaticization of what earlier were not Y/N questions, but rather alternative or disjunctive questions. The ST facts are also suggestive that Y/N questions with an operator/variable structure were originally associated with ka, and that the properties of ka questions later spread to A-Not-A questions. The examination of data from additional dialects as well as from texts of earlier Chinese is essential if the correctness of these speculations is to be determined.

#### *References*

Aoun, Joseph and Audrey Li (1993) "WH-Elements in Situ: Syntax or LF?", *Linguistic Inquiry* 24: 199-238.

- Baker, C. Lee (1968) *Indirect Questions in English*, Ph.D. dissertation, University of Illinois, Urbana.
- Baker, C. Lee (1970) "Notes on the Description of English Questions," *Foundations of Language* 6: 197-219.
- Cheng, Lisa L.-S. (1991) *On the Typology of WH-Questions*, Ph.D. dissertation, MIT.
- Cole, Peter (1983a) "Subjacency and Successive Cyclicity: Evidence from Ancash Quechua," *Journal of Linguistic Research* 2:4, 35-58.
- Cole, Peter and Chengchi Wang (1992) "Subject Orientation, Blocking Effects and the Phrase Structure of Chinese," presented at the 1992 Annual Research Forum of the Linguistic Society of Hong Kong.
- Cole, Peter and Gabriella Hermon (1993) "Question Formation in Malay", presented at the Symposium on South and East Asian Languages, National University of Singapore, December 1993.
- Cole, Peter and Gabriella Hermon (1994) "Is There LF WH Movement?" to appear in *Linguistic Inquiry* 25, 2.
- Cole, Peter and Gabriella Hermon (1995) "Is Wh-in-situ really In-situ - Evidence from Malay and Ancash Quechua", Proceedings from the 1994 West Coast Conference on Formal Linguistics, Stanford, CA, CSLI.
- Huang, C.-T. James (1982) *Logical Structures in Chinese and the Theory of Grammar*, Ph.D. dissertation, MIT.
- Huang, James (1991) "Modularity and Explanation: The case of Chinese A-Not-A Questions," in *Interdisciplinary Approaches to*

- Language: Essays in Honor of S.-Y. Kuroda*, editors, Carol Georgopoulos and Roberta Ishihara, Dordrecht and Boston, Kluwer Academic.
- McCawley, James (1994) "Remarks on the Syntax of Mandarin Yes-No Questions", *Journal of East Asian Languages* 3:2, 179-194.
- Mohanan, K.P. (1984) "Operator Binding and the Path Containment Condition," *Natural Language and Linguistic Theory* 2, 357-396.
- Pollock, J.-Y. (1989) "Verb movement, UG and the Structure of IP", *Linguistic Inquiry* 20, 365-424.
- Reinhart, Tanya (1993) "Wh-in-situ in the Framework of the Minimalist Program", Lecture presented at the Utrecht Linguistics Colloquium.
- Ross, John R. (1967) *Constraints on Variables in Syntax*, Ph.D. dissertation, MIT.
- Saddy, Douglas (1991) "WH Scope Mechanisms in Bahasa Indonesia," *MIT Working Papers in Linguistics* 15, 183-218.
- Shlonsky, U. (1991) "Quantifiers as Functional Heads: A Study of Quantifier Float in Hebrew", *Lingua* 84, 159-80.
- Tang, C.-C. Jane (1990) *Chinese Phrase Structure and the Extended X'-Theory*, Ph.D. dissertation, Cornell University.
- Tsai, Wei-Thein, Dylan (1994) *Economizing the Theory of A'-Dependencies*, Ph.D. dissertation, MIT. Distributed by the MIT Working Papers in Linguistics.
- Tsai, Wei-Thein, Dylan (1994) "To move or not to move - That is the Question". Unpublished paper.
- Watanabe, Akira (1992) "S-Structure Movement for WH-in-Situ and Anti-superiority," ms.

Watanabe, Akira (1993) "Subjacency and S-Structure Movement of WH-in-Situ," to appear in *Journal of East Asian Linguistics*.

Zanuttni, R. (1991) *Syntactic Properties of Sentential Negation. A Comparative Study of Romance Languages*, Ph.D dissertation, University of Pennsylvania.

