Typology of Yes-No Questions in Chinese and Tai Languages[*]

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Abstract

Although yes-no questions are one of the most basic sentence types of a language, their structure and interpretation in many Chinese languages as well as other languages of Southeast Asia is still very controversial. In this typological study we will use an analysis of the yes-no questions that builds on the grammar of focus in the spirit of Drubig (1998, 2000) and Kiss 1998). On the basis of an analysis of Mandarin question forms which we argued for in Chen & Schaffar (1998, 2000) we will analyse data from several other languages of the Chinese-Southeast Asian area. As a result of this study we will isolate two parameters that capture the variation of yes-no questions in the area and show that the different morphemes can be analysed as functional heads of two polarity phrases. Whereas in previous studies the connection of negation morphemes and question morphemes has already been documented we will show that one type of question constructions that is distributed over the whole area can systematically be traced back to affirmative polarity morphemes.

1. Introduction

We will start our presentation with a morphological overview of different question types in Chinese languages and their treatment in previous typological and syntactic studies.

1.1. Morphological types of yes-no questions

For the purpose of our study we have to distinguish between different types of yes-no questions. We will start with a morphological definition of four types. In principal, all these four types can be used by speakers of Mandarin. The only exception may be type four which has a strong dialectal or sociolectal connotation.

Negation type

The first of our types is constructed with a repetition and negation of the verb. Within this type we can further distinguish between different subtypes. In (1), the whole verb phrase is repeated and optionally co-ordinated with *haishi* ('or'). In traditional Chinese linguistics this structure is often taken as the source for the other types which are derived by different deletion processes. In (2) and (3) the repetition and negation is situated at the end of the sentence which can be explained by a forward deletion of the second part of the co-ordinated structure in (1). The sentences in (3) and (4) on the other hand show a repetition and negation in the middle of the sentence which can be derived by a backward deletion process in the first part of the co-ordination.

VO (or) neg VO

(1)	Ni	xihuan	zhe ben shu	**(haishi)**	**bu**	xihuan	zhe ben shu ?
	you	like	this book	or	not	like	this book

'Do you like this book?'

VO neg V

(2)	Ni	xihuan	zhe ben	shu	**bu**	xihuan ?
(3)	Ni	xihuan	zhe ben	shu	**bu** ?	
	you	like	this	book	not	

'Do you like this book?'

V neg VO

(4)	Ni	xihuan	**bu**	xihuan	zhe ben	shu ?
(5)	Ni	xi	**bu**	xihuan	zhe ben	shu ?
	you	like	not	like	this	book

'Do you like this book?'

Copula type

A second major type is constructed with the copula morpheme *shi*. Here it is the copula which is repeated and negated and not the main verb. Note that in this type the sequence *shi-bu-shi* can occur at different positions in the sentence including the beginning and the end.

(6a)	**Shi bu shi**	ni		xihuan	zhe ben shu ?	
(b)		Ni	**shi bu shi**	xihuan	zhe ben shu ?	
(c)		Ni		xihuan	zhe ben shu	**shi bu shi** ?
	C neg C	you	C neg C	like	this book	C neg C

'Do you like this book?'

Sentence-final particle

The third type is constructed with a particle at the end of the sentence. In contrast to the first and second type this particle can not be traced back to a negation morpheme and is strictly fixed to the sentence final position.

(7) Ni   xihuan   zhe ben shu   **ma** ?

     you like   this book   Q

     'Do you like this book?'

Ke-**type**

Whereas the first tree types are question forms of standard Mandarin Chinese, the last type is dialectally or sociolinguistically marked. It is formed with a morpheme in front of the main verb that we will provisionally call a modal verb.

(8) Ni   **ke**   xihuan   zhe ben shu?

     you KE   like   this book

     'Do you like this book?'

1.2. Former typological approaches

The analysis of the question types is one of the major topics in Chinese linguistics. We will first start with a quick summary of the major typological and syntactic theories.

Huang (1991): Modular approach

Against the traditional view that the different subtypes of the negation type in (2)-(4) are derived from a common source in (1), Huang argued for a modular approach. He distinguished between disjunctive questions as in (1) or (2) and reduplicative questions as in (4) or (5). Whereas disjunctive questions have a co-ordinated bi-sentential structure, the structure of reduplicative questions is mono-sentential and involves operator movement. Note that this distinction coincides with the direction of the deletion process. In Mandarin only those questions forms that are derived by a backward deletion in the traditional model are mono-sentential questions forms according to Huang's analysis.

One of Huang's central arguments are sentences with yes-no questions as sentential subject. The contrast between (9) and (10) shows that only reduplicative questions are island

sensitive. Although we found it difficult to get the same judgements from our informants, this test was also used by other studies.

(9)   [Wo qu   Meiguo   haishi   bu   qu] bijiao hao ?
       I   go   US   or   not go   better
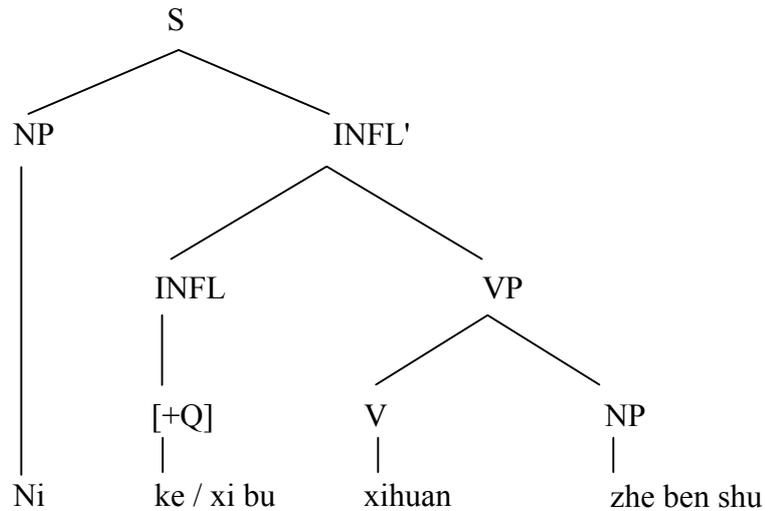   'Is it better that I go to America or that I do not go to America?'

(10) *[Wo   qu   bu   qu   Meiguo] bijiao hao ?
           I   go   not go   US   better

Besides this syntactic argument, Huang discusses typological data. In some dialects questions that involve the same kind of operator movement as the reduplicative form of Mandarin Chinese are constructed with a single preverbal question morpheme. According to Huang Taiwanese *ke*-type questions are the dialectal counterpart of Mandarin reduplicative questions and share the same syntactic properties as shown in (11).

(11) *[I   kam u   lai]   kha hou ?
          he KE   have come   better
       (Lit.) 'That he has come is better?'

Huang's syntactic analysis of reduplicative or *ke*-type questions is shown in (12). In an underlying structure the INFL projection of these questions is marked with an abstract [+Q] feature and depending on the dialect this feature is realised either with a (phonological) reduplication and negation as in Mandarin or with a special question morpheme as in Taiwanese.

