
Indefinite Wh in Mandarin Chinese

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INDEFINITE *Wh* IN MANDARIN CHINESE*

Wh-words in Mandarin Chinese can have a non-interrogative indefinite interpretation as well as an interrogative one. The occurrence of a non-interrogative *Wh*-element is subject to certain semantic and syntactic constraints: it needs a c-commanding non-interrogative *Wh* licensor, the set of the licensors being defined in terms of the effect on the truth value of a proposition. The relation between the non-interrogative *Wh* and its licensor is a binder-variable relation, like the one that exists between an interrogative *Wh* and a question operator. Appropriate interpretations of given *Wh*-elements are determined by the property of the binder: if a *Wh*-element is bound by a question operator, it is an interrogative; if bound by a non-question operator, it is a non-interrogative. The binder-variable relation is subject to a Minimality requirement and displays Blocking and Specificity effects.

INDEFINITE *Wh* IN MANDARIN CHINESE

Wh-words in (Mandarin) Chinese not only are interrogative words (referred to as interrogative *Wh*) as in (1a) but also have a non-interrogative indefinite interpretation 'some, any' (referred to as indefinite *Wh* henceforth), illustrated in (1b):

- (1) a. Ta yiwei wo xihuan shenme?
 he think I like what
 'What does he think I like?'
 b. Ta yiwei wo xihuan shenme.
 he think I like what
 'He thinks that I like something.'

In general, an interrogative *Wh* occurs freely, as long as there is no violation of selectional requirements. The distribution of an indefinite *Wh*, however, is much more restricted. Typically, it occurs in negative polarity contexts (see Huang (1982, ch. 4) for relevant discussions). This captures the unacceptability of (1c):

- (1) c. *Wo xihuan shenme.¹
 I like what
 'I like something.'

The occurrence of an indefinite *Wh* is not limited to negative polarity contexts, however, as (1b) shows. What further complicates the matter is that (2a), which minimally differs from (1b) in the type of matrix verbs, is unacceptable. Moreover, (2b), in contrast to (1c), is acceptable.

- (2) a. *Ta baoyuan wo xihuan shenme.
 he complain I like what
 ‘He complained that I like something/anything.’
- b. Wo tingdao le shenme le.
 I hear what
 ‘I heard something.’

The contrast between (1b) and (1c) indicates that embedding affects the availability of an indefinite *Wh*. The contrast between (1b) and (2a) shows that the matrix verb affects the availability of an indefinite *Wh* in the embedded clause. Embedding under a proper verb, however, is not the only saving device. If a different verb, together with the marker *le*,² is used in cases similar to (1c), an indefinite *Wh* becomes possible again, as in (2b).

A preliminary survey suggests that the distribution of the indefinite *Wh* is affected by a complex set of seemingly unrelated factors. The task of this paper is to search for generalizations within the complexity and seek links among the seemingly unrelated factors. I will show that the distribution of the indefinite *Wh* is constrained by various semantic and syntactic factors: semantically, it is affected by the truth value of the proposition containing the indefinite *Wh*; syntactically, an indefinite *Wh* behaves like a variable. It requires a licenser and needs to be c-commanded by it. It obeys a Minimality constraint and displays a Blocking effect and a Specificity effect.

This paper is divided into two parts: one on the semantic constraints and the other on the syntactic constraints. The semantic constraints essentially concern the effect of truth value on the distribution of the indefinite *Wh*. Various types of contexts are examined, which include the negative polarity contexts (section 1), non-factive verb contexts (section 2) and contexts of tentativeness and inference (section 3). The generalizations concerning the syntactic constraints are reached by examining the structural relation between the indefinite *Wh* and the element that licenses it (section 4) and investigating the interaction between the indefinite *Wh* and the interrogative *Wh* (section 5).

1. NEGATIVE POLARITY *Wh*³

A common usage of the indefinite *Wh* is to be a negative polarity item (see, for instance, Ladusaw (1980), Linebarger (1981), Huang (1982), Progovac (1988)). It does not occur in positive statements but occurs in typical negative polarity contexts, such as negation, questions, and conditionals.

1.1. *Negation*

As a typical negative polarity item, the indefinite *Wh* does not occur in a positive statement (3). It occurs in a negative sentence (4):⁴

- (3) *Ta xihuan shenme.⁵
 he like what
 ‘He likes something/anything.’
- (4) Ta bu xihuan shenme.
 he not like what
 ‘He doesn’t like anything.’

A negative sentence does not allow an indefinite *Wh* to occur in any position, however. Although the indefinite *Wh* is allowed in object position of verbs (4) and prepositions (5a),⁶ it is not allowed in subject position (5b):

- (5) a. Ta bu wei shenme ren zuo shi.
 he not for what man do thing
 ‘He does not work for anyone.’
- b. *Shenme ren bu xihuan ta.
 what man not like him
 ‘Someone/Anyone does not like him.’

In addition to negation, an indefinite *Wh* is available in other typical negative polarity contexts such as questions and conditionals.

1.2. *Questions*

Among the different types of questions, an indefinite *Wh* occurs in *yes/no* questions (*ma* questions) most freely: it occurs in either subject or object position:

- (6) a. Shei/Shenme ren xihuan ta ma?
 who/what man like him Q(question marker)
 'Does anyone like him?'
 b. Ta xihuan shenme ma?
 he like what Q
 'Does he like something(anything)?'

Wh-questions are the most restrictive. They do not allow an indefinite *Wh* in either subject or object position:

- (7) Shei/Shenme ren xihuan shenme?
 who/what man like what
 'Who likes what?'

(7) can only be interpreted as a multiple question; neither of the *Wh*-elements can have an indefinite interpretation.

A-not-A questions come in between: they allow an indefinite *Wh* in object position but not subject position:

- (8) a. *Shei/Shenme ren xi-bu-xihuan ta?
 who/what man like-not-like him
 'Does someone/anyone like him?'
 b. Ta xi-bu-xihuan shenme?
 he like-not-like what
 'Does he like something/anything?'

1.3. *Conditionals*

Conditionals, just like *ma*-questions, allow an indefinite *Wh* freely:

- (9) a. Yaoshi/Ruguo shenme ren (shei) xihuan ta . . .
 if what man who like him
 'If anyone likes him. . . .'
 b. Yaoshi/Ruguo ta xihuan shenme . . .
 if he like what
 'If he likes anything. . . .'

In brief, an indefinite *Wh* occurs in typical negative polarity contexts. Following the analyses of negative polarity items (see, among others,

Progovac (1988)), we may assume that an indefinite *Wh* needs to be licensed. The licensor can be a negation, a question, or a conditional.⁷

2. NON-FACTIVE VERBS

The distribution of an indefinite *Wh*, however, extends beyond the negative polarity contexts: we do find certain positive contexts permitting an indefinite *Wh*. For instance, even though the positive sentence (10a) is not acceptable with the indefinite *Wh*, it becomes possible when embedded:

- (10) a. *Ni xihuan shenme (dongxi).⁸
 you like what thing
 ‘You like something/anything.’
- b. Wo yiwei/renwei/cai/xiwang ni xihuan shenme (dongxi).
 I think/think/guess/hope you like what thing
 ‘I think/guess/hope that you like something.’

