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Studies on interrogatives in Chinese

Tsai, Ching-yuan Kenneth, Ph.D.
University of Hawaii, 1990

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ABSTRACT

This dissertation studies three areas in Chinese interrogatives: question words as quantifiers, rhetorical questions, and A-not-A questions. For question words, those occurring in special contexts are interpreted as the universal quantifier, whereas those used in question sentences or used as indefinite nouns are interpreted as the existential quantifier. For rhetorical questions, those involving negation are semantically interpreted as manifesting logical contradictory relationship; they are pragmatically interpreted as the speaker’s challenge to the hearer for disapproving a logically unavoidable deduction from given premises. Examples are given to show that rhetorical questions can be found not only in particle questions and question-word questions but also in A-not-A questions and disjunctive questions. It is also shown that although the use of interrogatives as rhetorical questions is usually determined by the context, some linguistic constructions or phrases in Chinese do force the rhetorical reading on the question sentences. These constructions include some polarity items, special sequences and frozen forms, and question sentences in which the question words are preposed or which contain some counterfactual phrases. For A-not-A questions, it is shown that the relation between the two juxtaposed predicates is not that of syntactic
negation, but rather semantic contradiction, and it is proposed that three rules are needed. Those with the form of 'VP not V' are derived through anaphoric ellipsis, while those with the form of 'V not VP' are derived by the reduplication of the verbal and an insertion of the negative *bu* or *mei*. And the A-not-A questions with perfective, experiential, or inchoative aspect are derived by the addition of *meiyou* 'not-have' to the end of the sentences. Moreover, it is believed that these three rules are competing against each other, with the reduplication rule being the prevalent one.
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LIST OF ABBREVIATIONS AND SYMBOLS

? preceding a sentence to mark it as odd

* preceding a sentence to mark it as not grammatical

% preceding a sentence to mark it as viewed differently by different speakers in terms of acceptability

(?) ending a sentence which can be interpreted as either a declarative or a question sentence

{} indicating that the elements included between the braces are alternatives at the same slot in a construction

ASP short for 'aspect'

CL short for 'classifier'

DE indicating a genitive ['s] or a nominalizer

EMP short for 'emphasis'

EXP short for the experiential aspect

INCH short for the inchoative aspect

PART short for the particles other than QP

PERF short for the perfective aspect

QP short for 'question particle'
1.1 The Language Chinese

The term Chinese, or the more formal term Mandarin Chinese, usually refers to a major dialect family of China, Northern Mandarin. Since this dialect is centered in Peking, sometimes it is simply called Peking Mandarin. It has been officially assigned as the standard language since the 1950s, and is called Putonghua 'common language' in Mainland China or Guoyu 'national language' in Taiwan.

Although Peking Mandarin has been chosen as the standard language, it should be kept in mind that as this language has spread over the past three or four decades to various regions and has mingled with different dialects, neither the Putonghua nor the Guoyu is identical to Peking Mandarin (for some of the possible reasons, see Zhu 1987). One may say that in fact there are different versions of the Northern Mandarin spoken in different regions, though they are rather similar. The influences of the various dialects on the standard languages vary in different regions. Even within the same region, the strength of the influence from one’s native language on the Mandarin Chinese acquired in school may vary from person to person. Thus, in the words of Li and Thompson (1981:1), "a truly uniform language in a country such as China can exist only in theory, not in reality."
Nevertheless, the term Mandarin Chinese as used in this dissertation is meant to avoid idiosyncracies of individual speakers as much as possible. We intend the generalizations and explanations of this dissertation to be applicable to most, if not all, speakers of the Mandarin language. We do not agree with Zhu's (1987) claim that the proper subject for the study of Mandarin Chinese is only Peking Mandarin, and we will try to consider examples accepted by as many persons as possible. Whenever occasions arise where different dialectal background may result in different judgements about acceptability, we will try to point them out. It should also be noted that since the present writer comes from Taiwan, some of the introspective data may be particular to Taiwanese Mandarin (see Cheng 1985). But in cases like these we will point them out and we will consult speakers from mainland China as well as from Taiwan.

1.2 Purpose and Scope

The purpose of this dissertation is to provide some generalizations and explanations about some aspects of interrogativity in Mandarin Chinese. In the presentation, though we primarily consider data from Mandarin Chinese, data from English and Taiwanese or other languages may also be included where they are relevant.

The main concern of this dissertation is to pursue areas of interrogativity which have been neglected or
insufficiently treated in previous studies, or areas which have been, in our opinion, incorrectly explained. As such, the scope of this dissertation primarily focuses on the following three aspects of interrogativity in Mandarin Chinese. First, how can question words in general be best explained? Second, how do we interpret rhetorical questions? Can all of the four types of question sentences in Chinese be used as rhetorical questions? Third, is it correct to analyze A-not-A questions in Chinese as syntactically derived from corresponding alternative questions (i.e., the conjunctions of a positive and a negative sentence)? If not, what alternatives may offer a better syntactic account?

Since some of the above issues involve very subtle and elusive intuitions, we feel that only one person's intuition and introspective data may not be adequate and we have resorted to some published works. The works that we investigate are Cao 1954, an anthology of his three famous plays, Leiyu 'Thunderstorm', Richu 'The Sunrise', and Beijingren 'Peking Man'; Walther 1985, a collection of her commentaries on the social situations in Taiwan and the readers' response letters; Zhong 1986 and Zhou 1987, both containing short stories with a lot of dialogue. Of course, we also take into consideration the data gleaned by other scholars.
As to the approaches taken to these areas, though we work within the generative grammar, we do not limit ourselves to any particular theoretic framework. Basically, we attack the problems using whatever approach that we think can help us better understand the problematic areas in Mandarin interrogativity. The approaches we thus adopt can be said to be a combination of syntactic, semantic or logical, and pragmatic approaches. For instance, in discussing question words as quantifiers, the approaches we use are mainly syntactic and semantic, whereas all the three approaches are employed in analyzing rhetorical questions.

In the remainder of this chapter, we present a brief discussion of the four types of questions in Mandarin Chinese. We hope that this brief discussion can serve as the background for probing further the issues in this dissertation. Special emphasis is given to describing the syntactic characteristics of the different question sentences and pointing out the differences between the Mandarin Chinese and the English question sentences. Also discussed is the relation between questions and answers in Mandarin Chinese.

In Chapter two, taking advantage of the fact that question words in Mandarin may be used as indefinite nouns, we discuss the feasibility of interpreting question words as quantifiers from the viewpoints of lexical cooccurrence restriction and semantics.
Chapter three focuses on rhetorical questions. We try to supply a semantic and pragmatic explanation of why positive rhetorical questions convey the meaning of negative assertions while negative rhetorical questions impart the meaning of positive assertions. We also describe some common forms in Mandarin that are always used together with rhetorical questions.

In Chapter four, we examine three views of the formations of A-not-A questions in Mandarin. After rejecting two of them as implausible solutions, we point out the inadequacies of the third one. Then we provide our own view, which is a moderately modified version of the third view. We think that all the so-called A-not-A questions cannot be lumped together under one formulation rule. Instead, we suggest that the A-not-A questions are classified into three categories according to their different structures and that three formulation rules are proposed. We further contend that these three rules are competing against each other so that some are more preferable. The last chapter is a brief summary of this dissertation.

1.3 Four Types of Interrogatives in Chinese

Following Tang 1981, Lu 1985, and Huang 1988, we think that in Chinese there are basically four types of questions: 1. particle questions or yes-no question, 2. question-word
questions, 3. disjunctive questions, and 4. A-not-A questions. However, it should be borne in mind that the classification of interrogative sentences in Chinese is not universally accepted. The classification is usually contingent on one’s view of grammar and on how much one thinks that one type can be syntactically derived from or semantically related to another type.1

1.3.1 Particle Questions

This type of question sentence is not much different from an assertive sentence except for the presence of a sentence-final particle, usually ma. This particle is destressed and has the neutral tone. For instance,

(1) a. Ta xihuan ni.
   He like you
   'He likes you.'

   b. Ta xihuan ni ma?
   'Does he like you?'

(2) a. Ruguo ni bu qu, ta jiu guai ni.
   If you not go he then blame you
   'If you do not go, then he will blame you.'

   b. Ruguo ni bu qu, ta jiu guai ni ma?
   'If you do not go, will he blame you?'

If there is no special intonation, the syntactic feature that we utilize to distinguish between the (a) declarative sentences and the (b) interrogative sentences is only the final particle, ma. Since this type of question asks the hearer to confirm or to deny the speaker’s question, some authors use the term ‘yes-no question’ to refer to it.
In Chinese there are several other final particles that can be used in interrogatives. The most noted are ne and ba. Of these two, ba still can count as a type of yes-no question. However, the use of ba is different from ma in that the use of the former indicates that the speaker is more confident of the information preceding the particle. Its function is close to the English tag question with the falling intonation. As Li and Thompson (1981:307) remark, "ba has the effect of soliciting the approval or agreement of the hearer with respect to the statement to which ba is attached." But ne is in complementary distribution with both ma and ba. Generally, ne is used in the other three types of questions; however, it can never be used in yes-no questions. The contrast between the uses of ma and ne can be seen in the following sentences:

(3)

a. Ta lai le (ma)? (yes-no)
   He come ASP QP
   'Did he come?'

b. *Shei lai le ma? (question word)
   Who come ASP QP
   'Who came?'

c. *Ta lai le haishi Lisi qu le ma?(disjunctive)
   He come ASP or Lisi go ASP QP
   'Did he come or did Lisi go?'

d. *Ta lai bu lai ma? (A-not-A)
   He come not come QP
   'Did he come?'

(4)

a. *Ta lai le ne? (yes-no)
   He come ASP QP
   'Did he come?'
b. Shei lai le (ne)? (question-word)
   Who come ASP QP
   'Who came?'

c. Ta lai le haishi Lisi qu le (ne)? (disjunctive)
   He come ASP or Lisi go ASP QP
   'Did he come or did Lisi go?'

d. Ta lai bu lai (ne)? (A-not-A)
   He come not come QP
   'Did he come or not?'

From (3) and (4), it is obvious that although both ma and ne can be used as final question particles, they go with different types of questions. Note that in the cases of (4b-d) the use of 'particle questions' overlaps with 'question-word questions', 'disjunctive questions', and 'A-not-A questions'. Also note that both the ma in (3a) and the ne in (4b-d) are optional. But there is a difference; if the optional particle are not present, then (3a) must have a rising intonation, whereas (4b-d) do not. For the purpose of classification and ease of discussion, from now on the term, particle questions, will be used to refer to interrogatives that end with ma or are marked with rising intonation.