Peter Cole

Department Of Linguistics

University of Delaware

Newark, DE 19716

pcole@strauss.udel.edu

Lee Cher Leng

Department of Chinese Studies

National University of Singapore

Singapore 0511

chsleecl@leonis.nus.sg

---

\* We would like to thank Gaby Hermon, James Huang, the members of the National University of Singapore (NUS) Linguistics Programme, the participants in the Symposium on South and East Asian Languages, National University of Singapore, December 1993, and the JEAL reviewers for their very helpful comments on earlier

---

versions of this paper. We would also like to thank the NUS Department of Chinese Studies and the NUS Department of English Language and Literature for their assistance. Thanks are due as well to Norhaida Aman for her assistance in getting the revised paper ready for publication. Finally, we would like to acknowledge the College of Arts and Science, the Department of Linguistics and the International Studies Program of the University of Delaware for funding our continued work on this and related topics.

<sup>1</sup> ST ka is related etymologically to Taiwanese kam and early Mandarin ke questions as described in Huang (1991).

<sup>2</sup> By A-Not-A question we mean the pattern referred to by Huang (1991) as A-Not-A-B questions.

<sup>3</sup> It might be thought that ka appears after a topic rather than a subject. However, ka can appear in sentences with quantified subjects like tak nang 'everyone', which are not possible topics:

(i) Tak nang ka u kok loimue?  
everyone Q have give present  
'Did everyone give present?'

We therefore conclude that the position of ka is post-subject rather than post-topic.

<sup>4</sup> The verbs which can occur in PNA are oi/b-oi 'can'/'not-can', ai/m-ai 'want'/'not-want', u/b-o 'have'/'not-have', si/m-si,m-i 'be'/'not-be' and tio?/miang 'have to'/'not have to'. We shall refer to these verbs as auxiliaries since they have modal meanings and only verbs with modal meanings can occur as the postposed verb in PNAs. It is beyond the scope of this paper to determine if the term "auxiliary" should be taken as more than a convenience.

<sup>5</sup> PNA questions might be viewed as similar in form to the A-B-Not-A questions of Huang (1991). We shall argue against an extension of Huang's analysis to ST PNA

---

questions, and will contend that PNA and A-Not-A questions derive from the same source. Our arguments are based on ST specific distributional facts. Thus, we do not claim that our arguments carry over to A-B-Not-A questions in Mandarin.

It should be noted that the superficial form of PNA and AB-Not-A questions is quite different. As is discussed below, PNA questions involve the repetition of one of a limited set of verbs which are interpreted as modal in meaning and not an open set of verbs. In contrast, in AB-Not-A questions in Mandarin, repetition of an open set of verbs is possible. We shall, therefore, assume that despite superficial similarities between the two constructions, it should not be expected that ST PNA questions and Mandarin AB-Not-A would have the same analysis.

<sup>6</sup> The following sentences illustrate the use of A-Not-A, ka and PNA in subordinate questions, demonstrating that all three types of y/n questions are possible as complements to verbs that subcategorize for questions:

(i) a. I zai Ah Meng su m suka ji bun zi.

he know Ah Meng like not like this CL book

'He knows whether Ah Meng liked this book.'

b. Ah Meng sio ai zai le jia m jia liuliang

Ah Meng wants know you eat not eat durian

'Ah Meng wants to know if you eat durian.'

(ii) I zai Ah Meng ka suka ji bun zi.

he know Ah Meng Q like this CL book

'He knows whether Ah Meng liked this book.'

(iii) I zai Ah Meng (oi) suka ji bun zi b-oi.

he know Ah Meng will like this CL book not-will

'He knows whether Ah Meng liked this book.'

---

<sup>7</sup> These structures differ from those proposed by Huang for A-Not-A questions in Mandarin and Taiwanese. We shall argue below that the properties motivating the structures proposed by Huang are lacking in ST A-Not-A questions but are found in ST ka questions.

In (9) oi 'will' is taken to head the functional projection, TP (Tense Phrase), following analyses of English in which modals need to occur as manifestations of tense. It is far from obvious that this is the correct analysis for English, but the matter is even less clear for Chinese--since Chinese lacks overt tense. It is not in fact important for our analysis of Y/N questions to determine the exact nature of the functional category in question. For our purposes, Aspect Phrase, for instance, would be as adequate as Tense Phrase. But, with these reservations, we shall for the sake of convenience, continue to employ TP in our structures.

<sup>8</sup> Further evidence for deriving PNA questions from the same source as A-Not-A questions will be provided in footnote 17 below.