(12)

```
                              S
                     _____/_____
                   NP                 INFL'
                    |              ____/\____
                    |            INFL        VP
                    |             |       ___/\___
                    |             |      V       NP
                    |           [+Q]     |        |
                    |             |       |        |
                   Ni        ke / xi bu  xihuan   zhe ben shu
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In order to defend this analysis, Huang refers to a typological study by Zhu (1985, 1990) where Zhu claims that *ke*-type questions and negation based questions are in complementary distribution among the dialects. Either a dialect realises the [+Q] INFL with the rule of repetition or with a special morpheme *ke*.

Zhu (1985, 1990) Dialectal distribution of the forms

As a summary of his results Zhu gives a diagram as in (13). In this diagram only the left branches are typologically relevant. This means that as the most fundamental distinction, dialects can be characterised as *ke*-type dialects vs. negation type dialects. Within the negation type dialects there is a further distinction between a VO-neg-V type and a V-neg-VO type. This last distinction correlates with a geographical distribution. Whereas the V-neg-VO type is the prevailing form of southern dialects, the VO-neg-V type is more common in northern dialects.

The other question forms, i.e. the VP-neg and the VO-neg-VO questions, occur in various dialects and do not characterise a distinct language (dialect) type.

(13)

yes-no question

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            ke-VP          VP-neg-VP          VP-neg


         VO-neg-V       V-neg-VO        VO-neg-VO
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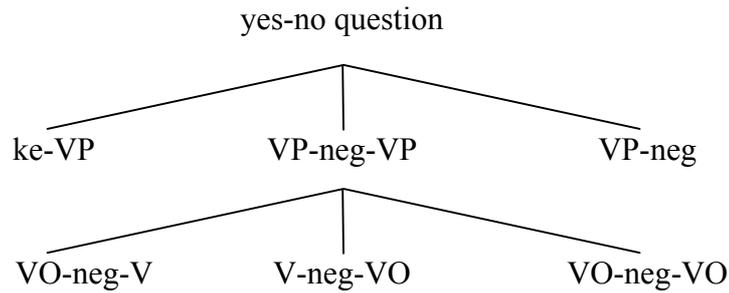
Zhu does not discuss methodological problems of his typological survey. In particular, it is not clear how he decided whether a certain construction can be regarded a question form in a given dialect. Beside this methodological problem, his claim of a complementary distribution between the ke-type and negation type alone can not serve as a strong argument in favour of Huang's analysis.

McCawley (1994) (contra Huang) approach of conventionalisation
A strong criticism against the approach of Huang was launched by McCawley (1994). I will come back to some of his data later and restrict myself to a theoretical summary of his central idea. McCawley argued in the spirit of the traditional Chinese view that the questions in (1)-(5) constitute a unitary paradigm. According to him, the only distinction between the forms in (1) though (5) is that the latter forms are more conventionalised disjunctive constructions. The structure in (5) is the question form which is fully grammaticalized into the function of an unmarked yes-no question in Mandarin and this is why only this form shows clear signs of syntactic operator movement.

Cole & Lee (1997) (application of McCawley)
One application of this view is demonstrated by Cole & Lee (1997) in their treatment of Singapore Teochew. As a counter-argument to Huang (1991) and Zhu (1985, 1990) this dialect has both *ke*-type and negation type questions. However, only the *ke*-type appears to be fully grammaticalised into the function of a yes-no question (Cole & Lee 1997:198f). As a test Cole & Lee use data as in (14) and (15) where the question form occurs as the sentential subject along the lines of Huang's test for Mandarin.

(14) [Wa kih   m   kih   Pakiah]   you hor?
         I   go   not   go   Beijing   better
      'Is it better for me to go to Beijing?'

(15) *[Wa   ka   kih Pakiah]   you hor?
      I   Q   go   Beijing   better

1.3. Former pragmatic and syntactic approaches for Mandarin

Apart from the syntactic properties that Huang used to distinguish between disjunctive and reduplicative questions, there are several attempts to give a pragmatic and syntactic characterisation of the different question forms. These accounts concentrated on the Mandarin forms alone and normally contrasted negation based forms with the particle question.

Li & Thompson (1979) Pragmatics of reduplicative vs. particle questions

An early but still influential account is the study by Li & Thompson (1979). For their pragmatic characterisation of the different question forms they give the following context:

> "Suppose you had always known that Wang did not eat apples. One day while having lunch with him, you were surprised that he had an apple for desert."

According to Li & Thompson this context demands a particle question as in (16). An V-neg-V question is not felicitous.

(16) Ni   chi pingguo ma ?
     you eat   apple   Q

(17) ^{??} Ni   chi bu chi pingguo ?
     you   eat not eat apples
     'Do you eat apples?'

Li & Thompson summarise that "The V-not-V question is used only in a neutral context whereas the particle question may be used in a neutral or non-neutral context" (Li&Thompson 1979:201f). As we will explain below, we interpret the term "neutral context" as a context where the question demands for information in the shape of a presentation focus. A "non-neutral context" as given above implies that the question asks for contrastive information.

Li (1992), indefinite *wh*-words(Li 1992:127f).

A more syntactic property that differentiates V-neg-V and particle questions was discussed by Li (1992). It is well-known that *wh*-words in Mandarin can be interpreted as indefinite pronouns if they are bound by a negative morpheme under c-command. This is shown with

the subject-object asymmetry in (18)-(21). In an affirmative sentence like in (18) or (20) neither the *wh*-word in object position nor the one in subject position can be interpreted as an indefinite pronoun. With a sentential negation, however, a *wh*-word in object position as in (19) can be bound whereas the *wh*-word in (21) cannot be bound as an indefinite pronoun.

(18) *Ta   xihuan   shenme.
       he   like   what
       'He likes something / anything.'

(19) Ta   **bu**   xihuan   shenme.
       he   not   like   what
       'He doesn't like anything.'

(20) *Shenme ren   xihuan   ta.
       what man   like   him
       'Someone / Anyone likes him.'

(21) *Shenme ren   **bu**   xihuan   ta.
       what man   not   like   him
       'No one / Anyone doesn't like him.'

The same holds for the binding of *wh*-words by question operators of a V-neg-V question. In (22) a *wh*-word in object position can be bound whereas in (22) with a *wh*-word in subject position, the sentence is ungrammatical.

(22) Ta   xi **bu** xihuan   shenme ?
       he   like not like   what
       'Does he like something / anything?'

(23) *Shenme ren   xi **bu** xihuan   ta ?
       what man   like not like   him
       'Does someone / anyone like him?'

Whereas the V-neg-V question form patterns with the sentential negation, the particle question does not show the same asymmetry. As shown in (24) and (25) both the *wh*-word in object position and in subject position can be bound by the question operator.

(24) Ta   xihuan   shenme   **ma** ?

he   like   what   Q

'Does he like something / anything?'

(25) Shenme ren   xihuan   ta   **ma** ?

what man   like   him   Q

'Does someone / anyone like him.'

McCawley (1994), scope interaction with quantification

A rather subtle syntactic property is discussed in McCawly (1994). Towards the end of the argumentation for his idea of increasingly conventionalised question forms, he notes that although the V-neg-V form is fully conventionalised, the structure conserved different scope properties from particle questions.

These scope properties, McCawley demonstrates with elliptical negative answers to questions that contain an universal quantifier as in (26) and (27). An elliptical negative answer to a V-neg-V question takes narrow scope with respect to the universal quantifier, which can be paraphrased as in (26b) with the expression in brackets. An elliptical answer to a particle question, on the other hand, takes wide scope over the universal quantifier. This interpretation is demonstrated in (27) and can be paraphrased as in the bracketed expression in (27b).

(26) A: Tamen   dou **xi bu xihuan**   kai che?

they   all   like not like   drive car

'Do they all like to drive?'

(b)   B: Bu.   (Dou bu xihuan kai che)

'No.'   (None of them likes to drive.)

(27) A: Tamen   dou xihuan   kai che   **ma**?

they   all   like   drive car   Q

'Do they all like to drive?'

(b)   B: Bu.   (Bu dou xihuan kai che)

'No.'   (Not all of them like to drive.)

1.4. Summary of the introduction and open questions

Syntactic and pragmatic analyses of Mandarin question forms (mostly) deal with the difference between particle questions and negation based questions.