Embedding does not always make an indefinite *Wh* available, however. (11a–b), in contrast to (10b), are not possible with the indefinite *Wh* interpretation:

- (11) a. *Wo houhui/aonao zuo shenme (shiqing).
 I regret/upset do what thing
 ‘I regret/am upset having done something/anything.’
- b. *Wo baoyuan/zhidao⁹ ni zuo/xihuan shenme.
 I complain/know you do/like what
 ‘I complained/knew that you did/liked something/anything.’

(10b) and (11a–b) minimally differ in the type of matrix verbs: the former has a non-factive verb and the latter, a factive one. (12a–b) further illustrate this contrast:

- (12) a. Wo yiwei ni fandui/kandao shenme (dongxi).
 I think you oppose/see what thing
 ‘I thought you were opposed to/saw something.’
- b. *Wo baoyuan ni fandui/kandao shenme (dongxi).
 I complain you oppose/see what thing
 ‘I complained that you were opposed to/saw something/anything.’

(10–12) thus suggest the following generalization: an indefinite *Wh* can be licensed by a non-factive verb.¹⁰ This generalization, however, does not immediately follow from the observation that an indefinite *Wh* is like a negative polarity item. What, then, is shared by non-factive and negative polarity contexts that makes an indefinite *Wh* possible? The answer lies in the semantics of these constructions. In an effort to seek a common link among all negative polarity contexts (including negation, questions, and conditionals), Progovac (1988) argues that all negative polarity contexts are related to negation: questions and conditionals have an extra-clausal negative-like operator *c*-commanding the propositions expressed in them. The only difference between negation and the negative-like operator is that the former inverts the truth value of a proposition and the latter cancels the truth value of a proposition. For instance, while the negation in (13) is to invert the truth value of its positive counterpart *he is here*, the proposition in (14a–b) does not have a fixed truth value: neither of the sentences entails the truth of the proposition *he is here*.¹¹

(13) He is not here.

(14) a. Is he here?

b. If he is here

Progovac's proposal makes it possible to link the non-factive context to the negative polarity context: for a non-factive verb, the truth value of its embedded clause is not fixed. In contrast, the truth of a proposition embedded under a factive verb is implied. To illustrate, (15) contains a non-factive verb; the truth of the embedded clause is not implied (he may be here and he may not be here). In (16), which contains a factive verb, the embedded clause must be true (he must be here):

(15) I think he is here.

(16) I know he is here.

Since the embedded clause of non-factive verbs, just like conditionals and questions, does not have a fixed truth value, it is not surprising that non-factive contexts allow an indefinite *Wh* as well.

The generalization that emerges from the discussion above is that an indefinite *Wh* is permitted in contexts where the truth of the proposition is not asserted/implied: either the truth value is not fixed as in the contexts of questions, conditionals, and non-factive complements or is negated as in the negation contexts.

3. EXTENSION

The generalization just reached shows the relevance of truth value to the licensing of an indefinite *Wh*. This generalization makes it possible to accommodate other cases of an indefinite *Wh* occurring in positive contexts: it can be extended to the cases where the force of asserting the truth of a proposition is lessened.

3.1. *Tentativeness and Uncertainty*

It has been noted in the literature (see, for example, Lü (1980)) that the use of an indefinite *Wh* indicates tentativeness or uncertainty. What I would like to suggest here is in fact the other way around: it is not because of the use of an indefinite *Wh* that makes a statement tentative or uncertain; rather, it is because of the tentativeness or uncertainty of a linguistic context that makes an indefinite *Wh* possible. This is most obviously illustrated by the fact that an indefinite *Wh* often requires the cooccurrence of expressions denoting uncertainty of tentativeness such as *dagai/keneng* 'probably', *haoxiang* 'seem', *sihu* 'seem', *de yangzi* 'the appearance of', *yexu* 'perhaps':

- (17) a. *Ta xihuan shenme.
 he like what
 'He likes something.'
- b. Ta dagai/keneng xihuan shenme.
 he probably like what
 'He probably likes something.'
- c. Ta haoxiang xihuan shenme.
 he seem like what
 'He seems to like something.'
- d. Ta sihu xihuan shenme.
 he seem like what
 'He seems to like something.'
- e. Ta xihuan shenme de yangzi.
 he like what DE appearance
 'It looks that he likes something.'

- (17) f. Ta yexu xihuan shenme.
 he perhaps like what
 'He may like something.'

An indefinite *Wh* cannot simply occur in a sentence like (17a) and make the expression more tentative or uncertain. However, when words like 'seem, probably' occur in the sentence, some degree of uncertainty or tentativeness is expressed. An indefinite *Wh* becomes possible. In other words, in addition to the contexts where the truth value is negated or not fixed, an indefinite *Wh* is licensed in the contexts of tentativeness or uncertainty, i.e., when the truth of the proposition is not straightforwardly asserted. It is a weaker assertion: a tentative or uncertain one.

3.2 *Inference le*

In addition to the use of explicit expressions denoting uncertainty or tentativeness, the weakening of asserting the truth of a proposition can also be achieved by the use of *le* (see n. 2), thereby licensing the occurrence of an indefinite *Wh*. Among the many uses of *le*, according to Li and Thompson (1981), one is to denote the realization on the part of the speaker that a change of state has occurred or an event has happened. Note that a speaker may realize the happening of an event or change of state through his direct observation of the happening/change of state or through his observation of the environment, then making inference according to his evaluation of the contexts and world knowledge. For the latter, the speaker need not see the actual happening of the event/change of state to conclude that something has happened. Inferences, however, are not as direct and straightforward as factual descriptions: a statement based on inference (circumstantial evidence) is more tentative and uncertain than direct and straightforward description of a fact. Such tentativeness or uncertainty hence licenses an indefinite *Wh*. To illustrate this point, compare the following sentences:

- (18) a. *Ta zuo shenme.
 he do what
 'He did something.'
- b. Ta zuo (le) shenme le.
 he do what
 'He did something.'

- (19) a. *Ta kandao shenme.
 he see what
 ‘He saw something.’
- b. Ta kandao (le) shenme le.
 he see what
 ‘He saw something.’

The minimal contrast between (18a) and (19a) on the one hand and (18b) and (19b) on the other shows that the indefinite *Wh* is possible because of the existence of *le*. To understand why *le* licenses an indefinite *Wh* in such cases, we give a situation where a sentence like (19b) is felicitous. Suppose someone has been looking out of the window. Suddenly this person stands up, sticks his head out of the window as if to look at something more closely. The speaker can, then, based on the situation, make the statement in (19b), although he does not go to the window to find out whether this person has indeed seen something. The statement in (19b) thus is based on the speaker’s realization of the changes in the situation and making inference according to his evaluation of the situation (circumstantial evidence).