There are several ways to answer particle questions. A question like (5) can be affirmatively answered with (6)-(8), or negatively with (9)-(11).

(5) Ni renshi ta ma?
    You know he QP
    'Do you know him?'

(6) (Wo) renshi (ta).
    I know he
    'I know him.'
(7) Shi (de).  
Be 'DE  
'Yes.'

(8) Dui.  
Right  
'Right.'

(9) (Wo) bu renshi (ta).  
(I) not know he  
'I don't know him.'

(10) Bu shi (de).  
Not be  
'No, it is not the case.'

(11) Bu dui.  
Not right  
'Not right.'

The answers to negative questions are different from those of English. To a negative question like (12), the hearer can reply with (13) or (14).

(12) Ni bu renshi ta ma?  
You not know he QP  
'Don't you know him?'

(13) Bu, wo renshi ta.  
No I know he  
'It is not the case. I know him.'

(14) Shi, Wo bu renshi ta.  
Be I not know he  
'It is the case. I don't know him.'

One may say that in Chinese answers to questions are other-oriented, oriented toward the utterance of the other speaker, while in English answers are self-oriented, oriented toward what the speaker himself is to utter.

Hashimoto (1964:43) and Elliott (1965:91) have proposed to derive the particle ma from A-not-A questions with the optional final particle a by deleting the second conjunct up
to the negative marker *bu*, and then by fusing *bu* and *a* into *ma*. Although it is plausible that historically *ma* may come from a negative marker (see Li Wang 1958:452), we feel that from the viewpoint of synchronic syntax their postulation cannot be correct for the following four reasons.

First, the pragmatics of particle questions and A-not-A questions are not completely the same. Li and Thompson 1979 have shown that A-not-A questions occur only in neutral contexts, whereas particle questions can occur in either neutral contexts or non-neutral contexts. A good example can be found in the following dialogue between Speaker A and Speaker B.

(15) A: Ta xihuan shu.
   He like book
   'He likes books.'

   B: Shi ma? Ta xihuan shu ma?
   Be QP He like book QP
   Danshi wo renwei ta bu xihuan shu.
   But I think he not like book
   'Is that so? Does he like books? But I
   think that he doesn't like books.'

(16) B: ??Shi bu shi? ??Ta xihuan shu bu xihuan shu?
   Danshi wo renwei ta bu xihuan shu.

Speaker B's answer has a presumption that the third person concerned does not like books. The particle questions in Speaker B's answer in (15) are acceptable, because they may be used in non-neutral contexts. On the other hand, the A-not-A questions of (16) are not compatible with the last statement, because they are used in neutral contexts only. The different compatibility with a presumption between the
particle questions of (15) and the A-not-A questions of (16) shows that the two types of questions are not equivalent in meaning in non-neutral contexts.

Second, there are sentences which allow ma, but do not allow A-not-A form. These sentences are either negative questions or sentences with positive polarity items. For example,

(17)  
a. Ta bu lai ma?  
He not come QP  
'Won't he come?'

b. *Ta bu lai bu lai (a)?

(18)  
a. Ta yixiang zhu zai Taibei ma?  
He always live in Taipei QP  
'Has he always lived in Taipei?'

b. *Ta yixiang zhu zai Taibei bu zhu zai Taibei (a)?

If the ma in (17a) and (18a) are derived from the fusion of bu and a after the reduction of the second conjunct in (17b) and (18b), then a grammar which postulates this derivation should be able to generate the latter two sentences first. But we know that any grammar which allows its phrase structure rules to generate (17b) and (18b) is flawed, because these two sentences do not exist in the language at all.

Third, sentences with quantified NPs as subjects can occur as particle questions, but not as A-not-A questions. For instance,

(19)  
a. Suoyoude ren dou yao lai ma?
all man all want come QP 'Do all the persons want to come?'

b. *Suoyoude ren dou yao lai bu yao lai (a)?

(20)
a. Youxie ren xiang qu ma? Some man think go QP 'Are some persons thinking of going?'

b. *Youxie ren xiang qu bu xiang qu (a)?

Again, if the particle questions are derived as Hashimoto and Elliott claim, they have to be derived from ungrammatical sentences.

Fourth, there are some adverbs which can occur with only one of the two kinds of questions at issue. If particle questions are derived from A-not-A questions, then there should not be such adverbs. Below are some examples.

(21)
a. Ta ye yao qu ma? He also want go QP 'Does he also want to go?'

b. *Ta ye yao qu bu qu (a)

(22)
a. Ta zhende hui lai ma? He really will come QP 'Will he really come?'

b. *Ta zhende hui lai bu hui lai (a)?

(23)
a. *Ta daodi yao qu ma? He after-all want go QP 'Does he want to go after all?'

b. Ta daodi yao qu bu yao qu (a)?

(24)
a. *Ni jiujing shuo ma? You after-all say QP 'Do you want to tell me after all?'
b. Ni jiujing shuo bu shuo (a)?

Sentences (21) and (22) show that adverbs like ye 'also' and zhende 'really' can occur only with particle questions, but not with A-not-A questions, while (23) and (24) indicate that adverbs like daodi 'after all' and jiujing 'after all' can occur with A-not-A questions, but not with particle questions. The sentences of (23) and (24) are of special importance in that they show that grammatical sentences like the (b) ones, if the postulation of Hashimoto and Elliott is applied, will derive ungrammatical sentences like the (a) ones.

In view of the four types of examples which do not follow the postulation of Hashimoto and Elliott, we would say that, synchronically speaking, the particle questions and the A-not-A questions are not syntactically related and that ma is not derived from the fusion of the negative marker bu and the final particle a.

1.3.2 Question-word Questions

In this type of questions, at least one question word is used. Some authors borrow the English term wh- questions to refer to this type of questions. The following is a list of the most commonly used question words in Chinese.

(25)

<table>
<thead>
<tr>
<th>Chinese</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>shei</td>
<td>'who'</td>
</tr>
<tr>
<td>sheme</td>
<td>'what'</td>
</tr>
<tr>
<td>zeme</td>
<td>'how, why'</td>
</tr>
</tbody>
</table>
The question word occurs in the same position in the interrogative as a corresponding non-question word do in the declarative. For instance,

(26)

a. You yi ge ren lai le.
   Have one CL man come ASP
   'Somebody has come; somebody is coming.'

b. Shei lai le?
   Who come ASP
   'Who has come? or Who is coming?'

(27)

a. Ta da po le yi ge dongxi.
   He hit break ASP one CL thing
   'He broke something.'

b. Ta da po le sheme dongxi?
   He hit break ASP what thing
   'What did he break?'

(28)

a. Lisi xihuan [NP[s mou yi ge ren zhu de] cai].
   Lisi like some a CL man cook DE dish
   'Lisi likes the dish that somebody cooks.'

b. Lisi xihuan [NP[s shei zhu de] cai]?
   'Who is the person such that Lisi likes the dish that he cooks?'

In (26), since it is the subject you vige ren 'somebody' that is questioned, so the position of the question word in (26b) is not different from the corresponding English translation. But in (27) the difference in the positions of the question words between the Mandarin Chinese question and
the corresponding English question is very obvious. The phrase to be questioned in (27a) is in the object position. In (27b) the question word is still in the object position. Also notice that in (28) the wh word can occur in an embedded relative clause, which is a sharp contrast to a corresponding English sentence, as in (29a) below.

(29)

a. *He likes the dish that who cooked?

b. Who cooked the dish that he likes?

Although (29b) is a good English sentence, its grammatical structure is different from that of (28b). The Chinese sentence parallel to (29b) is (30).

(30) Shei zhu le ta xihuan de (na dao) cai.
     Who cook ASP He like DE that one dish
     'Who cooked the dish that he likes?'

Another example of the contrast between English and Chinese question-word questions is when the question word occurs in a subordinate adverbial clause.

(31) (Ruguo) shei qu le, ni jiu yao qu?
     If who go ASP you then want go
     'Who is the person such that if he goes then you’ll go?'

(32) *If who goes, then you’ll go?

1.3.3 Disjunctive Questions

The disjunctive question is sometimes called 'alternative question' or 'choice question', because presented in the sentence is a list of two or more alternatives for the hearer to choose as answer. The
alternatives are usually connected by *haishi* 'or'. Below are some examples.

(33) Ni yao chi fan chi mian?
You want eat rice eat noodle
'Do you want to eat rice or noodles?'

(34) Ta qu Meiguo haishi qu Reben?
He go America or go Japan
'Did he go to America or Japan?'

(35) Ni qu haishi ta lai haishi nimen xiawu cai tan?
You go or he come or you afternoon only discuss
'Will you go or will he come or won’t you talk until this afternoon?'

Although the English translations are related to the English yes-no questions in form, the Chinese disjunctive questions are not so related to the Chinese yes-no questions. As we have said, the final particle that goes with disjunctive questions is *ne*, whereas that with yes-no questions is *ma*.

Some linguists think that the A-not-A question is a subtype of disjunctive questions (see Rand 1969 and Li and Thompson 1981) and many linguists consider the former to be syntactically derived from the latter. But following Lu 1985 and Huang 1988, we consider it a different type of questions in this dissertation. In Chapter 4, we will show that A-not-A questions are not derived from disjunctive questions.

1.3.4 A-not-A Questions

This kind of question is typically characterized by the juxtaposition of two verbal phrases, one being positive and
the other negative, as in (36a). There are, however, many variants, as in (36b)-(36e).

(36)

a. Ta xihuan ni (haishi) bu xihuan ni?
   He like you or not like you
   'Does he like you or not?'

b. Ta xihuan          bu xihuan ni?

c. Ta xi              bu xihuan ni?

d. Ta xihuan ni       bu xihuan ?

e. Ta xihuan ni       bu ?

Of these five variants, the order of preference is (b) and (c) first, then (a), and finally (d) and (e). Some people even think that (e) is not acceptable, although some similar sentences have been cited in Rand (1969:57), who quote them from cinematic scripts or theatrical plays published in the 1950s. Note that in (36c) the verbal part preceding the negative bu is merely the first syllable of the verb xihuan 'like'.

If the tense is past or the aspect is experiential or perfective, then the question is ended with meiyou 'not; not have'. Although it is also possible for this kind of question to be ended with just mei without the following you, this simplification is less common. Below are several examples of this kind of question:

(37) Ni qu guo Taiguo meiyou?
     You go EXP Thailand not
     'Have you ever been to Thailand?'