Particle question   ↔   Negation type

The *ke*-type is not taken into account since it is not a standard question form of Mandarin. If the copula question is mentioned at all, it is either treated as a subtype of the V-neg-V form or it is treated as a periphrastic tag question without specific syntactic properties.

Typological analyses (mostly) deal with different kinds of the negation type construction or the difference between negation type and *ke*-type constructions. To our knowledge, the copula type question has never been studied typologically.

Negation type   ↔   *ke*-type
V neg VO   ↔   VO neg V

This brief overview shows that there is a systematic gap between the (synchronic formalist) syntactic studies of Mandarin question forms and the typological studies of questions forms in different dialects. The crucial point of our criticism is that most of the Chinese dialects, like Teochew, Xiang, Kunming and Taiwanese do not have a particle question form. This leads into severe theoretical problems. Pragmatic studies showed that the V-neg-V form in Mandarin is functionally marked and restricted to neutral contexts. At the same time, typological studies claim that the *ke*-type question is the functional equivalent to the V-neg-V question in other dialects. If *ke*-type questions in Taiwanese and Teochew are the functional equivalent to A-not-A questions in Mandarin, and if there are no particle questions in these dialects, how do speakers of Taiwanese or Teochew ask a non-neutral question?

The next problem is more typological one. Without any further justification, the typological studies restrict the sample to Chinese languages. This leads to a simplified view that the *ke* morpheme in *ke*-type questions and the reduplicative negation based question forms are idiosyncratic features of Chinese. But as a superficial look at neighbouring language families already shows, the same question types also occur throughout the languages of the entire Southeast Asian area (Clark 1989:209ff).

Li (Kadai, Hainan, 820000 speaker) (Ôno 1987:304)
Negation type

In Li, a Tai language that is spoken on the island of Hainan, we find negation based questions of the VO-neg form. The negation morpheme *ta¹* that occurs in unmarked negative sentences as in (28) can also be used to construct a yes-no question if it is attached at the sentence final position as in (29). This negation based question form contrasts with other particle questions that are constructed with sentence final particles which can not be traced back to a negation morpheme as e.g. *Ɵjo³* in (30). Note that all these morphemes are different from the Chinese morphemes. This means that if these constructions are borrowings from Chinese, it can only be a syntactic borrowing.

(28) **Ta¹**   pɯ:n¹
     NEG   come
     '(S)he doesn't come.'

(29) Tsho:m¹ nei² lo:p⁹   la² **ta¹** ?
     fruit   this can   eat Q
     'Can you eat this fruit?'

Particle question
(30) Na¹ ta¹   pɯ:n¹   **ʔjo³** ?
     he   NEG   come   Q
     'Doesn't he come.'

Vietnamese (Austroasiatic, Vietnam, 57 mil speaker)
(Clark1989:212)
Negation type

Vietnamese is yet another example of the same construction principle. Here it is the negative morpheme *không* which forms either a yes-no question if it is attached at a sentence final position as in (31) or it forms a negative answer if it occurs pre-verbally as in (32).

(31) Chị   biết   đường   đó **không** ?
     sister   know   road   that not
     'Do you know that road?'

(32) Biết.   (**Không**) biết
      know   not   know
      'Yes, I know it.' 'No I don't.'

Hmong (Hmong-Mien, Burma, Thailand, Vietnam, China, 5-8 mil. speaker)
(Clark 1989:209)
Negation type

In Hmong we find a negation based question type with a repetition of the verb just as in Mandarin Chinese, but again with etymologically independent morphemes. The negative morpheme *tsis* occurs between the two verbs in the question form in (33). In (34) the same morpheme is used as a sentential negation.

(33) Koj mus **tsis** mus ?
      you go   not   go
      'Are you going?'

(34) Mus (nawb).   **Tsis** mus.
      go   sure   not   go
      'Yes, sure.'   'No.'

ke-type

What is interesting about Hmong is the fact that we also find a *ke*-type question form. The morpheme involved is *puas* and Clark (1989) glosses it with 'whether'. Since this word occurs in the same position as modal verbs and since it can not be traced back to negation morphemes, it fulfils the definition of a *ke*-type form that I gave in connection with the morphological discussion of the Chinese forms. Sentence (35) is a simple yes-no question of the *ke*-type. In (36) we find the *ke* morpheme in the matrix sentence alongside with the V-neg-V question form in the embedded sentence.

(35) Tus txiv neeg ntawd nws **puas**   haus   yeeb ?
      that man   he   whether   imbibe   opium
      'That man, does he smoke opium?'

(36) Neb **puas** tau muag peb cov paj-ntaub tag (lawm)

you whether got sell we group needlework finished already

or not got

los **tsis** tau.

'Have you been able to sell all our needlework (yet)?'

In our discussion we will proceed as follows. First we will summarise a syntactic account of focus phenomena along the lines of Drubig (1998, 2000) and Kiss (1998) and introduce the difference between presentational information focus and contrastive operator focus. On the basis of this syntactic account I will proceed with an introduction to the semantic implications of such a model and a revised version of a relational theory of focus (von Stechow 1985, Jacobs 1985, Moser 1993).

The notion of information focus and contrastive focus and its syntactic properties will serve as a frame for the analysis of Mandarin question forms. This analysis will provide us with a set of tests for the investigation of other Chinese dialects and languages. We will use the difference between presentational and contrastive focus as tertium comparationis in our typological study and isolate the parameters that are involved in the variation between the Chinese dialects as well as between other languages of the Southeast Asian area.

2. A syntactic theory of focus

The syntactic theory of focus that we will use for the typological comparison builds consists of two main ideas. Firstly the distinction between information focus and contrastive focus (Drubig 1994, Kiss 1995, Kiss 1998, Kenesei 1998) and secondly the idea that focus is relational (von Stechow 1984, Jacobs 1985, Moser 1993).

2.1. Information focus vs. contrastive focus (quantificational focus, operator focus, identificational focus)

From a syntactic perspective it is clear that two types of focus have to be distinguished. Incremental information focus and quantificational contrastive focus are syntactically distinct (Drubig 1994, Kiss 1995, Kiss 1998, Kenesei 1998).

For this presentation I use sentences by Moser (1993), although not exactly with her interpretation. Sentence (37) with an accent on the direct object is an example for a presentational information focus reading. This sentence is ambiguous between different focus readings (focus projection) and can be uttered as an answer to the global question in (37b). In

isolation it can be used to present information out of the blue, without any preconception about the situation on the side of the hearer.

In contrast to this, sentence (38) with an accent on the indirect object can only be understood as an identificational or contrastive focus. In this case the focused constituent *Beth* is interpreted on the background of a set of alternatives. This interpretation is captured by the formula in (38b).

(37) [$_F$ Sheila [$_F$ gave [$_F$ the HAMMER] to Beth]].

(b) What happened?

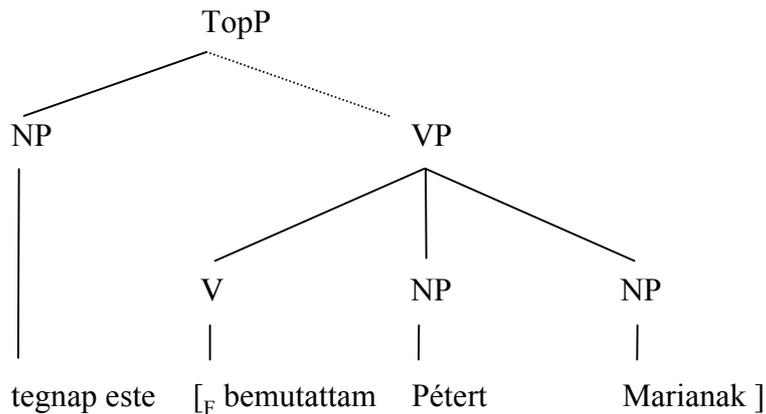(38) Sheila gave the hammer [$_F$ to BETH]. (and not to PAT)

(b) [$_{rel.}$ ∈] [$_{foc.}$ Beth] [$_{backgr.}$ λx (Sheila gave the hammer to x)]

Whereas the difference between information and contrastive focus seems to be an effect of accentuation in English, in Hungarian we see that it is also syntactically relevant. According to Kiss (1998) an information focus as in (37) is expressed with a sentences like (39) where all arguments of the verb stay inside the VP. If one argument is contrastively focused, however, it has to be moved to the front and this movement triggers a specific V2 effect as in (40). The syntactic analysis of these sentences are given in (41) and (42) respectively.
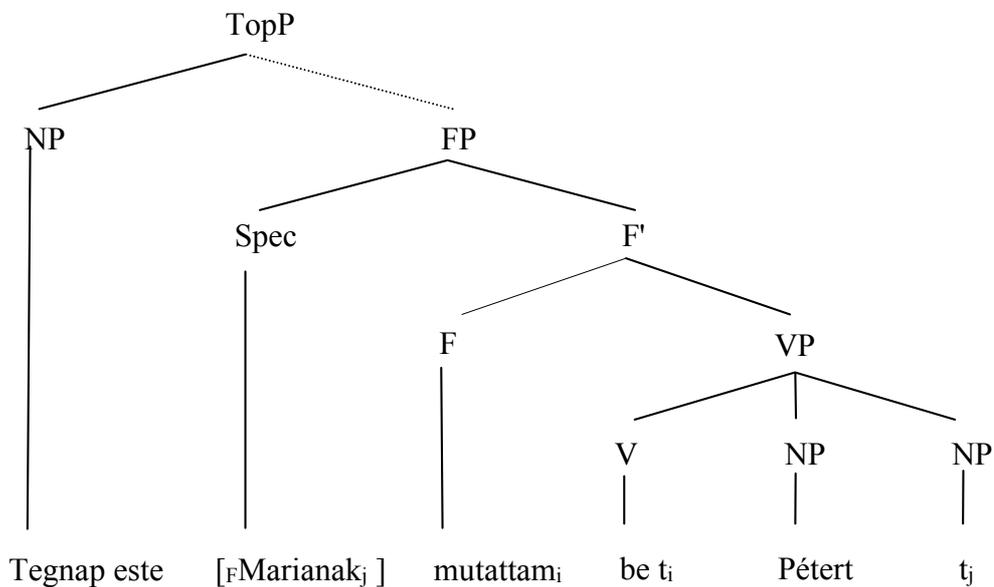
(39) Tegnap este   be   [$_F$ mutattam   Pétert   Marinak].
last night   PERF   introduced   Peter-ACC   Mary-DAT
'Last night I introduced Peter to Mary.'

(40) Tegnap este   [$_F$ MARINAK]   mutattam   be   Petert.
last night   Mary-DAT   introduced   PERF   Peter-ACC
'Last night I introduced Peter TO MARY.'
'It was to Mary that I introduced Peter last night.'

(41)