In short, the use of *le*, which denotes the realization on the part of the speaker that something has happened or a change of state has occurred, makes it possible for the speaker to state something based on circumstantial evidence rather than direct evidence. Statements based on circumstantial evidence are more tentative and uncertain than statements based on direct evidence. An indefinite *Wh* thus can occur.

Chinese is not alone in using a particular linguistic form to make certain statements according to circumstantial evidence.¹² Kim (personal communication) also notes this use of aspect markers in Korean: the “circumstantial use” of the aspect marker. Along the same lines, we may say that the “circumstantial *le*” makes it possible to state something according to the speaker’s inference from the situation. Inference normally is less definite or certain than a factual description; i.e., the force of asserting the truth of a proposition made by inference is weaker than that of a proposition based on direct factual descriptions. This reduced force of asserting the truth of a proposition is what permits an indefinite *Wh* — the extended contexts licensing an indefinite *Wh*.¹³

Summarizing, an indefinite *Wh* occurs in:

- (20) a. contexts where the truth value is negated: negation

- (20) b. contexts where the truth value is not fixed: questions, conditionals, non-factive verb complements
- c. contexts where the truth value is not asserted directly: *seem*, *probably* contexts, circumstantial *le*

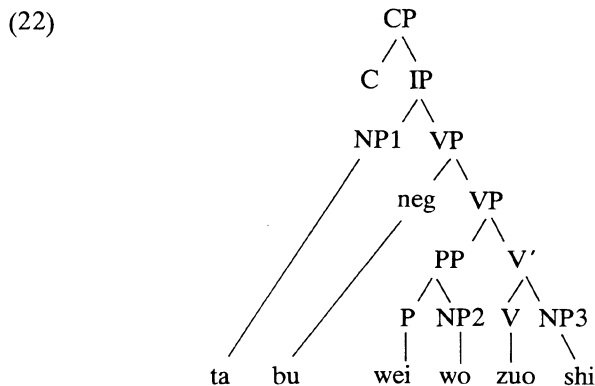
(20a–c) together state that an indefinite *Wh* is licensed in contexts where the truth value of the proposition is not positively fixed in a definite manner.

In this section we discussed the contexts where an indefinite *Wh* can occur. Within the respective contexts, there are further constraints on the positions where an indefinite *Wh* is possible. We turn to these constraints next.

4. S-STRUCTURE C-COMMAND

As noted earlier, there is a subject/object asymmetry in the availability of an indefinite *Wh* in negation contexts and the absence of such an asymmetry in the contexts of questions and conditionals (sections 1.2–1.3). This difference is expected if “c-command” is a structural requirement between the indefinite *Wh* and its licenser, following the analysis of negative polarity items (see, for example, Progovac (1988)). A node A c-commands B iff the first branching node dominating A also dominates B (Reinhart (1983)). According to the binary-branching phrase structure rules of Huang (1982) for Chinese, a sentence like (21) will have the structure in (22), assuming Chomsky (1986)’s extended X’ notation)

- (21) Ta bu wei wo zuo shi.
 he not for me do thing
 ‘He doesn’t do things for me.’



In this structure, the negation *c*-commands the object of the preposition (NP2) and the object of the verb (NP3) but does not *c*-command the subject (NP1). An indefinite *Wh* therefore is possible as object of a preposition or a verb but not in the subject position. This *c*-command requirement captures the contrast between sentences (4) and (5a–b), repeated as (23a–c) here:

- (23) a. Ta bu xihuan shenme.
 he not like what
 ‘He doesn’t like anything.’
- b. Ta bu wei shenme ren zuo shi.
 he not for what man do thing
 ‘He does not work for anyone.’
- c. Shenme ren bu xihuan ta?
 what man not like him
 *‘Someone/anyone does not like him.’
 ‘Who does not like him?’

That *c*-command is the relevant structural notion can be further supported by the unavailability of the indefinite *Wh* in (24) where the negation occurs within a sentential subject:

- (24) *Ta bu lai dui shenme ren zui hao.
 he not come to what man most good
 ‘That he does not come is the best for someone’

This *c*-command requirement also accounts for the unacceptability of (25a) where the negation is part of the adverb — ‘unhappily’ and captures the contrast between (25b) and (25c), whose minimal difference lies in the position of negation:

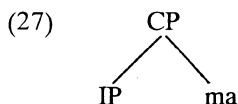
- (25) a. *Ta bu-gaoxing de zuo shenme.
 he not-happy DE do what
 ‘He did something unhappily.’
- b. Ta bu gen shenme ren shuohua.
 he not with what man speak
 ‘He does not speak with anyone.’

- (25) c. *Ta gen shenme ren bu shuohua.
 he with what man not speak
 'He does not speak with anyone.'

For conditionals, if the conditional marker *ruguo*, *yaoshi* 'if' is the element that licenses the indefinite *Wh*, it is clear that c-command directly captures the contrast between (26a–b) on the one hand and (26c) on the other:¹⁵

- (26) a. Ruguo shenme ren xihuan ta, jiu gen wo jiang.
 if what man like he then with me tell
 'If someone likes him, then tell me.'
- b. Ruguo ta xihuan shenme ren, jiu gen wo jiang.
 if he like what man then with me tell
 'If he likes someone, then tell me.'
- c. *Ruguo wo xihuan ta, shenme ren hui hen gaoxing.
 if I like him what man will very happy
 'If I like him, someone will be happy.'

For *yes/no* question, if the question marker *ma* is in the complementizer position (see Lee (1986)), the question marker would c-command both the subject and object NP in the clause, hence licensing an indefinite *Wh* in both positions:



The same c-command requirement is illustrated in the contrast between (28a–b) and (29):

- (28) a. Wo yiwei ta xihuan shenme.
 I think he like what
 'I thought he liked something.'
- b. Wo yiwei shenme ren xihuan ta.
 I think what man like him
 'I thought someone liked him.'

- (29) *Shenme ren yiwei wo xihuan ta.
 what man think I like him
 'Someone thought that I liked him.'

The licensing of an indefinite *Wh* by the circumstantial *le* also obeys the c-command requirement if we assume that *le* is in the INFL position and the clausal structure is [_{IP} [_{VP} NP1 [_{VP} V NP2]] I], following Aoun and Li's (1989) proposal concerning the constituent structure of Chinese. The *le* in INFL c-commands both the internal subject NP1 and the object NP2.¹⁶ This account predicts that an indefinite *Wh* cannot occur in an external subject position, which is the case:

- (30) a. *Shenme ren, xiaohai na cuo dongxi le.
 what man child take wrong thing
 'Someone, (his) child has taken the wrong thing.'
- b. Shenme ren *de* xiaohai na cuo dongxi le.
 what man DE child take wrong thing
 'Someone's child has taken the wrong thing.'

The indefinite *Wh* must be part of the internal subject NP (the possessor), as indicated by the obligatoriness of *de* in (30b).