(38) Ta zuotian shang xue le meiyou?
     He yesterday attend school ASP not
     'Did he go to school yesterday or not?'
Though A-not-A questions are translated into English in the form of yes-no questions, they are different from the typical particle questions in Chinese, which are also called yes-no questions by some linguists, in two aspects. First, the particle that goes together with typical particle/yes-no questions is ma, while the one with A-not-A questions is ne. Second, one may answer a particle question like (5) in several ways, whereas one can answer an A-not-A question in only one way. To a question like (5), Ni renshi ta ma? ‘Do you know him?’, one may answer affirmatively by saying the verb renshi ‘know’, or shi ‘yes’, or dui ‘right’; however, to an A-not-A question like Ni ren bu renshi ta? ‘Do you know him or not?’, one can answer affirmatively by saying renshi ‘know’ only, but not shi ‘yes’ or dui ‘right’.

One special group of questions that are structurally related to this form is that of disjunctive tag questions. The most noted lexical items that can be used in the A-not-A questions are the following six: 1. shi ‘is, are’, 2. dui ‘right, correct’, 3. xing ‘all right’, 4. cheng ‘all right’, 5. hao ‘all right’, 6. keyi ‘OK’. For example,

(39) Bie chao wo, xing bu xing?
    cheng bu cheng?
    hao bu hao?
    keyi bu keyi?

    Don’t bother me, .......
    ‘Don’t bother me, OK?’

(40) Ni zuotian mei lai, shi bu shi?
    dui bu dui?

    You yesterday not come, .......
    ‘You didn’t come yesterday, right?’
These six lexical items can be classified into two kinds according to their meanings. Those forming the tag questions in (39) ask the hearer for permission or agreement to do something. They can be placed only after requests. On the other hand, the two lexical items forming the tag questions in (40) ask the hearer to confirm the truth of a statement; thus, they follow statements only.

Failing to understand the distinction between these two kinds of tag questions, Rand (1969:56, note 5) is puzzled by the contrast of the acceptability of the following two groups of sentences.

(41)

\[
\begin{align*}
\text{dui bu dui} \\
\text{shi bu shi} \\
\text{Ta bu lai, xing bu xing} & \quad ? \\
\text{hao bu hao} \\
\text{cheng bu cheng}
\end{align*}
\]

(42)

\[
\begin{align*}
\text{dui bu dui} \\
\text{shi bu shi} \\
\text{Ta bu yuanyi lai, *xing bu xing} & \quad ? \\
*\text{hao bu hao} \\
*\text{cheng bu cheng}
\end{align*}
\]

The yuanyi 'want' in (42) refers to the intention of the third person, ta. The three lexical items xing, hao, and cheng cannot go with this sentence because one cannot prevent another person from having an intention to do something, although it is possible to prevent him from carrying out his intention. As to the pre-tag sentence in (41), the meaning is ambiguous. It can either be used as an assertion and thus allow the tag questions formed by dui and
shi, or be used as a request referring to a future event and thus is compatible with the tag questions formed by xing, cheng, and hao.

Our analysis of the six most used lexical items for making tag questions can be more clearly supported by the following two groups of sentences.

(43)  

Guan diao shouyinji, c. cheng bu cheng?  
Turn off radio d. keyi bu keyi? 

a. xing by xing?  
b. hao bu hao? 
c. cheng bu cheng?  
d. keyi bu keyi? 
e. *shi bu shi?  
f. *dui bu dui? 

'Turn off the radio, OK?'

(44)  

Wu jia liu dengyu shiyi, c. *cheng bu cheng? 
Five plus six equals eleven d. *keyi bu keyi? 

a. *xing bu xing?  
b. *hao bu hao? 
c. *cheng bu cheng?  
d. *keyi bu keyi? 
e. shi bu shi?  
f. dui bu dui? 

'Five plus six equals eleven, right?'

The pre-tag sequence in (43) is obviously a request and that in (44) is clearly a statement. Sentences (43e) and (43f) are not acceptable because the relevant lexical items can be used together with statements only. (Some may say that they are acceptable, but notice that if they are acceptable, the interpretation is that they are used as echo questions, conveying the meaning of 'did you say so and so?') In contrast, (44a)-(44d) are not acceptable for the tag
questions formed by the lexical items cannot be used with statements.
Notes

1. The proposed number of types of questions varies from two to six. For instance, Lu 1956 considers that there are only two types of questions: yes-no questions and question-word questions; disjunctive questions and A-not-A questions are considered to be subtypes of yes-no questions. Rand 1969 lists only three types, subsuming A-not-A questions under disjunctive questions. Li and Thompson 1981 enumerate four types: yes-no questions, question-word questions, disjunctive questions and tag questions, with A-not-A questions as a subtype of disjunctive questions. Cheung 1974 believes that there are five types: yes-no questions, question-word questions, disjunctive questions, A-not-A questions, and negative questions, which in his view are different from neutral yes-no questions. Li et al. 1984 at one place (p.72) list six types: 1. question particle questions, 2. choice-type question, 3. tag questions, 4. negative questions, 5. question-word questions, and 6. intonation questions, but at another place (p.275) they list only four types: 1. question-word questions, 2. A-or-B questions [i.e., choice-type questions or disjunctive questions], 3. A-not-A questions, and 4. question particle questions.

2. For other particles and other uses of these particles, see Chao 1968 and Li and Thompson 1981.
3. Thanks are due to Patricia Lee for helping me locate these two works.

4. But we find one of the authors whose works we investigate uses *huoshi* 'or', which most native speakers would use only for a disjunctive statement, but not for a disjunctive question. For example,

(i) Shi ni dong falu huoshi wo dong falu?
   Is you know law or I know law
   'Who knows about the law, you or I?'
   (Zhou, p. 126)
CHAPTER 2

QUESTION WORDS AS QUANTIFIERS

2.1 Introduction

The idea that question words like who and what can be viewed as logical operators or quantifiers is relatively old (see Jespersen 1924:302-305, Reichenbach 1947:340-342). In recent linguistic works, this idea is also found in, among others, Bach 1968, Baker 1970, Chomsky 1977, Karttunen 1977, May 1977. It is clear when some of the authors of these studies talk about question words as operators or quantifiers, they are concerned with what position question words would occupy if moved or with what scope they may have. But it is usually not clear what value or quantity will be assigned to question words, if they are considered quantifiers. Even when it is said that question words are considered to be the existential quantifier, this view is based merely on the well-known existential presuppositions of question sentences and is only mentioned in passing (for instance, Karttunen 1979:19) or the argument is conducted to cover only limited contexts (see C.-T. James Huang 1982:247-249 and the discussion in section 2.3.4 of this chapter). Nobody, to my knowledge, has ever provided clear evidence in any language for arguing that question words in most contexts should be interpreted as the existential quantifier. As Chinese allows the use of question words as indefinite pronouns, it offers a very good medium for
finding evidence to support this argument. The purpose of this chapter is to supply the necessary evidence in Chinese to support this position.

We think that the uses of the majority of question words in Chinese, with the exception of two nonquantificational uses, should be treated as the existential quantifier in most cases. Those question words which involve the universal quantifier in the representations usually occur only in special contexts: they are either followed by dou 'all' or they occur in conditional sentences with one question word in both the antecedent and the consequent. These contexts will be more clearly presented in section 2.2. Those interpreted as the existential quantifier occur in more general contexts. More precisely, they can occur in all question sentences and they can be used as indefinite NPs in contexts other than the two special ones just mentioned. The primary concern of this chapter is to provide arguments in support of this interpretation of question words. In section 2.3, five arguments are given to demonstrate that question words in most contexts should be treated as the existential quantifier. The five arguments are based on (1) definiteness restriction, (2) a lexical co-occurrence restriction, (3) scope ambiguity, (4) the relation between yes-no questions and their answers, and (5) the relation
between rhetorical wh-questions and their conveyed assertive meanings. In the last section, we give a conclusion.

2.2 Question Words in Special Contexts

Consider sentences like (1) and (2) below:

(1) Shei dou zhidao Lisi hen youqian.
    'Everybody knows that Lisi is very rich.'

(2) Wo dian sheme cai, Lisi jiu dian sheme dish
    'Lisi ordered whatever dish I ordered.'

(1a) (Ax)(person(x) --> x knows that Lisi is very rich)

(2a) (Ax)((dish(x) & ordered(I, x)) --> ordered(Lisi, x))

The context of (1) is characterized by a question word and a following dou 'all'. As Cheng 1984 observes, this context can be viewed as a reduction of the form of (bulun) shei dou, 'no matter who'. We can say that the question word together with the dou makes the universal quantifier. The context of (2) is what Cheng 1984 refers to as conditional selection; namely, (2) is a conditional sentence with two question words, one being in the antecedent and the other in the consequent, and the selection of a referent from the universe of discourse for the indefinite NP in the antecedent guarantees the selection of the same referent for the indefinite NP in the consequent.
Each of the propositions of (1) and (2), as represented by (1a) and (2a) respectively, contains the universal quantifier. A question thus arises why the question words, which are usually indefinite and thus considered to be better interpreted as the existential quantifier, should become the universal quantifier in these contexts. Take (1) for example. One may wonder why it takes dou ‘all’ and shei ‘who’ together to make the universal quantifier in (1). This depends on the fact that neither of them alone can make the universal quantifier. If dou is taken away, then (1) becomes a question, ‘Who knows that Lisi is very rich?’ If shei is taken away, (1) is unacceptable and does not make any sense at all, since dou is an adverb. But put together, shei and dou mean ‘everybody’. Different linguists have different interpretations for dou. Chao 1968 and Alleton 1972 categorize it as an adverb of scope from a syntactic viewpoint. Hou 1983 argues from a semantic perspective that dou is a quantificational operator having "the force of a universal quantifier." C.-T. James Huang 1983 considers it as a "trigger of universal quantification" and a "scope marker." I think Huang’s interpretation of dou as a universality trigger is closest to what dou really is in cases like (1) and I would not consider dou itself as a universal quantifier. I would like to point out that anyone who interprets dou as the universal quantifier cannot
account for its occurrence in sentences like (1b) and (1c) below.

(1b) Henduo ren dou lai xiawei dujia.
Many person come Hawaii vacation
'Many persons come to Hawaii for vacation'

(1c) Dabufen de ren dou kan le nei yi bu dianying.
Most DE person see ASP that CL movie
'Most persons have seen the movie.'

But how about if we analyze dou as a universality trigger and shei as the existential quantifier? This analysis has the consequence of mistakenly predicting that an existential quantifier word followed by dou would be interpreted as the universal quantifier. Consider (1d), which is simply unacceptable no matter what quantifier we may assume that it has.