```
                          TopP
                _____/ ·······
              /                  \
            NP                    VP
            |              _____/ | _____
            |             /        |         \
            |            V         NP         NP
            |            |         |          |
        tegnap este  [F bemutattam  Pétert    Marianak ]
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(42)

```
                        TopP
              _____/ ··········
            /                    \
          NP                      FP
          |             _____/        _____
          |            /                       \
          |          Spec                       F'
          |           |              _____/        _____
          |           |             /                       \
          |           |            F                         VP
          |           |            |                _____/  |  _____
          |           |            |               /         |         \
          |           |            |              V          NP         NP
          |           |            |              |          |          |
      Tegnap este  [F Marianak_j ]  mutattam_i    be t_i    Pétert      t_j
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In (41) the structure shows that the information focus comprises the VP (We are neglecting the effects of de-accentuation for the time being). In (41) the focus is restricted to the phrase that was moved into the specifier position of a functional category. Kiss's analysis served as the source for many other generative models among which Brody's (1990) FP (focus phrase) approach has reached a certain popularity.

2.2. Focus is relational

Apart from the distinction between information and contrastive focus, it has been noted that the focus of a sentence can associate with different focus sensitive particles, operators or with the negation. We will claim, slightly in contradiction to the approach of Jacobs (1985) and

Moser (1993), that the distinction between information focus and contrastive focus is orthogonal to the different relations that are expressed by the negation, particles or the question operator. That means that we will distinguish between presentational negation, presentational 'only' and presentational question operators at the one hand and contrastive negation, 'only' and contrastive questions on the other.

Sentence (43) is an example of an information focus that is associated with the particle 'only'. In (44) the same particle is associated with a contrastive focus. Note that in this case 'only' does not necessarily has to be adjacent to the contrastive focus. A so called Association with Focus construction like (44b) is also possible.

Information focus associated with *only*
(43)   [F Sheila **only** [F gave [F the HAMMER] to Beth]].

Contrastive focus associated with *only*
(44)   Sheila gave the hammer **only** [F to BETH]. (and not to Pat.)
(b)   Sheila **only** gave the hammer only [F to BETH]. (and not to Pat.)

In Hungarian the difference between information and contrastive focus is mirrored in the position of 'only' as well. In a sentence where 'only' associates with an information focus, it occurs in preverbal position immediately preceding the VP. In (46) with a contrastive focus, it can either occur adjacent to the focus or in an AwF construction as in (46b).

(45)   János   szinte   semmit   sem   csinált   egész   nap,
       John   practically nothing   not   did   whole   day,

       csak [F le   vitte   a   kutyát   sétálni].
       only   down   took   the   dog   to-walk
       'John did practically nothing the whole day, he only took the dog for a walk.'
       (Kiss 1998:265)

(46)   János **csak** [F Marit]   hívta   meg.
       John only   Mary   invited   PERF
       'John invited only Mary.'

(b)   János   [F Marit]   hívta   **csak**   meg.
       John   Mary   invited   only   PERF
       'John invited only Mary.' (Kiss 1998:265)

Focus associated with negation

In the same way a focus can be associated with a negation morpheme or with a question operator. Sentence (47) is an example of an information focus associated with the sentence negation, and (48) an example of a negated contrastive focus which parallels exactly (44) and (45). Example (49) and (50) show the same pattern with yes-no questions.

Information focus

(47) [F Sheila did**n't** [F give [F the HAMMER] to Beth]].

Contrastive focus

(48) Sheila gave the hammer **not** [F to BETH]. (but to Pat.)

(b)   Sheila did**n't** give the hammer [F to BETH]. (but to Pat.)

Focus associated with a yes-no question operator
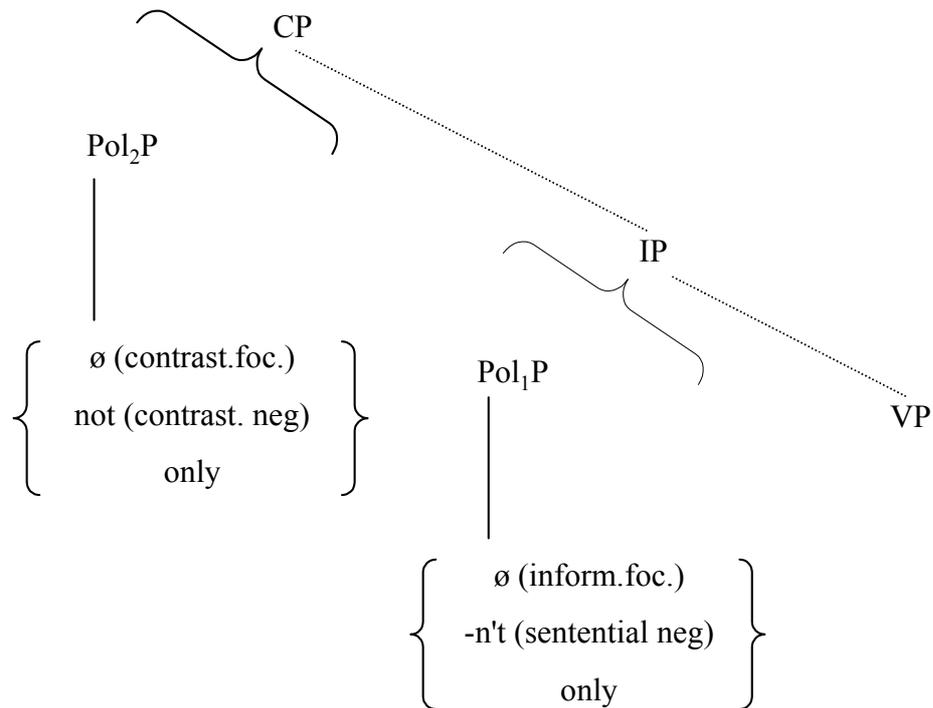
Information focus

(49) [F Did Sheila [F give [F the HAMMER] to Beth]] ?

Contrastive focus

(50) Did Sheila give the hammer [F to BETH] ?

To cover both the distinction between information focus and contrastive focus and the fact that focus is relational in the sense of Jacobs and Moser, we adopt a structure like in (51) proposed by Drubig (1994). The central idea behind this model is the analysis of two polarity phrases. One polarity phrase Pol1 which is situated immediately above the VP in the area of the INFL layer licenses the information focus. The other polarity phrase Pol2 is part of the COMP layer and is the equivalent of what became to be called FP in approaches following Brody (1990). In order to cover the cases of associated foci, the head of these categories can host either a negation morpheme in the case of negated sentences, an abstract affirmative morpheme in the case of affirmative sentences or an abstract question morpheme. This is why we reject the name FP and prefer the term polarity phrase (PolP).

(51)

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                              ___
                             /    CP
                            {       ·······
              Pol₂P         /              ·······
                          }                       ·······
                 |       /                              ·······
                 |      )                       ___           ·······
                                               /    IP             ·······
         ⎧ ø (contrast.foc.) ⎫               {                          ·······
         ⎨ not (contrast. neg) ⎬    Pol₁P    /                               ·······
         ⎩      only          ⎭     |      }                                     ·······
                                    |     /                                          VP
                                          )
                              ⎧ ø (inform.foc.)    ⎫
                              ⎨ -n't (sentential neg) ⎬
                              ⎩      only            ⎭
```