The discussion in the previous paragraphs shows that an indefinite *Wh* must be c-commanded by its licenser. There is evidence that such licensing must take place at S-Structure. The evidence comes from the distribution of the indefinite *Wh* in A-not-A questions. Recall that A-not-A questions allow an indefinite *Wh* in object position but not subject position:

- (8) a. *Shenme ren xi-bu-xihuan ta?
 what man like-not-like him
 'Does someone/anyone like him?'
- b. Ta xi-bu-xihuan shenme?
 he like-not-like what
 'Does he like something/anything?'

It has been proposed that the A-not-A form undergoes raising at LF to the COMP position (Huang (1982)). This amounts to saying that at LF, A-not-A questions should behave exactly like *ma* questions (see section 1.2), since the A-not-A form would end up in the same position as *ma*.

After it is raised to COMP, the A-not-A form will c-command the subject NP, in addition to the object. Were the indefinite *Wh* to be licensed at LF, sentence (8a) would be acceptable. On the other hand, if it is licensed at S-Structure, the unacceptability of (8a), in contrast to the acceptability of (8b), follows from the fact that the A-not-A form c-commands the object but not the subject at this level. It also accounts for the acceptability of (8c) where the subject is c-commanded by the A-not-A form:

- (8) c. Shi-bu-shi shenme ren xihuan ta?
 be-not-be what man like him
 'Does someone/anyone like him?'

In brief, the fact that A-not-A questions license an indefinite *Wh* in subject position but not object position, together with the proposal that the A-not-A form undergoes raising at LF, led us to conclude that an indefinite *Wh* must be licensed by a c-commanding element at S-Structure.

In addition to the c-command requirement, there are a Blocking effect and a Minimality requirement on the relation between the indefinite *Wh* and the element that licenses it. They are manifested in the cases involving the interaction between the indefinite *Wh* and the interrogative *Wh*.

5. INTERACTION WITH THE INTERROGATIVE *Wh*

Consider the following sentences:

- (31) a. Ta yiwei shei xihuan shenme.
 he think who like what
 'He thought somebody liked something.'
- b. Ta yiwei shei xihuan shenme ne?
 he think who like what *Wh*-Q(uestion marker)
 'Who(x), what(y), he thought x liked y?'
 *Who(x), he thought x liked something?
 *What(y), he thought somebody liked y?
 *He thought who liked what.'

As illustrated, *who* and *what* in (31a) can be interpreted as an indefinite *Wh*, due to the presence of the non-factive verb *think*. In contrast, neither of the *Wh*-elements can be interpreted as an indefinite *Wh* in (31b) where a *Wh*-question marker is present. They must be interpreted as an interrogative.

Similar restrictions occur in the case where the matrix verb selects an interrogative (32) and the case where two *Wh*-elements occur in a conditional clause (33):

- (32) Ta yiwei wo xiang-zhidao shei xihuan shenme.
he think I wonder who like what

‘He thinks that I wonder who likes what.’

*‘He thinks that I wonder what someone likes.’

*‘He thinks that I wonder who likes something.’

- (33) a. Yaoshi shei xihuan shenme, ta jiu gaoxing le.
if who like what he then happy

‘If somebody likes something, he would be happy.’

- b. Yaoshi shei xihuan shenme, ta jiu gaoxing ne?
if who like what he then happy *Wh-Q*

‘Who(x), what(y), if x likes y, he would be happy?’

*‘Who(x), if x likes something, he would be happy?’

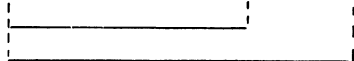
*‘What(y), if somebody likes y, he would be happy?’

*‘If somebody likes something, he would be happy.’

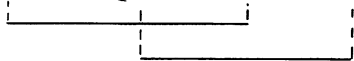
In (32), both of the *Wh*-elements must be interpreted as interrogative rather than indefinite. (33a) shows that an indefinite *Wh* is possible in both subject and object position of the conditional clause (see section 1.3). When a *Wh*-question marker is present in the matrix clause, however, neither of the *Wh*-elements can be indefinite.

Sentences (31–33) thus indicate that if a *Wh*-question marker is present in the matrix clause or an interrogative is selected, the *Wh*-elements in both subject and object position must be interpreted as interrogatives. Assume that a *Wh*-element must be interpreted as an interrogative if it is associated with a *Wh*-question marker (*ne*,¹⁷ or an abstract question morpheme selected by a verb). If it occurs with a negation, question (*ma* question, see section 1.2), conditional, *le*, or non-factive verb, it is interpreted as an indefinite. Schematically, then, the restrictions shown in (31–33) can be represented as (34–35). In these representations, +QOP (Question Operator) represents the *Wh*-question morpheme (the overt marker *ne* or an abstract *Wh-Q* morpheme when *ne* is not present); –QOP (non-Question Operator) represents the elements that license the indefinite *Wh*, such as non-factive verbs, *le*, conditionals, *yes/no* questions, and negation. The licensor-licensee relation is indicated by a link for each *Wh*-element.¹⁸

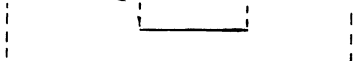
(34) a. +QOP ... -QOP ... wh1 ... wh2



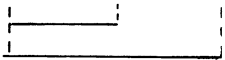
b. *+QOP ... -QOP ... wh1 ... wh2



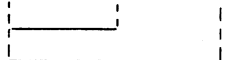
c. *+QOP ... -QOP ... wh1 ... wh2



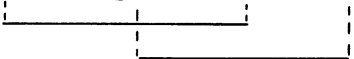
d. *+QOP ... -QOP ... wh1 ... wh2



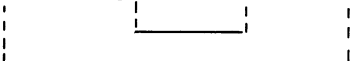
(35) a. -QOP ... +QOP ... wh1 ... wh2



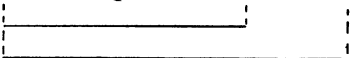
b. *-QOP ... +QOP ... wh1 ... wh2



c. *-QOP ... +QOP ... wh1 ... wh2



d. *-QOP ... +QOP ... wh1 ... wh2



The contrast between the acceptable (35a) on the one hand and the unacceptable (35b–d), (34b–c) is expected if a Minimality requirement (Chomsky (1986), Rizzi (1990), Aoun and Li (1989)) exists in the relation between the operators and the *Wh*-elements: a *Wh*-element must be linked to the closest operator. In (35a), both *Wh*-elements are linked to the closest operator. In contrast, *Wh1* in (34b) and (35b) is not linked to the closest operator. In (34c) and (35c), *Wh2* is not linked to the closest operator. In (35d), neither *Wh1* nor *Wh2* is linked to the closest operator. Minimality thus distinguishes (34b–c) and (35b–d) from (35a). Such a Minimality requirement, however, seems to be violated in (34a), even though it is acceptable. On the other hand, Minimality is obeyed in (34d), yet it is not acceptable. Minimality thus seems to be inadequate with respect to (34a) and (34d). I suggest that this apparent inadequacy is due

(36) a. *Ta xihuan ni ne?
he like you Wh-Q

b. Shei xihuan ni ne?
who like you Wh-Q

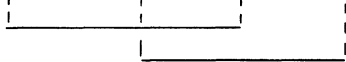
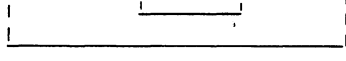
(37) a. *Wo xiang-zhidao ta xihuan ni.
I wonder he like you

b. Wo xiang-zhidao shei xihuan ni.
I wonder who like you
'I wonder who likes you.'