(1d) *You yige ren dou lai le.
Have one person come ASP
'*There is one person all coming.'

I suspect that a more reasonable analysis may be to treat shei in (1) as a free variable and its following dou as a trigger, and the two shemes in (2) as coindexed variables. But the reader should be warned that this speculation is based on merely a few sentences discussed in this section and I have no other evidence to support this notion. Also this speculation would raise more questions. For instance, how many kinds of indefinite NPs are there semantically? How do we classify them? And how can we represent the different kinds of indefinite NPs in traditional logic? I
can not give a definite answer now to any of these questions and will not pursue the issues any further. For the purpose of this chapter, I think it suffices to say that question words together with the special contexts in which they occur are interpreted as the universal quantifier. As for dou, I would continue to gloss it as 'all' in all contexts because it is convenient and because it has been widely so glossed in Chinese linguistics.

2.3 Question Words as the Existential Quantifier

In quantificational uses other than the two mentioned in the last section, question words should be interpreted as existential. More specifically, all question words used in non-identity question sentences or used as indefinite pronouns should be interpreted as the existential quantifier. In the following, I offer five arguments as evidence to support the correctness of this interpretation. The five arguments are based respectively on (1) definiteness effects, which refer to the widely known phenomenon where either a definite or an indefinite NP is exclusively acceptable (see Milsark 1977), (2) a lexical co-occurrence restriction, (3) scope ambiguity, and (4) the link between yes-no questions and their answers, and (5) the relation between rhetorical wh-questions and their assertive meanings.
2.3.1 Definiteness Effects

I think that the common question words without dou share the characteristics of indefinite nouns, while the question words followed by dou, which are interpreted as quantificationally universal, do not. A case for showing this point is provided by the existential sentences in Chinese, which are characterized by beginning a sentence with you 'have' followed by an indefinite noun. Consider the following sentences:

(3) You yige ren lai le.  
   Have one person come ASP  
   'There is a man coming; there is somebody coming'

(4) You shei lai le. (?)  
   Have who come ASP  
   a. 'There is somebody coming.'  
   b. 'Who is coming? or: Who has come?'

(5) *You Zhangsan lai le.  
   Have Zhangsan come ASP  
   '*There is Zhangsan coming.'

(6) *You {quanbu de ren, mei yige ren, suoyou de ren} lai le.  
    Have {all persons, everybody, all persons} come ASP  
    '*There are {all persons, everybody} coming.'

(7) *You shei dou lai le.  
    Have who all come ASP  
    '*There are all coming.'

Sentences (3)-(4) show that question words without a following dou can occur in existential sentences. Interestingly, (5)-(7) show that both the universally quantified phrases of (6) and shei dou of (7) behave the same as the definite noun in (5) in existential
constructions. This seems to contradict the belief held by some linguists (for example, Quirk et al. 1985:376) that nouns preceded by the universal quantifier are indefinite.\footnote{7}

A second case to show that common question words share the characteristics of indefinite NPs is that neither can serve as topic in a sentence, while definite NPs can. The topic always comes first in the sentence and refers to something about which the speaker assumes that the hearer has some knowledge; that is, it is either definite or generic (Li and Thompson 1981). Consider the following sentences.

(8) Zheke shu, yezi hen da.  
This tree, leaf very big  
'As for this tree, the leaves are very big.'

(9) Lisi, wo ma guo ta le.  
Lisi, I scold ASP he ASP  
'As for Lisi, I have scolded him already.'

(10) {Quanbu de ren, mei yige ren, suoyou de ren},  
{all persons, everybody, all persons},  
wo dou ma guo le.  
I all scold ASP ASP  
'As for {all persons, everybody}, I have scolded all of them already.'

(11) Shei, ta dou ma guo le.  
Who, he all scold ASP ASP  
'As for everyone, he has scolded all of them already.'

(12) *You yige ren, wo ma guo ta le.  
Have one man, I scold ASP he ASP  
'As for one man, I have scolded him already.'

(13) *Shei, wo ma guo ta le.  
Who I scold ASP he ASP  
'As for somebody, I have scolded him already.'
As is shown by (8)-(11), universally quantified question words and ordinary NPs behave the same as definite NPs in that all of them can be topic. The sentences of (8)-(11) again show, interestingly, that universally quantified phrases are more similar to definite NPs than to indefinite NPs. On the other hand, (12)-(13) show that both the common question words and indefinite NPs are prohibited from occurring as topics. 8

2.3.2 Cooccurrence Restriction

This argument is based on the different compatibility with some words between the existential quantifier and the common question words on the one hand and the universal quantifier and the question words with a following dou on the other. In Chinese, there are some words which can go with a universal quantifier but not with an existential quantifier and vice versa. Consider the following phrases and sentences.

(14) {jihu, cabuduo} {quanbu de ren, mei yige ren, suoyou de ren} {almost, nearly} {all persons, each person, all persons}

(15) {*jihu, *cabuduo} {yixie ren, jige ren} {*almost, *nearly} {some persons, several persons} 9

(16) {Jihu, Cabuduo} {quanbu de ren, mei yige ren, {all persons, each person} suoyou de ren} dou chi dao le. all late ASP ASP

' {Almost, Nearly} {all persons, each person} {are, is} late.'
(17) {Jihu, Cabuduo} shei dou chi dao le.
   {Almost, Nearly} who all late ASP ASP
   '{Almost, Nearly} all are late.'

(18) {*Jihu, *Cabuduo} {yixie ren, jige ren}
     {*Almost, *Nearly} {some, several persons}
     chi dao le?
     late ASP ASP
     '{*Almost, *Nearly} {some persons, several persons} are late?'

(19) {*Jihu, *Cabuduo} shei chi dao le?
     {*Almost, *Nearly} who late ASP ASP
     '{*Almost, *Nearly} who is late?'

While (16) and (17) show that shei dou behaves the same as
the universal quantifier, (18) and (19) indicate that shei
without dou behaves like the existential quantifier.¹⁰
On the other hand, zhiyou 'only' can go with existentially
quantified phrases but not with universally quantified
phrases. Consider (20) and (21) below.

(20) Zhiyou yixie ren mai le na-ben shu
     Only some men buy ASP that-CL book
     'Only some persons bought that book.'

(21) *Zhiyou {quanbu de ren, mei yige ren, suoyou
     Only {all persons, each person, all
     de ren} mai le na-ben shu.
     buy ASP that-CL book
     '*Only {all persons, each person, all
     persons} bought that book.'

Again, shei without dou is similar to existential quantifier
phrases in being able to go with zhiyou, but shei dou, like
universally quantified phrases, cannot.

(22) Zhiyou shei mai le na-ben shu?
     Only who buy ASP that-CL book
     'Only who bought that book?'

(23) *Zhiyou shei dou mai le na-ben shu.
     Only who all buy ASP that-CL book
     '*Only all bought that book.'
Now let's look at (24) below, which one might cite as a counterexample to this argument.

(24) Zhiyou {quanbu de ren, mei yige ren, suoyou de ren} yiqi nuli, zhejian gongzuo cai zuo de wan.

'Only if everybody strives together can this work be finished.'

(24) is acceptable and zhiyou does occur before universally quantified phrases. But this is not a counterexample. Note that the scope of zhiyou in (20)-(23) is an NP, but the scope of it in (24) is the conditional antecedent, as is shown by the English translation.

2.3.3 Scope Ambiguity

This argument is based on the fact that a sentence containing question words without dou and a universally quantified phrase may display scope ambiguity. It is well known that two quantified phrases of the same kind, be they universal or existential, when occurring together in the same clause, do not have scope ambiguity with respect to each other; on the other hand, if they are of different kinds, then there may be scope ambiguity. See (25)-(27).\(^1\)

(25) Every man likes some woman.

(26) \([Ax: man(x)][Ey: woman(y)][x \text{ like } y]\)

(27) \([Ey: woman(y)][Ax: man(x)][x \text{ like } y]\)

For most speakers of English, sentence (25) is ambiguous between a reading represented by (26) and another reading
represented by (27). In the former the universal quantifier precedes and has a wider scope than the existential quantifier; and vice versa in the latter. What (26) says is that for every man there is a woman such that he likes her; that is, the woman which one man likes may be different from that liked by any other man. The second reading (27) says that there is a woman such that every man likes her; that is, the woman liked by everyone is one and the same. We believe that some Chinese sentences, especially those involving question words, may have scope ambiguity of this kind, too, though it has been observed that Chinese mostly does not have scope ambiguity (see, among others, S. F. Huang 1981, Lu 1980 and C.-T. James Huang 1983).12

Our argument that Chinese sentences involving question words and universal quantified phrases may display scope ambiguity is incompatible with the view that wh has the widest scope. For if it is true that wh has the widest scope in a sentence, then it is impossible for the universal quantified phrase to be wider than wh. C.-T. James Huang (1982:263-269, i.e. section 4.2.3) has such a view. He argues that wh words always have the wide scope interpretation. For example, he cites his (185) and (190) to support his argument.

(185) meige ren dou mail le sheme?
     every man all buy  ASP what
     'What did everybody buy?'
(190) Meige ren dou shuo shei zui congming?
  Every man all say who most clever
  'Who does everyone say is the most clever?'

He says, "In (185), the subject NP meige ren 'every man' is interpreted collectively, and not distributively, with respect to the object NP sheme 'what', exactly as the relation between everybody and what in the English translation. Thus, to (185), (187) may be an appropriate answer, but not (188)." (p. 264)

(187) Meige ren dou mai le shu.
  every man all buy ASP book
  'Everybody bought books.'

(188) Zhangsan mai le shu, Lisi mai le bi, Wangwu
  Zhangsan buy ASP book buy pen
  mai le hua.
  buy ASP painting
  'Zhangsan bought books, Lisi pens, Wangwu paintings.'

Although I do not think his use of 'collectively' and 'distributively' in the above quotation is right, I agree with his intuitive judgement about which of the above two Chinese sentences is an appropriate answer to (185).13

However, the English translation of (185) is not unambiguous as Huang implies in the quotation above. Let's look at an English equivalent of (185), which is discussed in May (1985:38, 1988) (I think everyone will agree that the change from everybody to everyone and the addition of for Max will not result in any difference between the scope interpretation of the following sentence and that of the English translation of (185)).

(28) What did everyone buy for Max?
May has acknowledged that a sentence like (28) displays ambiguity in scope. It may be represented by either (29) or (30). In the representation (29), everyone has a wider scope than what, whereas in the latter (30) the scope relation is reversed. The former may be understood as a distributive question, asking each individual what it is that he bought for Max. The latter may be understood as a single question, asking for the identity of the object such that everyone bought it for Max. It is evidence of this kind that makes May (1985, 1988) retract his earlier claim of 1977, namely, that wh has the widest scope. May’s position now is that each of these two readings in the question (28) can have a corresponding answer.