In English it is only the negation that is morphologically distinct between a Pol1 form for sentential negation and a Pol2 form for constituent negation. The other potential heads of the polarity phrases are the same in both positions. Mandarin Chinese, by contrast, has different Pol1 and Pol2 forms for all morphemes, the negation, 'only', the question morpheme and, as we will show in this typological paper, for affirmative morphemes as well.

3. Mandarin Chinese syntax of focus:

(52)
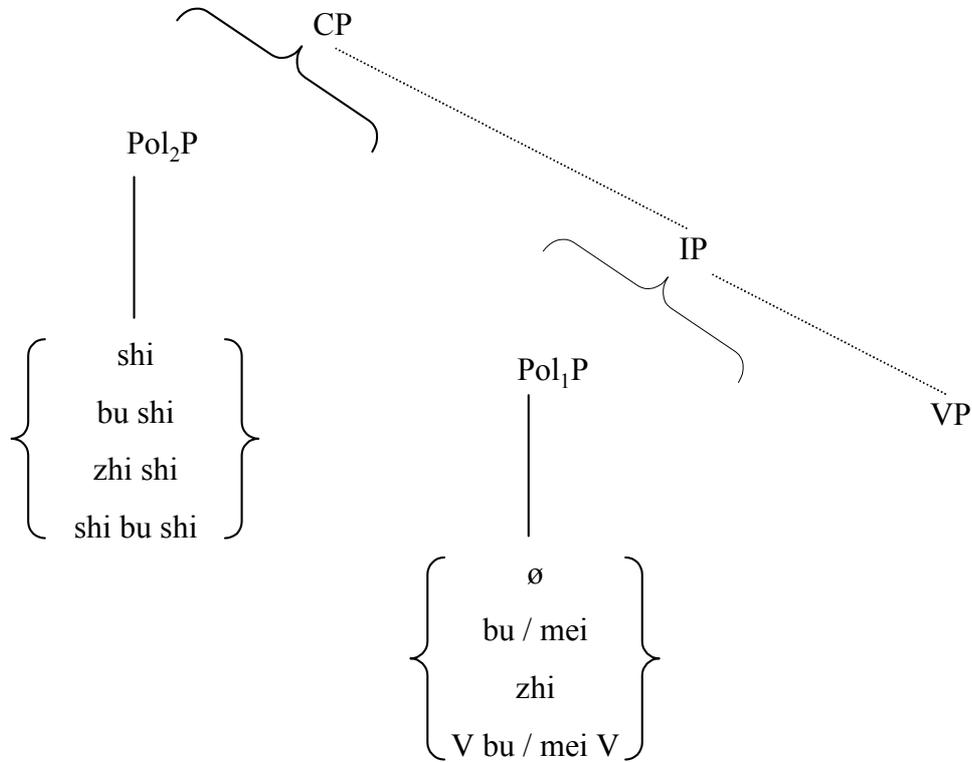
In Chen & Schaffar (1998, 2000) we have argued in detail how the different morphemes for the negation and for 'only' can be captured with the model of two polarity phrases. This analysis is not entirely new and should not be controversial since some details are already well accepted in the literature. Lü (1985) showed the systematic difference between morphemes that involve the copula *shi* and those without. Several other papers treated *shi* as the head of a focus phrase along the lines of Brody (1990). What is important for our investigation of the question forms is that Huang already argued that the V-neg-V question morphology is situated in the INFL layer.

In this presentation we will restrict ourselves to the treatment of the question forms. The central claim is that the V-neg-V question form is a functional head in the INFL layer and the C-neg-C question form a functional head in the COMP layer. In Chen & Schaffar we also argued for an analysis for the particle question. We have shown that the particle *ma* is not a functional head of any polarity phrase. Since the main aim of the presentation is a typological analysis, and since in most other Chinese dialects we do not find particle questions with *ma*, we will neglect this type for the time being. Differently from our previous papers, however, we will give a detailed analysis of the *ke*-type of question forms.

In what follows I will summarise our main arguments for the analysis of the V-neg-V question form as a head in INFL and for the C-neg-C question form as a head in COMP. These arguments will serve as syntactic tests for the treatment of the other dialects and the isolation of the parameters that differentiate the different dialects.

3.1. Syntactic evidence
Focus reading

The first piece of evidence is the focus readings. The following examples show that the V-neg-V question is restricted to yes-no questions with the interpretation of an information focus (presentational focus). Li & Thompson (1979) give the following context in which they claim that V-neg-V questions like (53) are felicitous. Li & Thompson do not differentiate between V-neg-V questions and C-neg-C questions. Whereas we agree with them that (53) is felicitous in the given contexts, we insist on the fact that C-neg-C questions have to be treated as a separate form. Whereas particle questions, which we will not discuss here, are possible in the same context, the C-neg-C question form in (54) is not.

Information focus

Context: Before preparing dinner for a guest, you wish to find out whether he drinks wine or not (Li&Thompson 1979:202).

(53) Ni   he bu he   jiu ?
     you   drink not drink   wine
     'Do you drink wine?'

(54) ??Ni shi bu shi   he   jiu ?
     you   COP not COP   drink   wine
     'Do you drink wine?'

Contrastive focus

In a context where one constituent of the same question is contrastively focused, however, only the C-neg-C and not the V-neg-V question is possible. In (55) and (56) the emphatic accent on the adverb demands a contrastive reading of the question. As the examples clearly show, only the C-neg-C form in (56) is possible. The same is true for questions like (56b) with a contrastive reading on the subject, in (56c) with a contrastive reading on the object, or in (57a) - (c) which are cited in Zhang (1997).

(55) ??Ni zuotian   he mei he   jiu ?

     you   yesterday   drink not drink   wine

     'Was it yesterday that you drank wine?'

(56) Ni   zuotian   shi bu shi   he   le   jiu ?

     you   yesterday COP neg COP   drink   PERF   wine

     'Was it yesterday that you drank wine?'

(b) Ni   zuotian   shi bu shi   he   le   jiu ?

     'Was it you that drank wine yesterday?'

(c) Ni   zuotian   shi bu shi   he   le   zhe zhong jiu ?

     'Was it this kind of wine that you drank yesterday?'

(57) Ta   shi bu shi   mingtian   lai ? (Zhang 1997)

     he   COP neg COP   tomorrow   come

     'Is it tomorrow that he will come?'

(b) Ta   shi bu shi   mingtian   lai ?

     'Is it he who will come tomorrow?'

(c) Ta   shi bu shi mingtian   lai ?

     'Is it true that he will come tomorrow?'

***wh*-binding**

Example (58)-(63) show data on the property of *wh*-binding. We already discussed examples like (58) and (59) which show that the sentence negation can only bind an *wh*-word in object position. Sentences (60) and (61) show that the same asymmetry can be found with the V-neg-V question form. The C-neg-C question form, however, behaves differently. As demonstrated in (62) and (63), there is no asymmetry and the *wh*-word in subject position can also be bound as an indefinite pronoun. We take this data as evidence for the position of the C-neg-C head. If we analyse this head as a head in the COMP layer it naturally follows that it can bind a *wh*-word in the subject position under c-command.

(58) Ta   bu   xihuan   shenme.

     he   not   like   what

     'He doesn't like anything.'

(59) *Shenme   ren   bu   xihuan   ta.
     what   man   not   like   him
     'No one / Anyone doesn't like him.'

(60) Ta   xi bu xihuan   shenme ?
     he   like not like   what
     'Does he like something / anything.'

(61) *Shenme   ren   xi bu xihuan   ta ?
     what   man   like not like   him
     'Does someone / anyone like him.'