(38) a.	Ta bu zuo (shenme) shiqing. he not do what thing 'He does not do (anything) things.'	negation
b.	Yaoshi ta xihuan (shenme) ren . . . if he like (what) man 'If he likes (someone) people. . . '	conditional
c.	Ni xihuan (shenme) ren ma? you like (what) man Q 'Do you like (anyone/someone) people?'	yes/no question
d.	Wo yiwei ta xihuan (shenme) ren. I think he like (what) man 'I thought he liked (someone) people.'	non-factive verb

- (38) e. Ta mai le (shenme) dongxi le. le
 he buy what thing
 'He bought (something) things.'

Given that a +QOP requires a *Wh*-element, it is expected that (34d) is unacceptable: this +QOP is not linked with any *Wh*-element. Given that a -QOP need not be linked with a *Wh*-element, it is also expected that (34a), which seemingly violates Minimality, is acceptable. The claim that a -QOP need not be linked with a *Wh*-element (thereby avoiding a Minimality violation), however, raises the question of why (34b–c) (and similarly (35b–c)) still violate Minimality:

- (34) b. *+QOP ... -QOP ... wh1 ... wh2

 c. *+QOP ... -QOP ... wh1 ... wh2


We have mentioned that these two representations violate Minimality because *Wh1* in (34b) and *Wh2* in (34c) are not linked to the closest operator, -QOP. On the other hand, the acceptability of (34a) and (38) led us to conclude that a -QOP need not be linked with a *Wh*-element and can be neglected. How are these two to be compromised? Note that the main contrast between the unacceptable (34b–c) and the acceptable (34a) is that, although -QOP is not linked at all in (34a), it is linked with *Wh1* in (34b–c). The generalization thus is (39):

- (39) The linking of a *Wh*-element with an operator is subject to minimality.

The linking of A with B [... A ... B ...] obeys Minimality iff there is no intervening C [... A ... C ... B] such that C is linked to another element D, $D \approx B \approx A$

(39) amounts to saying that a *Wh*-element must be linked to the closest operator, with the proviso that the indefinite *Wh* licenser is an operator only when it is linked to a *Wh*-element.

In (34a), although -QOP intervenes between the linking of the *Wh*-element and its +QOP licenser, it is not linked to any other element. Minimality defined in (39) is obeyed. In (34b), (39) is violated: the linking of *Wh1* with +QOP is blocked by -QOP, which is linked to a different

element *Wh*2. In (34c), although the linking of *Wh*1 with $-QOP$ does not violate Minimality, the linking of *Wh*2 with $+QOP$ violates Minimality, with the intervening $-QOP$ linked with *Wh*1. The contrast found in (34–35) thus can be captured by the Minimality requirement defined in (39).

The correctness of (39) can be further tested. According to (39), the following representations should be acceptable, since the linking obeys Minimality:

(40) a. $+QOP \dots wh1 \dots -QOP \dots wh2$
 └────────┘ └────────┘

b. $-QOP \dots wh1 \dots +QOP \dots wh2$
 └────────┘ └────────┘

This indeed is the case. (40a) is illustrated by the acceptability of (41a–d) and (40b) by (42a–b).¹⁹

(41) a. *Shei mei zuo shenme ne?*

who not do what Q

‘Who did not do anything?’

b. *Shei yiwei ta zuo le shenme le?*

who think he do what

‘Who thought that he did something?’

c. *Yaoshi ta xihuan shenme, shei hui hen gaoxing?*

if he like what who will very happy

‘Who will be happy if he likes something?’

d. *Shei dui ta xi-bu-xihuan shenme mei xingqu?*

who to he like-not-like what not interest

‘Who is not interested in whether he likes something?’

(42) a. *Ta yiwei shenme ren xiang-zhidao ni xihuan shenme.*

he think what man wonder you like what

‘He thought someone wondered what you liked.’

b. *Yaoshi shei xiang-zhidao ni xihuan shenme*

if who wonder you like what

‘if someone wonders what you like’

The acceptability of sentences (41a–d) and (42a–b) therefore provides further evidence for the correctness of (39).²⁰

(39), however, is challenged by the ambiguity of sentences like (43a–b). Huang (1982) first discusses this type of sentences and suggests that sentences like (43a–b) are three ways ambiguous:

- (43) a. Ta xiang-zhida_o shei xihuan shenme
 he wonder who like what
 i. 'He wonders who likes what.'
 ii. 'Who(x), he wonders what(y), x likes y.'
 iii. 'What(y), he wonders who(x), x likes y.'
- (43) b. Zhangsan yiwei ta xiang-zhida_o shei xihuan shenme
 Zhangsan think he wonder who like what
 i. 'Zhangsan thinks that he wonders who likes what.'
 ii. 'Who(x), Zhangsan thinks he wonders what(y), x likes y.'
 iii. 'What(y), Zhangsan thinks he wonders who(x), x likes y.'

Schematically, then, the three representations in (44a–c) are all possible. (44a) represents the interpretation of (i) in (43a–b), (44b), of (ii) in (43a–b) and (44c), of (iii) in (43a–b): (There is only one +QOP in (44a) because the matrix clause is not an interrogative in this case.)

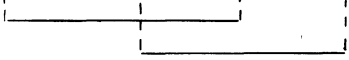
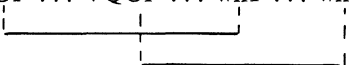
- (44) a. ... +QOP ... wh1 ... wh2
 └──────────┘
 └──────────┘
- b. +QOP ... +QOP ... wh1 ... wh2
 └──────────┘
 └──────────┘
- c. +QOP ... +QOP ... wh1 ... wh2
 └──────────┘
 └──────────┘

The acceptability of (44a) follows from (39). The acceptability of (44b–c), however, is not expected. Their acceptability is particularly puzzling if we consider the fact that an indefinite *Wh* interpretation is impossible in these sentences: (43) cannot have either of the interpretations in (45a–b), where one of the *Wh*-elements is interpreted as an indefinite *Wh*, although the matrix verb *yiwei* 'think' generally can license an indefinite *Wh* in the embedded clause.

(45) a. Zhangsan thinks he wonders what someone likes.

b. Zhangsan thinks he wonders who likes something.