But, as I said above, I agree with Huang’s judgement that for (185), (187) is an appropriate answer, whereas (188) is not. How can we explain this difference between the Chinese and English equivalent sentences? Can this difference exist because wh in English does not necessarily have a wide scope, but in Chinese it must have a wide scope? I think the answer is negative. Consider the following Chinese sentences, whose possible scope interpretations are parenthesized (the symbol ‘>’ reads ‘has a wider scope than’).
(31) Meige ren gen shei jiehun le?
   Every man with who marry ASP
   'With whom did everyone get married?'
   (meige ren 'everyone' > shei 'who')

(32) Meige laoshi xihuan neiyige xuesheng?
   Every teacher like which student
   'Which student did every teacher like?'
   a. (meige laoshi 'every teacher' > neiyige xuesheng 'which student')
   b. (neiyige xuesheng 'which student' > meige laoshi 'every teacher.')

(33) Ta renwei meige Ouzhou guojia de shoudu
   He think every Europe country DE capital
   jiao sheme mingzi?
   call what name
   'What name does he think that the capital of each European country is called?'
   (meige wuzhou guojia de shoudu 'the capital of each European country' > sheme mingzi 'what name')

Among all the possible interpretations of these sentences, we find that only (32b) has a wide scope wh and that in all the other sentences the universally quantified phrases have a wide scope. So the difference between (185) and the English equivalent (28) is not because Chinese differs from English with respect to the scope interpretation of wh. Rather, I suspect that this difference is a result of the use of dou. If we take away dou from the sentences (185) and (190), as in (34) and (35a) respectively, then (34) can have either (187) or (188) as appropriate answers and similarly both (35b) and (35c) may be considered to be appropriate answers to (35a).

(34) Meige ren mai le sheme?
   Every man buy ASP what
   'What did everybody buy?'
(35a) Meige ren shuo shei zui congming?
   Every man say who most clever
   'Who does everyone say is the most clever?'

(35b) Meige ren shuo Zhao-xiaojie zui congming.
   Every man say Zhao-miss most clever
   'Everyone says that Miss Zhao is the most clever.'

(35c) Zhangsan shuo ta de laoshi zui congming,
   Zhangsan say he DE teacher most clever
   Lisi shuo nide didi zui congming,
   Lisi say your brother most clever,
   Wangwu shuo ta ziji zui congming.
   Wangwu say he self most clever
   'Zhangsan says that his teacher is the most
   clever, Lisi says that your younger brother
   is the most clever, Wangwu says that he
   himself is the most clever.'

Notice that in (35b) everyone has narrow scope, whereas in
(35c) it has wide scope. Hence, we may say that (35a)
correspondingly has scope ambiguity. In fact, even if a
sentence contains dou, it may have scope ambiguity. For
instance, consider (34b) below and its two possible answers.

(34b) Tamen meige ren dou xihuan shei?
   They every man all like who
   'Whom does everyone of them like?'

(34c) Tamen meige ren dou xihuan Li Xiaojie.
   They every man all like Li Miss
   'They all like Miss Li.'

(34d) Tamen meige ren dou xihuan ziji de taitai.
   They every man all like self DE wife
   'They all like their own wife.'

What (34c) conveys, in terms of scope reading, is that each
of the persons likes one and the same woman; the universal
quantifier has the narrow scope. On the other hand, (34d)
conveys that each likes a different person; the universal
quantifier has the wide scope. In terms of the different
scope readings of the two possible answers, we may say that (34b) has scope ambiguity.

Of course, I do not mean that any sentence which has a wh and a universally quantified phrase must have scope ambiguity. Sentences of this sort may be unambiguous, just as sentences which have the universal quantifiers and the existential quantifiers need not have scope ambiguity. One thing worth noticing is that whenever we find that a sentence with both the universal quantifier and the existential quantifier is unambiguous, we can substitute wh for the existential quantifier and preserve the original scope reading.

(36) Suoyou de xuesheng juji zai yige canting.
    All DE student gather at a restaurant
    'All students gather at a restaurant.'
    (yige canting 'a restaurant' > suoyou de xuesheng 'all students')

(37) Suoyou de xuesheng juji zai nali?
    All DE student gather at where
    'Where did all students gather?'
    (nali 'where' > suoyou de xuesheng 'all students')

(38) *Zhangsan juji zai caochang, Lisi juji
    Zhangsan gather at playground, Lisi gather
    zai tushuguan, Wangwu juji zai jiaoshi.
    at library Wangwu gather at classroom
    '*Zhangsan gathers at the playground, Lisi at
    the library, and Wangwu at the classroom.'
    (suoyou de xuesheng 'every student' > nali
    'where')

(39) You yige ren mai zou le quanbu de ji.
    Have one person buy away ASP all DE
    chicken
    'Somebody bought all the chickens.'
    (you yige ren 'somebody' > quanbu de ji 'all
    the chicken.')
(40) Shei mai zou le quanbu de ji?
Who buy away ASP all DE chicken
'Who bought all the chickens?'
(shei 'who' > quanbu de ji 'all the chicken')

(41) *Zhangsan mai zoule quanbu de ji, Lisi mai
Zhangsan buy away all DE chicken Lisi buy
zou le quanbu de ji, Wangwu mai zou
away ASP all DE chicken, Wangwu buy away
le quanbu de ji.
ASP all DE chick
'*Zhangsan bought all the chickens, Lisi
bought all the chickens, and Wangwu bought
all the chickens.'
(quanbu de ji 'all the chickens' > shei
'who')

(42) Meige ren gen yige nuren jiehun.
Every man with one woman marry
'Every man got married to one woman.'
(meige ren 'every man' > yige nuren 'one
woman')

(43) Meige ren gen shei jiehun?
Every man with who marry
'To whom did every man get married?'
(meige ren 'every man' > shei 'who')

(44) Zhangsan gen Zao xiaojie jiehun, Lisi gen
Zhangsan with Zao miss marry Lisi with
Yang xiaojie jiehun, Wangwu gen Liu
Yang miss marry Wangwu with Liu
xiaojie jiehun.
miss marry
'Zhangsan got married to Miss Zao, Lisi to
Miss Yang, and Wangwu to Miss Liu.'
(meige ren 'every man' > shei 'who')

(45) *Zhangsan gen Liu xiaojie jiehun, Lisi gen
Zhangsan with Liu miss marry Lisi with
Liu xiaojie jiehun, Wangwu gen Liu xiaojie
Liu miss marry Wangwu with Liu miss
jiehun.
mARRY
'*Zhangsan, Lisi, and Wangwu got married to
Miss Liu.'
(shei 'who' > meige ren 'every man')

Just like (36), where the universal quantifier has a narrow
scope, (37) has only one reading on which nali 'where' has a
wider scope than the universal quantifier; hence, (38), in which the universal quantifier has a wider scope than nali 'where' is not an appropriate answer. The same is true of (39)-(41). In (42) and (43), if interpreted in a monogamous society, the universal quantifier has a wider scope; hence, (44) is a proper answer because it has the same scope interpretation while (45) which has the reversed interpretation is not an appropriate answer.

From the discussion above, we can see that question words or wh behave in the same way as the existential quantifier, no matter whether there are scope ambiguities or not. This evidence supports our view that question words should be treated as the existential quantifier.

2.3.4 Question Sentences

This argument has to do with question sentences and their replies or implied meanings. I think that only if we treat question words as the existential quantifier can we account for yes-no questions containing wh and their negative replies on the one hand and rhetorical questions containing wh and their implied meanings on the other. Let's consider questions of the former kind first, of which I am only concerned with the negative replies.

(46) Ta chi le sheme ma?
   He eat ASP what QP
   'Did he eat anything?'

(47) [yes/no=?][Ex: thing(x)][he eat x]
(48)  (Bu,) ta mei chi sheme.
     No he not eat what
     'No, he didn't eat anything.'

(49)  ~[Ex: thing(x)][he eat x]

(50)  (Bu,) ta sheme dou mei chi.
     No he what all not eat
     'No, he didn't eat anything.'

(51)  [Ax: thing(x)]~[he eat x]

We represent (46) as (47), in which [yes/no=?] can be considered to be a speech act operator and is meant as a request for the hearer to make a choice between 'yes' and 'no'. Notice that it is followed by the existential quantifier. Once the hearer has made a choice, he is considered to have made a reply to the question. If he chooses 'no' upon request, then the answer is (48), represented by (49). Sentence (50) expresses the same answer to (46) in a different way and is represented as (51). In predicate logic, (51) is logically equivalent to (49). In this way, (46)-(51) show that if we choose the existential quantifier to represent question words, the connection between a yes-no question and two possible negative answers can be accounted for automatically. If, on the contrary, we do not treat the question words as the existential quantifier, then there is no way that we can relate (46), (48), (50) and their corresponding representations.

An A-not-A question like (52) below can also be used to support our view in the same manner as yes-no questions,
because the former may be seen as a variant of the latter, as can be seen from the English translation (but see Li and Thompson 1979).

(52) Ni xiang-bu-xiang chi sheme?
You want-not-want eat what
'Do you want to eat anything?'

(53) [yes/no=?][Ex: thing(x)][you want to eat x]

In fact, (52) is used by C.-T. James Huang (1982:247-249) to support his argument that wh in affective contexts must be treated as the existential quantifier contained by a wider scope of negation. But my argument is different from his in that I treat all question words except those with a following dou as the existential quantifier, while he considers only wh in affective contexts in his argument.

Though his conclusion is drawn from a limited context, I accept it since it is compatible with my more general conclusion. But I think that his argumentation is problematic. His method of argumentation is reductio ad absurdum. His argument goes as follows:

a. there are two alternatives to explain sheme in (52) [his (136)]: existential quantifier or universal quantifier

b. assume that sheme in (52) is universal quantifier

c. the representation of (136) is (138) [his number] ('t,' in the third line is the trace left behind by quantifier raising in the framework he uses)
(138) [[meige x: x shi dongxi][ni xiang-bu-xiang
  every is thing you want-not-want
  chi t],
  eat

d. convert (138) into English as:
  "For every x, do you want to eat x or not?"

e. two possible appropriate answers to (138) are
  (139) and (140):

(139) Yes, for every x, I want to eat x.
(140) No, for every x, I don't want to eat x.

f. only (140) is an appropriate answer to (136);
   (139) is not appropriate because when we say
   'yes' to (136), we just mean 'I want to eat
   something', not 'I want to eat everything',
   which is what (139) conveys.

g. conclusion: since the assumption of (b) results
   in an incorrect interpretation of a positive
   answer like (139), this assumption is absurd.
   So we take the other alternative to interpret
   sheme as existential quantifier.