<sup>9</sup> A possible argument against our claim that ka and A-not-A question are different grammatical categories is based on the conjunction possibilities. In general, unlike categories cannot be conjoined, but conjunction is possible for ka and A-not-A questions:

(i) i mng tha Ah Meng ka u boi liuliang  
he ask if Ah Meng ka have buy durian  
ga i gai boh jia m jia liuliang  
and his wife eat not eat durian

'He asked if Ah Meng bought durians and if his wife eats them.'

---

(ii) i mng tha Ah Meng ka u kih tai wang

he asked if Ah Meng ka have go Taiwan

ga i boh ka jia m jia chao tauhu

and his wife eat not eat smelly bean curd

'He asked if Ah Meng had gone to Taiwan and if his wife eats smelly bean curd.'

Examples (i) and (ii) both show a ka question conjoined with an A-not-A question.

While the conjunction facts taken alone would appear to be evidence against the claim that ka and A-not-A questions are different categories, it should be remembered that conjunction of unlike categories is possible when the conjoined phrases have the same function:

(iii) happily and without a care

(iv) quickly but with a smile

In (iii)-(iv) an adverb is conjoined with a prepositional phrase, but both serve parallel, adverbial functions. Thus, in the light of the evidence in the body of the paper that ka and A-not-A questions are different categories, we interpret the conjunction evidence as constituting additional examples of the conjunction of unlike categories which have the same function in the sentence.

<sup>10</sup> For Tsai nominal WH forms are generated in situ and are unselectively bound by an operator generated in scopal spec of CP. Since unselective binding does not involve movement, it would not be expected that island constraints would apply to the distribution of nominal WH forms. Unselective binding, however, is not available to adverbial WH forms (since operator bound variables must be nominal in character). Thus, adverbial WH forms must themselves be operators and undergo covert movement. This analysis is discussed further below. See Tsai (1994) for details. For a treatment of Malay and Quechua WH in terms of unselective binding, see Cole and Hermon (1995) *inter alia*.

---

<sup>11</sup> This explanation of the ungrammaticality of (15-17) follows Huang (1982). Somewhat different accounts are given in more recent works. All, however, are based on the supposition that these sentences involve covert movement, either LF movement of the wh form itself, or syntactic movement of a null operator associated with the wh form. It is irrelevant for our purposes which variant of the analysis is to be preferred.

<sup>12</sup> The sentential subject in (18) is represented by an NP dominating a CP. In fact, the presence or absence of the NP node is irrelevant for our purposes. Regardless of its syntactic category, a subject is not L-marked. Thus, antecedent government of a trace inside a subject by an antecedent outside of the subject will not be possible.

<sup>13</sup> Or, under the OP movement analysis, from an operator position within that IP.

<sup>14</sup> Note that while some of the matrix verbs in (20) might be interpretable as parentheticals, this is not the case for kia 'fear' in (20b). This contradicts McCawley's claim for Mandarin that apparent instances of Yes/No questioning of embedded clauses are all due to parenthetical interpretations.

<sup>15</sup> These examples duplicate in ST the observation of Huang (1991) that kam questions in Taiwanese cannot occur in islands.

<sup>16</sup> While the occurrence of an A-Not-A question inside a relative clause is not perfect, it is much better than the occurrence of a ka question as in (22).

<sup>17</sup> It would appear at first glance that PNA questions have distributional restrictions similar to those on ka questions rather than similar to those on A-Not-A questions. If this were so, it would undercut our claim that PNA questions are derived by postposing the negative predicate from an A-Not-A source. PNA questions, like ka questions, but unlike A-Not-A questions, cannot appear inside a syntactic island:

(i) PNA Question in Sentential Subject

---

\*Ah Meng oi suka ji bun zi boi you hor?  
Ah Meng will like this CL book won't better  
'Is it better for Ah Meng to like this book or not?'

(ii) PNA Question in Relative Clause

\*Ah Meng suka oi tiaobu boi gai nang?  
Ah Meng like know dance won't part. person  
'Does Ah Meng like someone who can or can't dance?'

It will be remembered, however, that we have proposed that PNA questions are derived from A-Not-A questions which contain an overt auxiliary like oi 'will, know, can'. For reasons which we do not understand, A-Not-A questions which manifest overt auxiliaries cannot appear in islands.

(iii) A-Not-A Question With Auxiliary in Sentential Subject

\*Ah Meng oi boi suka ji bun zi you hor?  
Ah Meng will won't like this CL book better  
'Is it better for Ah Meng to like this book or not?'