(62) Ta   shi bu shi xihuan   shenme ?
     he   C NEG C   like   what
     'Does he like something / anything.'

(63) Shenme ren   shi bu shi xihuan   ta ?
     what man   C NEG C   like   him
     'Does someone / anyone like him.'

Note that differently from what Li (1991) claims, it is not necessary that the C-neg-C morphology linearly precedes the *wh*-word in order to bind it. The same syntactic process that achieves the association between the contrastively focused subject and the C-neg-C question operator in (56b) and (57b) is at work here as well.

Scope interaction with universal quantifier
Another test for the position of the two question operators can be constructed on the basis of McCawley's (1994) discussion. There he noticed that the V-neg-V question operator only takes narrow scope in respect to the universal quantifier in sentences like (64). He demonstrated this scope with the help of elliptical negative answers which in the case of V-neg-V questions can only be paraphrased as in the brackets in (64b).

(64) A: Tamen   dou xi bu xihuan   kai che ?
           they   all   like not like   drive car
           'Do they all like to drive?'

(b)　B:　Bu.　　　(=Dou bu xihuan kai che)

　　　　　'No.'　　(None of them likes to drive.)

As most of the other syntactical studies of Mandarin question forms, McCawley only contrasted the V-neg-V type with the particle question. According to our informants, however, a much clearer scope contrast holds between the V-neg-V and the C-neg-C type. As demonstrated in (65) a C-neg-C question always takes wide scope. This scope reading can be shown in the same way as in (64) as here the elliptical negative answer can only be paraphrased with the expression in (65b).

(65)　A:　Tamen　　dou　xihuan　　kai che　　shi bu shi ?

　　　　　they　　　all　　like　　　drive car　　C NEG C

　　　　　'Do they all like to drive?'

(b)　B:　Bu.　　　(=Bu dou xihuan kai che)

　　　　　'No.'　　(Not all of them like to drive.)

Further evidence
In Chen & Schaffar (2000) we have collected some further evidence for the analysis of the Mandarin question forms. This evidence comprises the complementary distribution among the Pol1 heads, the distribution between Pol1 and Pol2 heads as well as the question scope with regard to different adverbials. Since we do not want to go into detail in the analysis of the Chinese dialects, we will skip this data.

3.2. Summary: Mandarin focus constructions
There is a syntactic difference between negation type and copula type questions that can be explained in the frame of a syntactic theory of focus where we analyse the negation type morphemes as heads in Pol1 and the copula type morphemes as heads in Pol2. The difference is fundamental and independently (universally) motivated as the difference between information focus and contrastive focus. Out of this we expect to find the same distinction throughout different dialects and languages. The distinction itself should not be affected by parametric variation. By investigating what morphological forms are connected with Pol1- and Pol2-questions in a given dialect we will isolate the parameters of typological variation.

4. Typological variation of yes-no questions

4.1. Isolation of the parameters of variation

We have shown that the distinction between information focus and contrastive focus is independently motivated. This means that it is not restricted to the readings of yes-no questions and not restricted to any specific language like Mandarin Chinese. In the following typological overview we will use this distinction as a tertium comparationis for the analysis of the question forms of other Chinese languages and other Southeast Asian languages. On the basis of this comparison we will isolate the parameter that distinguish the different languages.

The presentation of the data follows the following pattern. First we present the question forms that occur in the specific language and show with the test of Huang that the form in question is fully grammaticalised / conventionalised as a yes-no question form. In the next step we investigate the focus readings of the forms and analyse the syntactic behaviour of the form according to the tests that we have established for Mandarin Chinese above.

4.2. Parameter I   V-not-VO vs. VO-not (-V)

Xiang (Southern Chinese, Hunan, 45,6 million)
Question forms: Type VO-not (-V), no particle question, no *ke*-type

In Xiang we find a negation type question form with the morphology VO-neg. This form is a parallel construction to the forms in Vietnamese, Li and many other languages of the Southeast Asian area. Sentence (66) shows that the form respects island constraints which means in the sense of McCawley (1994) and Cole & Li 1997) that it is fully grammaticalised. There is no particle question and no *ke*-type question in Xiang. The negation type, however, occurs in two variants. Beside the form in (67) where a negation morpheme is attached to the end of the sentence, there is another form as in (68), where the negation morpheme occurs together with the copula *sɨ* .

(66) *[Wo   qu   Beijing   **bo**]   bijiao hao ?
     I   go   Beijing   not   better
   'Is it better for me to go to Beijing?'

(67) Ni   xihõ   ge ben su   **bo** ?

(68) Ni   xihõ   ge ben su   **sɨ bo** ?

you   like   this book   (COP) not

'Do you like this book?'

We analyse (67) as a question form for presentational focus, i.e. as Pol1 question. The form in (68), however, we analyse as the Xiang variant of the copula type question of Mandarin. This question is a Pol2 question form. This analysis is supported by the following pragmatic and syntactic tests.

Focus readings

As shown in (69)-(71) only the negation type question form can be used in questions with an presentational information focus. In questions with a contrastive focus reading on one constituent as in (70) and (71) only the copula type question is possible.

(69) Ta   zuotian   zuo le   suxi   **bo** ?

he   yesterday   make PERF   sushi   not

'Did he make sushi yesterday?'

(70) ??Ta zuotian   zuo le   suxi **bo** ?

(71) Ta   zuotian   zuo le   suxi **sɨ bo** ?

'Was it yesterday that he made sushi?'

***wh*-binding**

The two different forms also correspond to the V-neg-V and the C-neg-C form of Mandarin with respect to *wh*-binding properties. As (72) and (73) demonstrate, only the copula type can bind a *wh*-word in subject position.

(72) *Nage   xihõ ta   **bo** ?

who   like   he   not

(73) Nage   xihõ ta   **sɨ bo** ?

who   like   he   COP not

'Does anybody like him?'

Scope interaction with universal quantifier

The data on the scope interaction with the universal quantifier also exactly parallels the behaviour of the corresponding Mandarin forms. An elliptical negative answer to a negation

type question in (74) can only be interpreted with narrow scope. In the case of the copula type question, the negative answer in (75b) shows that this question type has wide scope over the quantifier.

(74) A: Tamen   (ha) dou xihõ kai   tsə   **bo** ?
         they   all   all   like drive car   not
         'Do they all like to drive?'

(b) B: Mao lɛ   (=   Ha   bo xihõ   nɛ)
         no   PRT   all   not like   PRT
         'No.   (None of them likes to drive.)'

(75) A: Tamen   (ha) dou xihõ kai   tsə   **sɨ bo** ?
         they   all   all   like drive car   C not
         'Do they all like to drive?'

(b) B: Mao lɛ   (=   Bo sɨ ha   dou xihõ.)
         'No. PRT   (Not all of them like to drive.)'

Central Thai (Southwestern Tai, Thailand, 55 million)

As we have already mentioned, the constructions in Xiang have a parallel structure to questions in other Southeast Asian languages which do not belong to the Chinese family. Our next examples are taken from Standard Thai. Here a yes-no question can be expressed with the morpheme *mái* which is attached at the sentence final position as in (76). Although the modern standard orthography uses different letters for the preverbal negation morpheme in (76b) and despite of the tone difference, Noss (1964) treats them as cognates. This means that in Thai we find the same negation based structure of yes-no questions as in Xiang, although with independent morphemes.

(76) A: Phrûŋ·nǐi khun   cà   pai duu năŋ   **mái** ?
         tomorrow you   will go   see   movie   not
         'Are you going to the cinema tomorrow?'

(b)   B: Cà   **mâi**   pai.

          will   not   go

          'I am not going.'

Apart from the negation type as in (77), there is an alternative form as in (78) which is constructed as a combination of the negation based question morpheme together with the copula *châi*. We analyse this form as the Thai variant of the copula type question form of Mandarin or Xiang. The focus readings of the two forms support this analysis. Only a question with an presentational information focus can be constructed with the negation form. A question where one constituent is contrastively focused is infelicitous with the negation form and has to be constructed with the copula type.

(77)   A: $^{??}$Khun   cà   pai   duu   năŋ   phrûŋnĭi   **mái** ?