But now let's redo all the steps again, except that this

   time we assume sheme is the existential quantifier. So

(139) and (140) look like (139a) and (140a) now.

(139a) Yes, for some x, I want to eat x.
(140a) No, for some x, I don't want to eat x.

At step (f), (139a) is an appropriate answer, but not

(140a), because when we say no we mean that I don't want to
eat anything (see my representation of the negative answers
as (55) and (57) below), not that I don't want to eat

something ([(Ex: thing(x)]-[I want to eat x]).

(54) Bu, wo bu xiang chi sheme.
    no, I not want eat what
    'No, I don't want to eat anything.'

(55) ~(Ex: thing(x)][I want to eat x]
(56) Bu, wo sheme dou bu xiang chi.
    No, I don't want to eat anything.'

(57) [Ax: thing(x)]-[I want to eat x]

If we follow the new assumption and deduce as above, then we'll have to conclude either (a) is wrong or somewhere in the deduction there is a mistake. But since the existential quantifier interpretation works nicely, as is shown in (46)-(51), one has to say the deduction is problematic. And indeed step (e) is where the problem arises. The negation indicated by a negative answer has to take the wide scope, as a negative answer is interpreted as 'it is not the case that PHI' or simply '-PHI', where PHI is the Greek letter used as a variable ranging over propositions. The existential quantifier is a part of the proposition expressed by (136), and thus negation takes wider scope than the original proposition. See our representation (55) of (54). Also note that the representation (55) corresponds with the linear order of the negation and existential operators in (54).

In this section, particle questions and A-not-A questions containing wh words have shown that the interpretation of wh words as the existential quantifier can help us understand the relation between questions and their appropriate answers.
2.3.5 Rhetorical Wh-Questions

The rhetorical questions that we have in mind here are the sentences which have the form of interrogative sentences but the meaning of declarative sentences. More specifically, a positive rhetorical question conveys the meaning of a negative assertive and a negative question conveys the meaning of a positive assertive. Take (58) and (59) below for example (these sentences are taken from Quirk et al. 1985:826; capitalized words or parts of words indicate where stresses are):

(58)
  a. Is that a reason for despair?
  b. What difference does it make?
  c. Isn't the answer obvious?
  d. Who doesn't know?

(59)
  a. Surely that is not a reason for despair.
  b. It makes no difference.
  c. Surely the answer is obvious.
  d. Everybody knows.

Sentences (58a)-(58d), if used as rhetorical questions, convey the meanings of (59a)-(59d), respectively.

What concerns us here is rhetorical wh-questions like (58b) and (58d), and their respective meanings (59b) and (59d). Similar rhetorical wh-questions can be found in Chinese, as in (60).
(60)

a. Shei YAO qu na zhong guei difang?
   Who want go that kind ghost place
   'Who wants to go to a damned place like that?'

b. Shei BU ai quan?
   Who not like money
   'Who doesn’t like money?'

c. Meiyou ren yao qu na zhong guei difang.
   No man want go that kind ghost place
   'Nobody wants to go to a damned place like that.'

d. Meige ren dou ai quan.
   Every man all like money
   'Everyone likes money.'

As rhetorical questions, (60a) and (60b) are equivalent in meaning to the declarative sentences (60c) and (60d), but with a stronger force.

One may wonder why sentences like (60a) and (60b) are interrogative in structure and yet have meanings that are opposite to the declarative forms of the interrogatives. But this phenomenon can be easily explained if we, with the help of some pragmatic account, interpret question words in rhetorical questions as the existential quantifier.

Pragmatically, we may consider a rhetorical question like (60a) or (60b) as the speaker’s attempt in a speech situation to challenge the hearer to find a counterexample to refute his assumption or belief. In the speech situation, the speaker has in his mind a set of beliefs and he either makes this set known or assumes the hearer also has this set of beliefs; further, he believes that from this set of beliefs the hearer should be able to draw a conclusion
through logical deduction. But in the course of conversation, the speaker avoids stating the conclusion directly; instead, he challenges the hearer to find a counterexample to refute the conclusion by positing a question, the proposition of whose declarative form is the logical contradictory of the conclusion. Of course, the speaker thinks that the conclusion cannot be possibly refuted on the basis of mutual knowledge between him and the hearer. And that is why it is usually said that a rhetorical question is a question which does not expect an answer or whose answer is self-evident from the context (for more detailed analysis, see section 3.2.1).

With this pragmatic account and the interpretation of question words as the existential quantifier, the link between (60a) and (60c) and that between (60b) and (60d) can be clearly shown. The semantic representation of the sentences in (60) can be roughly written as (61) below:

(61)

a. [Ex: person(x)][x want to go to a damned place like that]

b. [Ex: person(x)]-[x like money]

c. -[Ex: person(x)][x want to go to a damned place like that]

d. [Ax: person(x)][x like money]

The representation (61a) differs from (61c) in that the latter is preceded by a negation; thus, the former is clearly the contradictory of the latter. The relation between (61b) and (61d) is not obvious at first sight. But
the logical contradictory relation still holds between them. A logical equivalent of (61d) is: \(-[\text{Ex: person}(x)] -[x \text{ like money}]\) and this equivalent is obviously the logical contradictory of (61b). As the logical equivalent of (61d) is the contradictory of (61b), (61d) itself is the contradictory of (61b).

But so far I have discussed only the more common shei 'who', but not, say, weisheme 'why'. This question word seems more difficult to interpret. See (62) and (63), for example.

(62) Neime hao de gongzuo, ni weisheme bu yao?
That good DE job you why not want
'Why didn’t you take a job that good?'

(63) Neime hao de gongzuo, ni yinggai yao.
That good DE job you should want
'You should have taken a job that good.'

The difficulty lies in how we can relate weisheme 'why' with yinggai 'should'. If we interpret weisheme 'why' as \([\text{Ex: reason}(x)]\), then (62) can be paraphrased as 'What is the reason that you did not take a job that good?' Similarly, (63) can be reinterpreted as 'There is no reason that you did not take a job that good'. Now we represent, in the way just mentioned, (62) and (63) as (62a) and (63a) below.

(62a) \([x=?][\text{Ex: reason}(x)]-\text{[you took a job that good for }x]\)

(63a) \(-[\text{Ex: reason}(x)]-\text{[you took a job that good for }x]\)

Ignoring the speech act question operator of (62a), we can see that (62a) is the contradictory of (63a).
From the representations of (60)-(63), we can see clearly the relation between rhetorical questions and their assertive meanings, if we interpret question words in rhetorical questions as the existential quantifier.

2.4 Concluding Remarks

According to the analysis presented here, the following question words in question contexts can be represented as in the right column.

(64)

<table>
<thead>
<tr>
<th>Question Word</th>
<th>Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>shei</td>
<td>'who' [x=?][Ex: person(x)]</td>
</tr>
<tr>
<td>sheme</td>
<td>'what' [x=?][Ex: thing(x)]</td>
</tr>
<tr>
<td>zeme</td>
<td>'how' [x=?][Ex: manner(x)]</td>
</tr>
<tr>
<td>weisheme</td>
<td>'why' [x=?][Ex: reason(x)]</td>
</tr>
<tr>
<td>nali</td>
<td>'where' [x=?][Ex: place(x)]</td>
</tr>
<tr>
<td>sheme-shihou</td>
<td>'what-time' [x=?][Ex: time(x)]</td>
</tr>
</tbody>
</table>

The property 'thing(x)' of sheme 'what' in [x=?][Ex: thing(x)] can be considered as a property variable ranging over the other properties in (64). The variable designated by 'thing(x)' may be replaced by 'person', as in sheme-ren 'what person', or by 'place', as in sheme-difang 'what place'. Of course, when question words are used as indefinite NPs, the performative question operator [x=?] is not needed. On the other hand, if question words are used in question contexts, either direct or indirect, both the question operator and the existential quantifier are needed.

In conclusion, we have analyzed a question word followed by dou 'all' as the universal quantifier and analyzed a question word alone as the existential
quantifier. Evidence is given to support this analysis, especially the interpretation of question words as the existential quantifier. It is shown that this analysis can help us understand the connection between questions, either ordinary or rhetorical, and their answers or conveyed meanings. But the reader should be reminded that this chapter only talks about the quantificational uses of question words and that there are other uses of question words that cannot be explained in terms of quantifiers.
Notes

1. A slightly different version of this chapter was published in *Journal of Chinese Linguistics* as Tsai 1990.

2. In linguistics, operators and quantifiers are often confused. Although there may not be a sweeping consensus as to how to distinguish operators from quantifiers, it is generally agreed that the former term refers to that which effects a function on objects and is a more general term, whereas the latter refers to only the kind of operator which involves quantity. Thus, symbols for functions, truth-functional connectives such as 'and', 'or', 'not', and 'if', and quantifiers are all classified under operators. But nobody would say that the truth-functional connectives are quantifiers. It may be interesting to note that May (1985:5) says that *wh* is a quasi-quantifier.

3. The two uses of QWs that cannot be treated as quantifiers are the list use, as in (i), and the identity or equivalence use, as in (ii).

   (i) Ta xiang chi mugua, putao, pingguo, sheme de.  
   He want eat papaya grape apple what DE  
   'He wants to eat papaya, grape, apple, and whatnot.'

   (ii) Huang Chun-ming shi shei?  
   Huang Chun-ming is who  
   'Who is Huang Chun-ming?'

The list use is mentioned in Chao (1968:654-655).

4. By question words in Chinese I mean words like *sheme* 'what' and *shei* 'who' as given in (64) in section 2.4.
Words like *ma, na, ba*, which are usually called question particles, are excluded. Also excluded is the question form of A-not-A, which if embedded is usually considered to correspond to the English word 'whether' in meaning. I do not think that the list given in (64) is exhaustive. Nor do I claim that all question words in Chinese can be interpreted as EQ (see some of the discussions in the text).

5. The use of a universal quantifier to help represent the meaning of (2a) may not be accepted by some speakers. But if we add a background, say a specific time and place, to (2), its interpretation may not be objectionable. Look at (i) below.

(i) Zuotian zai canting, wo dian sheme cai, Lisi jiu dian sheme cai.
Yesterday at restaurant I ordered what dish Lisi then ordered what dish
'Yesterday at the restaurant Lisi ordered whatever dish I ordered.'