(iv) A-Not-A Question With Auxiliary in Relative Clause

\*Ah Meng suka oi boi tiaobu gai nang?  
Ah Meng like know won't dance part. person  
'Does Ah Meng like someone who can or can't dance?'

Since, according to the postposing analysis, the structure underlying (iii) and (iv) are the source for (i) and (ii), it would not be expected that PNA questions would be grammatical inside islands. Thus, the fact that PNA questions cannot appear inside islands supports our proposal that PNA questions derive from an A-Not-A source.

---

None of the above provides any explanation for why A-Not-A questions with overt auxiliaries, unlike those in which auxiliaries are absent, would be excluded from islands.

<sup>18</sup> An alternative analysis, which we will not explore here, would be one in which ka itself undergoes LF movement.

<sup>19</sup> Various details of structure not relevant here, like TP, are omitted.

<sup>20</sup> Other possible analyses for A-Not-A questions (as distinct from ka questions) will be considered below. We shall argue against an unselective binding approach.

<sup>21</sup> It should be noted that the proposed structure presents no problem for "subcategorization". This is for two reasons. First, verbs that require (i.e. select) complements which are questions (like mng 'ask') do not differ with regard to whether they require a Y/N question or a disjunctive question. Thus, a disjunctive question complement would satisfy the requirements of such verbs. Second, we would not assume that both (semantic) selection and "strict subcategorization" are involved in the determination of what sort of complement is taken by a verb. Rather, we would hold that subcategorization can be reduced to selection. We specifically do not believe that verbs taking question complement require a C with special characteristics that might be unique to one type of question, or, indeed to questions in general. Thus, given our assumptions, the fact that A-not-A questions are, in our analysis, not, strictly speaking, Y/N questions should not pose a problem for the determination of which verbs will permit them as complements.

<sup>22</sup> We assume that the traces left by verb movement are antecedent governed and that verb movement results in the L-marking of the VP.

<sup>23</sup> According to our analysis, Teochew A-Not-A questions are syntactically disjunctive questions which have acquired a conventional interpretation as yes/no questions. The matter arises whether Teochew A-Not-A questions would, then, be

---

predicted to occur as complements of verbs that select question complements. (They can, in fact, occur in that environment as is seen in Footnote 6.)

The prediction made depends on the theory of selection for question complements which is employed. There are (at least) two logical possibilities.

1) Syntactic theory: Verbs selecting a question complement require a form marked [+WH] in the Spec of CP of the complement clause.

2) Semantic theory: Verbs selecting a question complement require an element interpretable as a question as their complement.

It can be seen with some reflection that the former theory cannot be correct. For example, the English verb ask can take a noun/PP or a question CP as its complement:

(i) He asked an interesting question.

(ii) I wondered about that question.

(iii) He asked why these verbs take NP complements.

(iv) He wondered why these verbs take NP complements.

If the verbs ask/wonder required complements with a [+WH] Spec of CP, the grammaticality of (i)-(ii) in addition to (iii)-(iv) would require an analysis in which these verbs have dual subcategorization ([+WH] in Spec of CP or NP/PP meaning 'question'). This is tantamount to claiming that the well-formedness of (i)-(iv) versus the ill-formedness of (v) is an accident of English, and that the pattern seen in English would not be expected to occur in other languages. This, of course, is a false claim.

(v) \*He asked an interesting statement.

In contrast, the semantic theory predicts that (i) and (iii) would both be grammatical for the same reason: The verb ask requires a complement interpretable as a question and both that question and why these verbs take NP complements are

---

interpretable as questions. Thus, even though the syntactic structures involved may vary from language to language, the pattern found in English would be expected to occur in any language in which elements with these meanings are found.

Given the semantic theory of selection, it would be expected that A-Not-A questions would be possible complements for verbs of asking in Teochew because Teochew A-Not-A questions are interpreted as questions. The fact that these questions do not involve movement is irrelevant to this issue. (The semantic theory is presented in more details in Cole (1983).)

It should also be noted that something like the semantic theory must have been assumed by Huang (1991) since in his analysis questions with haishi 'or' are derived from true disjunctive questions by conjunction reduction. But, as Huang shows, these questions can be found in environments which select for questions. Thus, selection must be related to interpretation rather than to the occurrence of a particular element in Spec of CP. (We leave open the details of how interpretation takes place.)

<sup>24</sup> We shall return to the diachronic analysis of these constructions below.

<sup>25</sup> See also footnote 10 for further discussion of Tsai's proposal.