The non-availability of (45a–b) indicates that the following representations are not possible (cf. (40b)), as predicted by (39):

- (46) a. *–QOP ... +QOP ... wh1 ... wh2

 b. *–QOP ... +QOP ... wh1 ... wh2


Why, then, are (44b–c) acceptable but (46a–b) are not?

Note that (44b–c) contrast with (46a–b) in the type of operators involved: (44b–c) contain only +QOPs (interrogatives) but (46a–b) contain a +QOP (an interrogative) and a –QOP (an indefinite). This suggests that the Minimality requirement stated in (39) needs to be sensitive to the type of elements intervening between the two points of a link. The sensitivity to the type of the intervening elements reminds us of the so-called Blocking effects displayed by the binding of long-distance anaphors discussed in Battistella and Xu (1990), Cole et al. (1990), Y.-H. Huang (1984), Huang and Tang (1988), and Tang (1989), among others.

The anaphor *ziji* 'self' in Chinese generally is coindexed with the closest possible antecedent within a local domain (a Minimality requirement):

- (47) Zhangsan_i, baba_j hen xihuan ziji_{i/*j}.
 Zhangsan father very like self
 'Zhangsan, (his) father likes self.'

This anaphor can also be bound by an NP beyond the local domain (long-distance binding), as long as the intervening (closer) subject is of the same person²¹ as the higher subject:

- (48) a. Zhangsan_i yiwei Lisi_j xihuan ziji_{i/j}.
 Zhangsan think Lisi like self
 'Zhangsan thinks that Lisi likes self.'
 b. *Zhangsan_i yiwei wo/ni_j xihuan ziji_{i/*j}.
 Zhangsan think I/you like self
 'Zhangsan thinks that I/you like self.'

Ziji in (48b) cannot be coindexed with the matrix subject, *Zhangsan* (3rd person) due to the existence of an intervening subject of a different person (1st or 2nd person) (see the reindexing analysis of Tang (1989) or the movement analysis of Huang and Tang (1988), Cole et al. (1990)). The unacceptability of (48b) illustrates the so-called Blocking effects and is captured by an analysis that essentially assumes *ziji* must acquire the person feature of its first possible binder when Principle A of the Binding Theory applies. Since *ziji* in (48b) will acquire a 1st/2nd person feature when Principle A applies to the lowest clause (the first cycle that the Binding Principles apply), it can no longer be bound by an NP that is of the third person. In contrast, *ziji* in (48a) acquires the third person feature during the first cycle (the embedded clause) and does not contradict the person feature of the matrix subject.

With this, we may account for the contrast between (44b–c) and (46a–b) in the same way: assume that a *Wh* is to an operator (+QOP or –QOP) what *ziji* is to its antecedent (see the A and A'-anaphoric relations discussed in Aoun (1985), (1986)). Further, assume that a *Wh* acquires the [+Q] or [–Q] feature in the same way that *ziji* acquires the person feature. The unacceptability of (46a–b) will therefore be another instance of the Blocking effects: the coindexing of a *Wh* with a higher [–Q] operator is blocked by an intervening [+Q] operator. After the Binding Principles apply to the lowest clause, the *Wh*-element would acquire a [+Q] feature. When the Binding Principles apply to the higher clause, this +Q *Wh*-element cannot be bound by a –Q operator, due to feature conflict.²²

6. CONCLUSION

This work began by unveiling the factors governing the distribution of the indefinite *Wh*. It was shown that the seemingly complicated and confusing distribution of the indefinite *Wh* is due to the interaction of several semantic and syntactic factors. Semantically, the indefinite *Wh* occurs in contexts where the truth value of the proposition is negated, non-fixed, asserted with uncertainty, or inferred tentatively. It does not occur in contexts where the truth value is positively asserted in a definite manner.²³ In other words, it is the lack of definitely asserting the truth of a proposition that makes an indefinite *Wh* available.

In addition to the semantic constraints, the distribution of the indefinite *Wh* is constrained by such syntactic factors as the c-command structural requirement, the Minimality requirement, and the Blocking effect. The clustering of these factors suggests that the relation between an indefinite

Wh and its licensor should be viewed as a binder-variable relation. A binder must c-command the variable that it binds. The binding relation is subject to a Minimality requirement (see the Minimal Binding Requirement in Aoun and Li (1989)). Furthermore, just as the anaphor (*ziji*) is subject to a Blocking effect, so is the variable, which is also an anaphor (Aoun (1985)). Further evidence for the variable status of the indefinite *Wh* can be found in cases involving Specificity.

The Specificity Condition, according to Fiengo and Higginbotham (1981) (also see Chomsky (1977)), applies to bound variables. This accounts for the unacceptability of (49a) and the unavailability of *everyone* having scope external to the NP (NP-external scope) in (49b):

- (49) a. *Who_i do you like [that picture of x_i]?
 b. He likes [those pictures of everyone].
 *‘Everyone(x), he likes those pictures of x’

In (49a), there is a variable x_i which is not bound within the specific NP. In (49b), *everyone* undergoes raising at LF. If it is adjoined to the sentence-initial position, a variable would be left free within the specific NP:

- (49) c. [_{IP} everyone_i [_{IP} he likes [_{NP} those pictures of x_i]]]

The Specificity Condition thus correctly rules out (49a–b).

An indefinite *Wh* cannot occur within a specific NP either:

- (50) a. Ta bu kan shenme ming ren de shu.
 he not read what famous man DE book
 ‘He does not read books of any/some famous person.’
 b. *Ta bu kan naben shenme ming ren de shu.
 he not read that what famous man DE book
 ‘He does not read that book of any/some famous person.’
 (51) a. Ni xihuan shenme ren de xiangpian ma?
 you like what man DE picture Q
 ‘Do you like someone’s/anyone’s picture?’
 b. *Ni xihuan nazhang shenme ren de xiangpian ma?
 you like that what man DE picture Q
 ‘Do you like that picture of some/any person?’

- (52) a. Yaoshi ni xihuan shenme ren de xiangpian....
 if you like what man DE picture
 ‘If you like pictures of some/any person...’
- b. *Yaoshi ni xihuan nazhang shenme ren de xiangpian....
 if you like that what man DE picture
 ‘If you like that picture of some/any person...’
- (53) a. Ta kandao le shenme ren de xiangpian le.
 he see LE what man DE picture LE
 ‘He saw pictures of someone.’
- b. *Ta kandao le nazhang shenme ren de xiangpian le.
 he see LE that what man DE picture LE
 ‘He saw that picture of someone.’
- (54) a. Wo yiwei ta na le shenme ren de xiangpian.
 I think he take LE what man DE picture
 ‘I thought he took someone’s picture.’
- b. *Wo yiwei ta na le nazhang shenme ren de xiangpian.
 I think he take LE that what man DE picture
 ‘I thought he took that picture of someone.’

The Specificity effects displayed in these sentences suggest that an indefinite *Wh* should be treated as a bound variable.