What (i) conveys is that Lisi ordered all the dishes that I ordered. If I ordered Peking duck, beef with broccoli, and shrimps stir-fried with green onion and salt, then Lisi ordered all these three dishes, too.

6. For a radical analysis which treats all definite and indefinite NPs as quantifier-free and as consisting of free variables plus the descriptive predicates, see Heim 1982.

7. In fact, the observation that UQ generally cannot be used in existential sentences has been noted by Milsark 1977. But note that there are some special uses of
existential sentences that allow the occurrence of definite NPs. One use of this kind is mentioned by Rando and Napoli 1978: the enumeration or list use of existential sentences, as in (i). This use is always characterized by special contexts and distinctive intonation. Another is pointed out by Woisetschlaeger 1983: a use in which asserted is an instantiation of a generic concept which has narrow enough specification, as in (ii).

(i) A: I wonder whether there are any old men or women who are in favor of abortion.
    B: There are my neighbor, Mrs. Smith, and my aunt in New York.

(ii) There was the smell of pot all over the apartment.

But these special uses of existential sentences, we think, cannot invalidate our data in the text, which are typically existential.

8. However, in the BA-construction, which is a construction containing the co-verb or preposition ba ‘dispose, hold’, the definite effects in terms of QWs do not seem to apply. It generally requires definite or generic NPs (see Li and Thompson 1981: 465-466). But the following sentences show that it allows both the QWs with a following dou and those without a following dou.

(i) Ta ba wode shu diu le.
    He BA my book throw ASP
    'He threw away my book.'

(ii) Ta ba mou ben shu diu le.
    He BA a-certain CL book throw ASP
    'He threw away a certain book.'
(iii) Ta ba {quanbu de shu, mei yige shu, suoyou de shu} diu le.
   'He threw away {all the books, every book, all books}.'

(iv) Ta ba sheme shu diu le. (?)
   He BA what book throw ASP
   'He threw away a certain book.'
   'What books did he throw away?'

(v) Ta ba sheme dou diu le.
   He BA what all throw ASP
   'He threw away everything.'

Why the BA-construction is different from the two cases discussed is not clear to us at this moment.

9. This is inspired by Carlson 1980. In his work, he argues that negative-polarity any is interpreted as existential. In this paper, I argue that all the common QWs in Chinese without a following dou must be treated as existential quantifiers.

10. Contrast the unacceptable (19) with the acceptable (i) below.

   (19) {*Jihu, *Cabuduo} shei chi dao le?
       {*Almost, *Nearly} who late ASP ASP
       '{*Almost. *Nearly} who is late?'

   (i) Shei {jihu, cabuduo} chi dao le?
       Who {almost, nearly} late ASP ASP
       'Who is {almost, nearly} late?'

   Notice that the different positions of jihu and cabuduo make them modify different parts of the otherwise identical sentences. In (19), they modify the NP whereas in (i) they
modify the VP. It is this difference that makes different acceptability.

11. To represent more truthfully what quantifiers are used in natural languages, I adopt, hereafter, the use of restricted quantifiers. For the reasons why this is used in linguistics and for the difference between this use and the unrestricted use of quantifiers by Frege and his followers, see, for example, McCawley 1981.

12. An example in which quantifiers have scope ambiguity can be found below:

   (i) Tamen sange ren mai le yiben shu.
       They three man buy ASP one-CL book
       'The three of them bought one book.'

   (ii) [3x: person(x)][Ey: book(y)][ x bought y]

   (iii) [Ey: book(y)][3~: person(x)][ x bought y]

The sentence (i) could mean either that the three persons bought one book each, as in (ii), or that the three together bought one book, as in (iii).

13. As one referee of Journal of Chinese Linguistics has pointed out, (185), in fact, has only the distributive reading, not the collective reading. The use of 'distributive' to refer to a reading on which the universal quantifier has the wide scope and 'collective', to a reading on which the existential quantifier has the wide scope is convenient and helpful, but I think that their uses (I cannot trace down the person who first started to use them
in linguistics or logic), are not appropriate in some cases. For instance, if the former term is used to refer to the reading of (26), it is perfectly descriptive; but the use of the term 'collective' to refer to (27) sounds strange to me. It is all right to talk about 'everyone together beats someone', but 'everyone together likes someone' just isn't right.

As I said above, (185) has only the reading on which the UQ has the wide scope, but so do (187) and (188). The reading of (188) is self-evident, but (187) needs some explanation: shu can refer to different copies with the same title or different books with different titles. In either case of the interpretations of shu, the UQ has the wide scope. Even though (188) has the same scope reading as (185), I still won't consider it as an appropriate answer in the strict sense, whereas the referee thinks that the former sentence IS an appropriate answer to the latter. I think that our difference may be related to our different interpretation of dou in (185). The referee, in my view, may think that dou just refers to the domain or scope of the extension indicated by the NP and that dou has nothing to do with the VP and hence in the answer one needs to care only about the distribution of the persons indicated by the NP and each of them may or may not do different things. According to this view, both (187) and (188) are appropriate answers to (185). In contrast, I think that the use of dou
quantifies over not only the NP but also the VP and thus in
the answer each of the persons indicated by the NP is
required to do the same thing at certain level as is
indicated by the same VP. According to this second view,
only (187), but not (188), would make an appropriate answer.
To see that the second view may be closer to the true use of
the word, consider the following sentences:

(i) a. Tamen liangge ren da le Lisi.
   They two man beat ASP Lisi
   'The two of them beat Lisi.'

     b. Tamen liangge ren dou da le Lisi.
     'The two of them both beat Lisi.'

     c. Tamen liangge ren da shi Lisi le.
     They two man beat dead Lisi ASP
     'The two of them beat Lisi dead.'

     d. *Tamen liangge ren dou da shi Lisi le.
     'The two of them both beat Lisi dead.'

(ii) a. Nimen sange ren dou chi le ji wan
   You three man all eat ASP how-many bowl
   fan?
   rice
   'How many bowls of rice did the three of
   you all eat?'

     b. Lisi chi le liang wan, Wangwu chi le
     Lisi eat ASP two bowl Wangwu eat ASP
     san wan, wo chi le yi wan.

(ia) and (ib) seem to mean the same, but (ic) and (id) are
quite different. The fact that (id) is unacceptable is
because Lisi cannot be beaten dead twice. This can be
accounted for by my view. On the other hand, the view that
dou refers to only the scope of the NP subject cannot
explain why (id) is unacceptable. Also consider the
question and its possible answers in (ii).
three bowl I eat ASP one bowl
'I ate two bowls, Wangwu three, and I, one.'

c. Women sange ren dou chi le liang wan.
We three man all eat ASP two bowl
'The three of us all ate two bowls.'

My intuition is that (iic), but not (iib), is an appropriate answer to (iia), and that (iib) is appropriate to a question similar to (iia) except that the dou is replaced by ge 'each, respectively'.

But I have to admit that different people may have different judgements about the appropriateness of (187) and (188).

14. We ignore the representation of the speech act question element for the moment in this section.

15. The referee comments that this sentence is odd. Y. C. Li also considers this odd. He thinks that there are two meige's: one for generic or universal use and the other for referential use. Li says that if one precedes meige with something like tamen, then (31) is acceptable. The referee also comments that if (31) is grammatical the QW can have both narrow and wide scope readings, depending on our imagined situations. Of course, this does not refute my argument that QW does not necessarily have wide scope.

16. If the answer is as follows, then it is an appropriate answer.

(i) Zhangsan, Lisi, haiyou Wangwu yiqi mai
Zhangsan Lisi also Wangwu together buy
zuo le quanbu de ji.
It is appropriate, because its scope interpretation is the same as that of (40). On the other hand, (ii) is not.

(ii) *Zhangsan, Lisi, haiyou Wangwu ge mai zuo le quanbu de ji.
    Zhangsan Lisi also Wangwu each buy away the all the chickens.
    *Zhangsan, Lisi, and Wangwu each bought all the chickens.'
    (quanbu de ji 'all the chickens' > shei 'who')

The meaning conveyed by (ii) is exactly the same as (41); both have the UQ as a wide scope.

17. 'Contradictory' here is used as in the square of opposition in logic. Namely, a contradictory is either of two propositions so related that both cannot be true or both cannot be false. In other words, one must be true and the other must be false. Thus, the proposition 'it is not the case that p', symbolized as '-p', is the contradictory of the proposition 'p', and the other way around. For more details about the square of opposition, see Copi (1979:66).

18. Whether a sentence containing a question word is a direct question or an indirect question depends a lot on what the main verb or predicate is. For a classification of verbs and for how to distinguish between direct and indirect questions, see Cheng 1984.
CHAPTER 3
RHETORICAL QUESTIONS

3.1 Introduction

Because of the misleading word 'rhetorical', a rhetorical question is usually considered to be a kind of question used for a rhetorical purpose, a type of question that one finds only in ostentatious or argumentative speeches or writing. Rhetorical questions may thus be mistakenly considered to be used almost exclusively by lawyers or politicians when debating or making public speeches. But of course this is a misconception. Upon reflection we find that rhetorical questions are used not infrequently in our daily conversations. The works in prose and drama that we investigate also support our observation (see the examples cited in this chapter).

Rhetorical questions may also be deemed to be loaded with emotions and nuances and are thus rarely discussed in linguistics, with the exception of Sadock 1971, Pope 1976 and Alleton 1988.1 This is understandable, because questions used for rhetorical purposes are not homogeneous. We can think of at least the following four types: (1) questions raised at the very beginning of a speech or a writing and merely intended as a sort of introduction to a topic; (2) self-addressed questions in which the speaker does not expect an answer from others and may answer for himself (they are termed ratiocinative questions in Quirk et al. 1985:826); (3) questions whose answers are evident from
the context, but the speaker or author raises them simply because he wants to draw the hearer or reader's attention to the points conveyed; and (4) questions which convey opposite assertive meanings. Probably only the fourth kind is linguistically interesting, as it is the only kind of rhetorical question that has been dealt with in the three works cited. In this chapter we will primarily consider this kind, too, but the third kind will also be discussed where relevancy exists.

However, even in these three works the treatments of the fourth kind of rhetorical question leave something to be desired. For instance, although the three authors recognize that positive rhetorical questions convey the meanings of negative assertives and negative rhetorical questions convey the meanings of positive assertives, none of them has offered a satisfactory explanation of why the conveyed meanings and the rhetorical questions have to be opposite in forms.