(78)   A: Khun   cà   pai   duu   năŋ   phrûŋnĭi   **châi mái** ?

          you   will   go   see   movie   tomorrow   (C) not

          'Is it tomorrow that you're going to the cinema?'

(b)   B: Mâi   châi.   Châi.

          not   COP   COP

          'No.'   'Yes.'

Lao (Southwestern Tai, Laos, 4 million)

Standard Lao is another language of the Tai family. Here we find the same structure of question formation. The morphemes that are involved in the different types, however, go back to yet another source of negation and copula morphemes. The negation morpheme and the question morpheme is *bɔ²* , which might be cognate with the Standard Thai negation *plàao*. The copula *mɛn²* is also different from the copula in the copula type question form of Standard Thai. The interpretation, however, shoes the same regularities as in Thai and Xiang. A question with an information focus as in (79) can only be expressed with the negation type form. If there is a contrastive focus on one constituent only the copula type question can be used as shown in (80) versus (81).

(79)   A: Lao³ si:²   pai¹ Lua·⁴ Pha:²ba·¹   bɔ² ?

          you   will   go   Luang Phrabang   not

          'Are you going to Luang Phrabang?'

(b)   B: Si:² **bɔ²** pai¹.

will   not   go

'I am not going.'

(80)   A: ?? Lao³   si:²   pai¹ Lua·⁴ Pha:²ba·¹   **bɔ²** ?

(81)   A: Lao³   si:²   pai¹ Lua·⁴ Pha:²ba·¹   **mɛn² bɔ²** ?

'Is it to Luang Phrabang that you are going?'

(b)   B: Mɛn² lɛo⁵.   Bɔ²   mɛn².

COP   PERF   not   COP

'Yes.'   'No.'

The data of Xiang, Standard Thai and Standard Lao reveal the first typological parameter. In all these languages we find the question morphology at the end of the sentence in contrast to the question morphology of Mandarin, which occurs in preverbal position. Apart from this difference in position, the distinction between negation type questions for presentational questions and copula type questions for contrastive questions are exactly parallel to Mandarin. In addition to the interpretation of the question types, the syntactic properties of Xiang question forms showed that even the subtle scope interactions support our syntactic analysis of the negation type as Pol1 head and of the copula type as Pol2 head.

4.3. Parameter II: negation type vs. *ke*-type

Kunming (Southwest Mandarin, Yunnan)
Question types: *ke*-type, no negation-based type, no particle question

What Mandarin, Xiang, Thai and Lao have in common is that question formation involves negation morphemes - only at different positions in the sentence. In Kunming, however, we find *ke*-type questions as the standard question form. The relevant morpheme is *gə* which occurs in preverbal position. The example in (82) shows that this form is fully grammaticalised in the sense of McCawley (1994) and Cole & Li (1997).

(82)   *[Wo   **gə**   qu   Beijing]   bijiao hao?

   I   KE   go   Beijing   better

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

As with the negation based forms in the languages above, there is a alternative question form as given in (84). This form is constructed together with the morpheme *gə* which we analyse as a copula morpheme.

(83) Ta **gə**   xihuan   zhe ben shu ?
(84) Ta **gə ʃə**   xihuan   zhe ben shu ?
     you KE (C)   like   this book
     'Do you like this book?'

Our tests show that these two variants correlate to the negation type versus copula type forms in the languages discussed above. The focus readings in (85) and (86) shows that only the form with the copula can be used in questions where one constituent is contrastively focused. The facts of *wh*-binding point into the same direction. Only the form in (88) with the copula the *wh*-word in subject position can be bound.

Focus readings

(85) ?? Tə   ZOTIƐN   **gə**   zo le   suxi ?
(86) Tə   ZOTIƐN   **gə ʃə**   zo le   suxi ?
     he   yesterday KE (COP) make PERF   sushi
     'Was it yesterday that he made sushi?'

wh-**binding**

(87) *Nage   **gə**   xihuan   tə ?
(88) Nage   **gə ʃə**   xihuan   tə ?
     who   KE (COP)   like   he
     'Does anybody like him?'

Even the data on scope interaction with universal quantifiers parallels this behaviour. An elliptical negative question to a simple *ke*-type question as in (89) can only be interpreted with narrow scope, whereas the same elliptical answer to a *ke*-copula question in (90) is interpreted with wide scope over the universal quantifier.

Scope interaction

(89) A: Təmen **gə** bɒliɛn (dou) xihuan kai tse ?
       they   KE   all   all   like   drive car
       'Do they all like to drive?'

(b) B: Mɤu. (= bɒliɛn (dou) bu xihuan.)
       no   all   all   not   like
       'No.   (None of them likes to drive.)'

(90) A: Təmen **gə ʃə** bɒliɛn (dou) xihuan kai tse ?
       they   KE (COP) all   all   like   drive car
       'Do they all like to drive?'

(b) B: Mɤu. (= Bu ʃə bɒliɛn xihuan.)
       no   not COP all   like
       'No. (Not all of them like to drive.)

Up to here we have isolated two parameters. One parameter specifies the position of the question morphemes in languages with negation based questions. The other parameter specifies the difference between languages with negation based question formation and *ke*-based question formation. Within the different types we have shown that the distinction between Pol1 and Pol2 questions are constructed with plain forms versus forms that involve a copula morpheme. The distinction between presentational and contrastive questions itself has proved independent of parametric variation.

The parameters of typological variation that we discussed so far are also covered by the tree diagram of Zhu (1985) which we cited as (15) in our introduction. The next language that we analyse, however, will show that the parameters have to be formulated in a more generalised way than in Zhu. Whereas Zhu assumes a hierarchical ordering of the parameters that yields only three types, we will show that both parameters are mutually independent and can be combined orthogonally to yield four different language types.

4.4. Combination of parameter I and II: *ke*-VO vs. VO *ke*

Kam mɯa· (Southwestern Tai, Northern Thailand)
Question forms: *ke*-type, but sentence-final, VO *ke*

In Kammɯa·, the language of the formally independent kingdom of Lanna in Northern Thailand, we find questions types that are formed with an *ke* morpheme, but differently to the Kunming dialect of Chinese not in preverbal position but at the end of the sentence.
In a question with a presentational focus the morpheme *kɔɔ²* is attached at the sentence final position as in (91) and (92). Questions with contrastively focused constituents or questions that ask for an identification are constructed with the same question morpheme in combination with a copula morpheme. In our written sources that we collected, there are two types of copula morphemes. In the area of Chiangmai the copula *mɛɛn⁶* is used as shown in (93). This form can easily be traced back to a common source with the copula *mɛn²* in Standard Lao. In other areas of the former kingdom of Lanna we also find the copula *cai³* which has a common source with Standard Thai *châi* as in (94).

(91) Aŋ¹ Lɔɔ¹   sɔɔp³   kin⁵ thempura   kɔɔ² ?
      Ang Loo   like   eat tempura   KE
      'Ang Loo, do you like tempura?' (Okonogi 1995)

(92) Dai³   khɯɯn³   pai¹ Dɔɔi¹ Suteep³   kɔɔ² ?
      PAST   climb   go   Doi Sutheep   KE
      'Have you visited Doi Sutheep already?' (Okonogi 1995)

(93) Paa³ mai² Thai¹   mɛɛn⁶ kɔɔ² ?
      silk   Thai   COP KE
      'Is this Thai silk?' (Okonogi 1995)

(94) Can⁴ Taa¹   pen⁵   mɛɛ⁶ ɲiŋ¹ cai³ kɔɔ²
      Can Taa   COP   woman   COP KE
      'Is Can Taa a woman?' (Bonsooth, Chaimongkol et al.)

(95) Mɛɛn⁶   kaa²   Ba² / bɔɔ² mɛɛn⁶.
      COP   PRT   not not   COP
      'Yes.'   'No.'

However, there is a problem with this analysis. In our morphological definition of question types in Mandarin at the very beginning of this presentation we have defined the *ke*-type as a type that is constructed with a preverbal modal auxiliary that is distinct from the negation morpheme. On the basis of our definitions it would be more plausible to call the questions type of Kammɯaŋ a particle question, since it occurs at the end of the sentence and is distinct from the negation.