Since the binder-variable relation is also fundamental to the relation between a question marker and a *Wh*-element, the indefinite and the interrogative *Wh* are identical: they both are variables to be bound by an operator. If the operator is a question marker, it is an interrogative; if the operator is a non-question operator (specifically, the set of licensors discussed in sections 2 and 3), it is an indefinite pronoun.²⁴ Furthermore, a *Wh*-element can have a universal quantification interpretation if it is licensed by *dou* ‘all’ or *ye* ‘also’ (see Lee (1986), Chiu (1990) for *dou* licensing).²⁵

- (55) Ta sheme dou/ye xihuan.
 he what all/also like
 ‘He likes everything.’

The above discussion indicates that *Wh*-elements can only be inter-

puted according to their binders. This is reminiscent of the system of unselective binding discussed in Heim (1982). Heim suggests that indefinite NPs in English are variables and their quantificational force is determined by their binders (see Lewis (1976)). The same phenomenon is observed by Kuroda (1965) and Nishigauchi (1990) concerning *Wh*-elements in Japanese. In this language, *Wh*-elements can have an interrogative interpretation if the binder is a question marker (*ka*, for instance) and a universal quantification interpretation if the binder is *mo* (similar to *ye* 'also' in Chinese) (see Nishigauchi (1990), ch. 4 for detailed discussions of the possible interpretations).

The claim that *Wh*-elements in Chinese are variables and interpreted according to their binders raises the question of how such *Wh*-elements should be represented in logical form. Two options are available, as suggested in Nishigauchi (1990, ch. 4). One is to treat *Wh*-elements directly as variables at the level of logical representation; the binding relation is captured by coindexing the *Wh*-elements and their respective binders. The other is to assume that *Wh*-elements are subject to movements; the binding relation is established between a raised *Wh*-element and the variable created by the movement. In the literature on Chinese *Wh*-elements, the issue has been discussed more or less within the boundary of the interrogative *Wh* (see Huang (1982), Aoun and Li (1990)). It would be fruitful to re-examine the issue from the viewpoint of *Wh*-elements being unselectively bound variables (see Nishigauchi (1990) and Kim (1990) for a quantifier raising analysis to the *Wh*-elements in Japanese and Korean).

NOTES

* I am grateful to Joseph Aoun, Hajime Hoji, James Huang, Nam-Kil Kim, Tim Shi, and the two reviewers for their helpful comments. I would also like to thank Sylvia Chen, Horngyi Lee, Tim Shi, and Cathy Wei and her family for help with the data. I also thank participants in the Third North American Conference on Chinese Linguistics at Cornell University, where part of this paper was presented.

¹ Sentences (1c) and (2a), of course, are acceptable with the *Wh*-word *shenme* interpreted as an interrogative. For the sake of simplicity, the possibility of the interrogative interpretation will not be represented unless it is relevant to the discussion.

² In Chinese, there are two *le*'s: one that immediately follows (is attached to) the verb (a verbal *le* denoting completion) and the other that occurs in sentence-final position (a sentence-final particle denoting change of state). Linguists disagree on whether the two *le*'s are two distinct entities or the same one (see, among others, Teng (1973), M.-J. Huang (1987)). In the examples of this paper involving *le*, it seems that the indefinite *Wh* interpretation is most accessible if both *le*'s are present, although the verbal *le* seems to be dispensable in most cases. Thus, if a distinction is to be made, it is the sentence-final *le* that licenses an indefinite *Wh* (see section 3.2). To simplify the discussion, however, we will not

make it an issue to distinguish the two *le*'s. The function of *le* pertinent to the licensing of the indefinite *Wh* will be discussed in section 3.2.

³ Essentially, all *Wh*-elements except *weishenme* 'why' and *zenme* 'how' can occur as indefinite *Wh* in the contexts discussed in this paper. The negation context, however, is more restrictive than other contexts discussed in sections 1.2 and 1.3 and again in sections 2 and 3. In the negation context, only *shenme* 'what' is perfect with an indefinite interpretation, *shei* 'who' being less acceptable, and *nage* (*N*) 'which (*N*)' being unacceptable:

- (i) Ta bu xihuan shenme.
he not like what
'He does not like anything.'
- (ii) ?Ta bu xihuan shei.
he not like who
'He does not like anyone.'
- (iii) *Ta bu xihuan nage (ren).
he not like which man
'He does not like anyone.'

In contrast, all of these *Wh*-elements are acceptable as indefinite *Wh* in other contexts, such as the *yes/no* question context:

- (iv) Ta xihuan shenme ma?
he like what Q
'Does he like something/anything?'
- (v) Ta xihuan shei ma?
he like who Q
'Does he like someone/anyone?'
- (vi) Ta xihuan nage (ren) ma?
he like which man Q
'Does he like someone/anyone?'

⁴ There are two negation markers in Chinese: *bu* and *mei*. These two negation markers differ in the aspectual meaning that they denote: *bu* indicates a non-completive aspect and *mei*, a completive one. Since *mei* is in complementary distribution with *le*, which contributes to the availability of an indefinite *Wh* in some contexts (see n. 2 and section 3.2), only the non-completive negation *bu* will be used to illustrate the effect of negation.

⁵ The indefinite *Wh* can occur by itself (indefinite pronoun) or before an *N(P)* (indefinite adjective/demonstrative, see among others Lü (1980)). In general, a bare indefinite *Wh* has very similar distributions to an indefinite *Wh* followed by a generic noun such as *ren* 'man', *shiqing* 'thing', *dongxi* 'thing', *difang* 'place'. If more description is added to the noun, however, the distribution can be different. This is especially true in the negation context: a bare *Wh* or a *Wh* with a generic *N* cannot occur in a complex NP licensed by negation outside the NP, but a *Wh* with a more descriptive *N* can:

- (i) a. *Wo bu xihuan [[shenme zuo de] dangao].
I not like what make DE cake
'I don't like cakes made of something/anything.'
- b. *Wo bu xihuan [[shenme ren zuo de] dangao].
I not like what man make DE cake
'I don't like cakes that someone/anyone makes.'

- (ii) Wo bu xihuan [[shenme you ming de ren zuo de] dangao].
 I not like what have fame DE man make DE cake
 'I don't like cakes that some/any famous person makes.'

The contrast between (i) and (ii) does not exist in other contexts, such as the question context in (iii) and the conditional context in (iv):

- (iii) a. Ni xihuan [[shenme ren zuo de] dangao] ma?
 youlike what man make DE cake Q
 'Do you like cakes that someone makes?'
 b. Ni xihuan [[shenme you ming de ren zuo de] dangao] ma?
 you like what have fame DE man make DE cake Q
 'Do you like cakes that some famous person makes?'
 (iv) a. Yaoshi ni xihuan [[shenme ren zuo de] dangao] ...
 if you like what man make DE cake
 'If you like cakes that someone makes. . . .'
 b. Yaoshi ni xihuan [[shenme you ming de ren zuo de] dangao]
 if you like what have fame DE man make DE cake
 'If you like cakes that some famous person makes. . . .'