There are two arguments how we can defend that this question type is in fact a construction which corresponds to the *ke*-type of Mandarin and that must be analysed as a sentence final *ke*-question. First, as we pointed out in our previous study in Chen & Schaffar (2000) that particle questions in Mandarin do not behave like functional heads of a polarity phrase. In contrast to the negation type and the copula type they are indifferent to focus readings as well as to other syntactic effects. The question with *kɔɔ²* in Kammɯaŋ, however, is specified for a characteristic presentational focus reading. Secondly, there are also question particles in Thai that we discussed in our previous study. These particles, however, can not be combined with a copula to construct a complex question form. The paradigm that a simple question morpheme yields a presentational question and a combination of this morpheme together with a copula yields a contrastive question, is a unique feature of the morpheme *kɔɔ²*. In this property the morpheme *kɔɔ²* patterns with the negation based questions morphemes of languages like Standard Thai, Lao or Xiang and not with the other question particles in Kammɯa·.

Thirdly, in the following section we will show that just like the sentence final morpheme *mâi* in Thai, or *bɔ²* in Lao or *bo* in Xiang can be traced back to a preverbal negation morphemes, the question morpheme *kɔɔ²* of Kammɯaŋ has a counterpart in the affirmative preverbal modal verb *kɔ̂* of Thai which is etymologically related.

4.5. What is KE?

To find an answer to the question from what source the *ke* morphemes come from, let us have a look on some examples of Standard Thai where the cognate functional element *kɔ̂* appears in preverbal position. Note that Noss (1964) classifies this element as a modal and mentions that it is the most frequently used functional morpheme of Thai.

Sentences (97) and (98) are examples of complex sentences where in the second part *kɔ̂* occurs in preverbal position. Conditional sentences like (97) and sentences with a resultative sequence are commonly constructed in this way.

(97) Thâa khun   yàak   maa dûoi   **kɔ̂**   maa.
     if   you   want   come too   KE   come
     'If you want to come along, then come.' (Haas 1964)

(98) Sèt lɛ́ɛo kháo **kɔ̂** pai nɔɔn.

finish PERF he KE go sleep

'When it was finished, he went to bed.' (Noss 1964:181)

Example (99) shows a common idiomatic expression where in the first part the negation *maːi* is echoed by *kɔ* in the second part. The morpheme *kɔ* can also introduce a sentence that gives a reason or justification with the slight taste of reproach as in (100). Example (101) shows a very common construction where *kɔ* in the repetition of the verb is translated as 'too' or 'also' or in a strong sense of co-ordination.

(99) mâi mâak **kɔ̂** nɔ́ɔi

not much KE little

'whether many or few, if not a (whole) lot, then (at least) some'

(100) **Kɔ̂ɔ** phǒm khîi kiàt thâonán nîi.

KE I lazy only PRT

'Well, I am just lazy, that's all.' (Noss 1964:170)

(101) Khruu **kɔ̂** mii, nákrian **kɔ̂** mii

teacher KE exist student KE exist

'There are both teachers and students.'

The most distinctive construction for the syntactic analysis of *kɔ*, however, are examples like (102) and (103). Sentence (102) demonstrates a simple *wh*-question. Note that the question word remains in situ in the unmarked post-verbal position for objects. Example (103) is a possible answer to (102) and the Thai expression of universal quantification. In this construction *kɔ* must occur pre-verbally and the *wh*-word is moved leftwards to a position immediately preceding *kɔ*.

(102) Khun chɔ̂ɔp arai ?

you like what

'What do you like?'

(103) Phǒm $arai_i$ **kɔ̂** chɔ̂ɔp e_i.

I what KE like

'I like everything.'

Similar constructions are documented in Mandarin Chinese in Association with Focus sentences as in (104)-(106). In (104) the constituent *Li Si* is associated with the focus sensitive particle *shenzhi* or *lian* 'even'. In this construction the particle is directly attached to the focused constituent, but the constituent itself has to be moved to a distinctive position preceding the verb and a characteristic morpheme *ye* or *dou* obligatorily occurs pre-verbally. The same kind of constructions are documented for a variety of AwF sentences by Hole (1999) as in (105) and (106).

(104) Ta   [shenzhi / lian Li Si]$_i$ ye / dou   renshi   e$_i$.
    he   even   Li Si   also   know
    'He even knows Lɪ Sɪ.' (Gasde 1998:65)

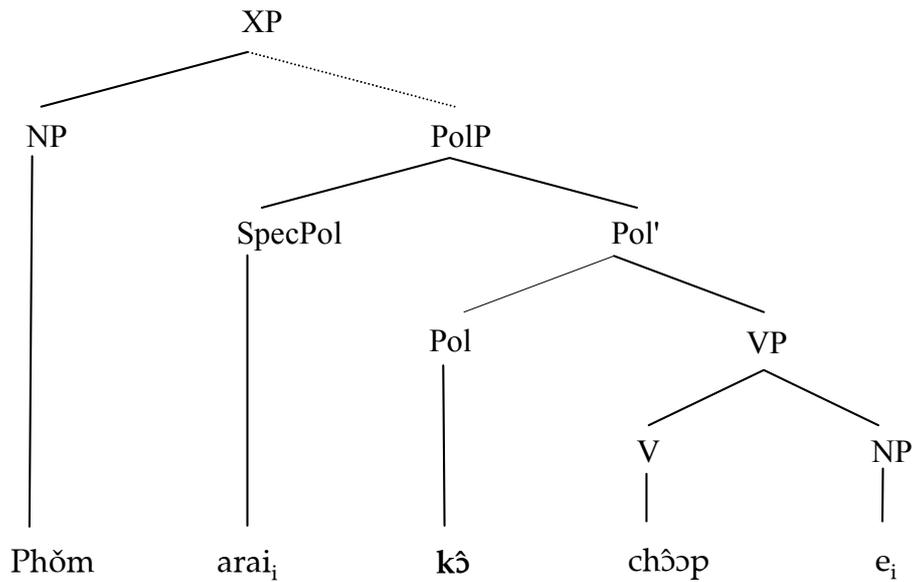(105) Zhi you   xingqitian   Laoli   *(cai)   gongzuo.
    only   sunday   Laoli   work
    'Laoli works only on Sundays.' (Hole 1999)

(106) (Zhi yao)   wu ge ren   jiu   bandedong   le.
    only need   fife men   can move   PERF
    'Only with fife men can you move it.' (Hole 1999)

Hypothesis: *ke* is an affirmative polarity head
The morpheme *kɔ̂* of Standard Thai belongs to the same class of functional elements as *ye*, *dou*, *cai* and *jiu* in Mandarin Chinese. A tentative syntactic analysis for sentence (103) is given in (107). Here we analyse *kɔ̂* as a functional head that projects a functional category in the INFL layer. The *wh*-word is hosted in the specifier position of this category. By this analysis we treat the universal quantification as an affirmative polarity construction. Note that this construction has the same structure as association with focus constructions in Mandarin.

(107)

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                          XP
              ┌───────────┄┄┄
             NP              PolP
              │          ┌──────────┐
              │       SpecPol       Pol'
              │          │        ┌──────┐
              │          │       Pol      VP
              │          │        │     ┌────┐
              │          │        │     V    NP
              │          │        │     │     │
            Phǒm       araiᵢ      kɔ̌  chɔ̂ɔp   eᵢ
```

4.6. Summary: Parameters of yes-no questions

The results of our investigation can be summarised as follows. The question forms of the different Chinese dialects and languages of Southeast Asia are specified by two parameters. One parameter specifies the position of the morphemes. The other parameter specifies whether the morphemes are based on negation morphemes or on affirmation morphemes. In every language, however, the question morphology is closely connected with polarity morphemes.

Parameter	negation type	affirmation type
pre VP	**V-neg-VO** Mandarin, Wu, Min	**aff-VO** Kunming, Taiwanese, Teochew
sentence final	**VO-neg (-V)** Xiang, Thai, Lao, Vietnamese	**VO-aff** Kammɯaŋ

Within the four different types the distinction between presentative Pol1 questions and contrastive Pol2 questions is invariantly constructed with the help of copula morphemes. The plain forms serve for the expression of presentational questions and the complex forms with the copula serve for the expression of contrastive questions.

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