See n. 3 for other contrasts.

⁶ Lü (1980) states that an indefinite *Wh* mostly occurs in object position.

⁷ More specifically, the licensor can be the negation morpheme, the question morpheme (*ma*, or an abstract question morpheme if *ma* is not present), or the conditional morpheme 'if'. Alternatively, we may assume with Progovac (1988) that the licensor is either a negation operator (in the negation context) or a null negative-like operator which occurs in the Specifier of COMP of an interrogative clause or a conditional clause.

⁸ As discussed in notes 2 and 4 and will be further discussed shortly, *le* affects the acceptability of an indefinite *Wh*. To tease out the different factors, we use examples without *le* here.

⁹ The sentence with *know* is acceptable with the *Wh*-element interpreted as an interrogative (an indirect question in this instance) but not as an indefinite 'some, any'.

¹⁰ The licensor may be the verb itself or an element in the (SPEC of) COMP selected by the verb, following Progovac's (1988) analysis for adversity predicates.

¹¹ Pertinent to the licensing of negative polarity items, Progovac discusses the truth value being entailed or implied. As shown in this and the next section, the relevant truth value may also be asserted or presupposed. We will not distinguish them, since such distinctions do not affect the licensing of the indefinite *Wh*.

¹² A reviewer pointed out that the English modal *must* in *he must be looking at something* and the future tense in Spanish in *Estara viendo algo* 'he must be looking at something' have the same "circumstantial" interpretation.

¹³ Although more marginally, the progressive aspect seems to have the same circumstantial function as in (iii):

- (i) Tamen taolun shenme.
 they discuss what
 *They discussed something.
 'What did they discuss?'
 (ii) Tamen taolun le shenme le.
 they discuss what
 'They have discussed something.'

- (iii) ?Tamen zheng zai taolun shenme.
 they right at discuss what
 'They are discussing something.'

For some speakers, however, the cooccurrence of expressions denoting uncertainty or tentativeness is preferred here:

- (iv) Tamen zheng zai taolun shenme *de yangzi*.
 they right at discuss what DE appearance
 'They seem to be discussing something.'

¹⁴ J. Huang (personal communication) pointed out some potential cases of the extended contexts:

- (i) wo xiang qu mai yiben shenme shu lai kan.
 I want go buy one what book to read
 'I would like to buy a book (with whatever title) to read.'
- (ii) guo lai chi dian shenme ba!
 pass come eat a-bit what Particle
 'Come eat a bit (of whatever is edible).'
- (iii) chi dian shenme zai zou ba!
 eat a-bit what then go Particle
 'Please eat a little something before you leave.'

Sentences (ii) and (iii) are examples of sentences with *ba*, which "has the effect of soliciting the approval or agreement of the hearer with respect to the statement to which *ba* is attached" (Li and Thompson (1981, 307)). Instead of being direct commands, (ii) and (iii) are suggestive statements which are less assertive and more tentative.

Similarly, *xiang* 'would like to' in (i) indicates tentativeness or uncertainty. An indefinite *Wh* thus is licensed.

¹⁵ The indefinite *Wh* occurring in the matrix clause in (i) need not be a counterexample. It is subject to specific constraints. For instance, *Wh*-elements must both be present in the conditional and matrix clauses and the *Wh*-element in the matrix clause must have the same referent as the one in the conditional clause:

- (i) (Yaoshi) ta shuo shenme, Zhangsan jiu shuo shenme.
 if he say Zhangsan will say what
 'Zhangsan says whatever he says.'

The two *Wh*-elements must be identical in form. Thus, even though *shei* 'who' and *shenme ren* can be used interchangeably in most cases, they cannot in this particular pattern:

- (ii) (Yaoshi) ta xihuan shei, Zhangsan jiu xihuan shei.
 if he like who Zhangsan then like who
 'Zhangsan likes whoever he likes.'
- (iii) *(Yaoshi) ta xihuan shei, Zhangsan jiu xihuan shenme ren.
 if he like who Zhangsan then like what man

The "anaphoric" use of an identical *Wh*-element in the matrix clause may be related to "donkey sentences" in English:

- (iv) If a man owns a donkey, he beats it.

¹⁶ In note (2), it is suggested that the licenser of an indefinite *Wh* is the sentence-final *le*. The literature has not been clear concerning the position of the sentence-final *le* in the clausal structure. If the structure is as suggested in the text, we must assume that negation adjoins to the VP containing V and its complements (see Ernst (1991)) and modals are verbs (see Lin and Tang (1991)).

¹⁷ In Chinese, the overt *Wh*-question morpheme *ne* only occurs at the end of a matrix clause:

- (i) Ta zhidao shenme ne?
he know what Q
'What does he know?'
- (ii) *Ta xiang-zhidao ni mai shenme ne.
he wonder you buy what Q

Although the question morpheme occurs in sentence-final position (COMP), it will be represented in sentence-initial position for the convenience of representing hierarchical relations linearly.

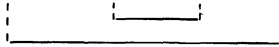
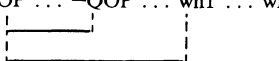
¹⁸ It does not matter here whether the linking between the interrogative operator (the question morpheme) and the *Wh*-element is derived by movement (see Huang (1982)) or interpretation rules (see Aoun and Li (1990)).

¹⁹ In all these examples, the indefinite *Wh* can be interpreted as an interrogative if it is linked to the question operator, neglecting the intermediate indefinite *Wh*-licenser. This conforms to the definition of Minimality in (39).

²⁰ A reviewer suggested that the Minimality effect stated in (39) may be replaced by the simple claim that *Wh*-elements must be linked to a question operator if one is available. This alternative, however, would not account for the availability of an indefinite *Wh* in (41–42).

²¹ Tang (1989) notes that number features contribute to the Blocking effect for some speakers. Person features are part of the phi features that contribute to the Blocking effect in Huang and Tang (1988).

²² It is impossible to tell whether the representation in (i) is acceptable or not, since the interpretation of (i) is identical to the interpretation derived from (ii): all *Wh*-elements will have the non-interrogative indefinite interpretation.

- (i) -QOP ... -QOP ... wh1 ... wh2

- (ii) -QOP ... -QOP ... wh1 ... wh2


²³ This constraint may have much to do with the basic meaning of a *Wh*-element which leaves its referent open (non-referential).

²⁴ The interrogative and indefinite *Wh* in fact can both be interpreted as existential quantifiers (see Karttunen (1977) and Fiengo et al. (1988), among others), in contrast to the universal quantification interpretation when the licenser is *dou* 'all' or *ye* 'also'.

²⁵ *Ye* licenses a *Wh*-element in the same way as *dou*. According to Lee (1986), *dou* licenses a *Wh*-element to the left that it c-commands. See Chiu (1990) for a different account. No matter what the analysis of *dou/ye* licensing is, it is clear that *dou* and *ye* licensing a non-interrogative *Wh* would require a different structural configuration from the other indefinite *Wh* licensers.

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