In this chapter, I offer a semantic and pragmatic analysis to explain the relation between rhetorical questions and their corresponding assertive meanings, and investigate rhetorical questions to see whether they can be found in all the four types of question sentences in Chinese. In section 3.2, I discuss the need to distinguish two basic kinds of rhetorical questions and explain how rhetorical questions can convey assertive meanings. In
section 3.3, I explore the possibility of finding rhetorical questions not only in particle questions and wh-questions but also in disjunctive questions and A-not-A questions. In section 3.4, I examine why some questions cannot be used as rhetorical questions and on the other hand why some questions have to be interpreted as rhetorical questions. In this section, I also present some frozen constructions which are often interpreted as rhetorical questions. The last section is a summary of this chapter.

3.2 Two Types of Rhetorical Questions

Rhetorical questions are considered to be quasi-questions because the speaker does not expect any answer to this kind of question and its meaning is always self-evident from the context, which is either the state of affairs in the real world or the context of the discourse. In addition to questions used for introducing a topic and self-addressed questions, there are, as we mentioned in the previous section, two types of rhetorical questions. One type involves contradiction, by which we mean that the rhetorical question is in the question form of the contradictory of what the speaker intends to convey. Namely, if the rhetorical questions are positive questions, the meanings are negative assertives and if the rhetorical questions are negative questions, the meanings are positive assertives. Or, to put it in another way, the relation
between a rhetorical question and its conveyed assertive meaning is that of logical contradictory. The other type does not involve contradiction; this is referred to as the third kind in the previous section. The meanings of this type of rhetorical question are obtainable completely from the context.

3.2.1 Rhetorical Questions Involving Contradiction

This type of rhetorical question includes particle questions and wh-questions, but not A-not-A questions and disjunctive questions. For some examples of this type of rhetorical question, look at sentences (1)-(4).

(1) Ta gen hendou ren, shenzhi wode weihunqi, He with many person, even my fiancee, shuo wode huaihua. Ta hai shi wode say my bad-words. He still is my pengyou ma? friend QP

'He said bad things about me with many persons, even my fiancee. Is he still my friend?'

(2) Ta gen hendou ren, shenzhi wode weihunqi, He with many person, even my fiancee, shuo wode huaihua. Ta bu shi wode say my bad-words. He not is my pengyou le. friend ASP

'He said bad things about me with many persons, even with my fiancee. He is not my friend any more.'

(3) Ta kongshou zhuadao le neige na daozi de He barehanded catch ASP that hold knife DE xiaotou. Ta bu yonggan ma? thief He not courageous QP

'He caught the thief with a knife barehanded. Wasn’t he courageous?'
(4) Ta kongshou zhuadao le neige na daozi de
He barehanded catch ASP that hold knife DE
xiaotou. Ta hen yonggan.
thief He very courageous
'He caught the thief with a knife barehanded.
He was courageous.'

If a person utters (1) with emphasizing stress on hai shi
'still is', what he tries to convey is (2) but with a
stronger force. Similarly, a speaker who utters (3) imparts
(4) and yet with a stronger force.

We may consider the rhetorical questions which involve
negation as a kind of interaction between the speaker and
the hearer which involves logical deduction. The speaker
has in his mind a set of premises and the necessary
conclusion that one has to draw from this set. In the
process of interacting, the speaker makes known or brings
out this set of premises with which he assumes the hearer
agrees, and yet the speaker refrains from flatly stating or
drawing the conclusion for the hearer. Instead, he posits a
question and 'challenges' the hearer to refute the assumed
conclusion that one can draw from the given premises. Thus,
if the hearer cannot refute the assumed conclusion, the
conclusion drawn by the hearer himself in this way is more
effective and convincing to the hearer than if it is
directly given to him by the speaker. In other words, we
may consider a rhetorical question involving negation as a
challenge for the hearer to refute an underlying logically
deduced conclusion, which the speaker thinks the hearer
cannot possibly refute on the basis of the mutually understood premises.

Take (2) for example. There are two premises. One is a hidden premise, which can be considered to be a piece of our secular knowledge; namely, if someone says bad things about another person, then he cannot be considered his friend. Let’s say this is premise (a). The other premise, say premise (b), is explicitly stated by the speaker; that is, ‘he said bad things about me’. The conclusion deduced from (a) and (b) by *modus ponens* is that he is not a friend of mine. The speaker of (2) of course knows all this, but by giving the premises and positing the conclusion in the opposite question form, he challenges the hearer to refute it, and yet he knows that the hearer is surely to reach the same conclusion as he does.

The reason that the speaker does not follow the Gricean maxims of quality and manner to tell it as it is, is that he wants the hearer to see for himself that he cannot challenge it or refute it and that the conclusion is deductively necessary and unavoidable. And this may account for our impression that though (1), when used as a rhetorical question, and (2) are essentially equivalent in meaning, the former has a stronger force than the latter.

An interesting phenomenon is that the rhetorical particle question is always in the question form of a proposition which is the contradictory of the conclusion
assumed by the speaker. The conclusion in (1) is the second sentence of (2), which says 'he is not my friend any more'. Since it is a statement involving no quantifier, the contradictory of it is merely its negated form; that is, 'he is still my friend'. Now we can see the second sentence of (1) is in the question form of the contradictory of (2). And the same is true of (3) with respect to (4). This seems to be universal. Why does this kind of rhetorical question have to take the question form of the contradictory of the proposition presupposed by the speaker?

It seems that this question can be answered in the following way. If one comes to a speech situation, committed to the truth of a proposition which is relevant to the speech situation, the way to inform the hearer of the proposition of course is not to pose the proposition as a question, but instead to assert it or to question the contradictory of the proposition, to challenge the hearer to refute it, or to lay the burden of disapproving the proposition on the hearer.

This applies to not only the rhetorical particle questions but also the rhetorical questions involving who. Consider (5)-(8) below.

(5) Neime hao de gongzuo, shei bu yao?
That good DE job who not want
'Who doesn't want a job that good?'

(6) *Neime hao de gongzuo, shei yao?
That good DE job who want
'Who wants a job that good?'
(* in the sense it doesn’t convey 7 or 8)
Our intuition is that (5) is basically equivalent in meaning to but has a stronger force than (7) or (8), while (6) is not. Then, according to our analysis of rhetorical questions, (5) must be the question form of the contradictory of (7) or (8), whereas (6) cannot be. The problem now is how we know that (5), with the question factor taken away, is the contradictory of either (7) or (8) and that (6) is not. But the problem is not a problem any more if we interpret question words without dou as existential quantifier. Now let's ignore the question factor and follow this interpretation to convert (5)-(8) to the following predicate logic representations as (5a)-(8a), respectively.

(5a) \[\text{Ex: person}(x) \sim [x \text{ wants a job that good}]\]
(6a) \[\text{Ex: person}(x) [x \text{ wants a job that good}]\]
(7a) \[\sim [\text{Ex: person}(x) [x \text{ wants a job that good}]]\]
(8a) \[\text{Ax: person}(x) [x \text{ wants a job that good}]\]

(7a) and (8a) are logically equivalent. It is clear from the representations that (7a) is \sim (5a); hence, (5a) is the negation or contradictory of (7a) and (8a). (6a), on the other hand, is entailed by (7a) or (8a); it is the contradictory of neither of the latter two. From these
representations, we can see that if we interpret question words without dou as existential quantifier, it works nicely with my analysis of rhetorical wh questions.

Notice that in traditional logic the relation of contradictory is symmetrical in the sense that if A is contradictory of B, then B is also contradictory of A. Also notice that from (5) to (8) we only talk about one side of the logical relationship of contradictory involving quantification, the side containing question words as the existential quantifier, the side of particular propositions as some logicians call it. It would be interesting to see whether rhetorical questions can be interpreted the same way starting from the other side, the one some logicians call 'the universal propositions'. That is, we would like to see whether we can ask a question utilizing the universal quantifier and get the contradictory assertive meaning with the existential quantifier. The question sentences of (1) and (3), which are Ta hai shi wo de pengyou ma? 'Is he still my friend?' and Ta bu yongkan ma? 'Isn't he courageous?', respectively, are simple rhetorical particle questions; no quantification is involved. In other words, in our interpretation of rhetorical questions, we have seen that to assert a proposition like (9) and (11), one questions (10) and (12), respectively.

(9) \[Ax: M(x)][P] = \neg[Ex: M(x)]\neg[P]

(10) \[x=?][Ex: M(x)]=\neg[P]
Our question now is whether one can assert (10) and (12) by rhetorically asking (9) and (11), respectively. The answer seems to be yes, though admittedly rhetorical particular questions are more common than rhetorical universal questions. For instance, look at the English examples below:

(13) Does everybody want a dirty job like that?
(14) Not everybody wants a dirty job like that.

(15) a. ~[Ax: person(x)][x want a dirty job like that]
    b. [Ex: person(x)]~[x want a dirty job like that]

If used as rhetorical question, (13) conveys the meaning of (14), which is represented as (15a). Logically (15a) is equivalent to (15b), so one may say that rhetorically (13) conveys (14b). Native English speakers confirm that this is an instance of (9) and (10).

But now let us look at some examples in Chinese to see if the same holds true. Specifically, we would like to know whether instances in the form of (9)-(12) can be found in Chinese. Consider the following sentences:

(16) a. Shei shuo meige ren dou xihuan ta?
    'Who said that everybody likes him'
b. Bu shi meige ren dou xihuan ta.  
Not be every man all like him  
'Not everybody likes him.'

(17)

a. Shei shuo meige ren dou bu lai?  
Who say every man all not come  
'Who said that everybody will not come?'

b. Bu shi meige ren dou bu lai.  
Not be every man all not come  
'Not everybody will not come.'

Sentences (16a) and (17a) both contain a phrase shei shuo 'who say', which is a rhetorical question marker used to refute what is said by the other speaker at a previous conversational turn (see section 3.4.2). What this marker does is to negate the meaning of the corresponding affirmative sentence of a question. Thus (16a) and (17a) convey respectively the meanings of (16b) and (17b). The sentences in (16) are instances of rhetorically asking (9) but asserting (10). And (17) is an instance of rhetorically asking (11) but asserting (12).

In this section we have shown that the relation between a rhetorical question and its conveyed assertive meaning is the relation of logical contradictory. And we have shown that in both Chinese and English the logical contradictory relationship works in both directions. One can assert a proposition with universal quantifier by asking a rhetorical question which comes from a particular proposition, and one can also assert a proposition with existential quantifier by asking a rhetorical question which comes from a universal proposition.
3.2.2 Rhetorical Questions Not Involving Contradiction

In this kind of rhetorical question, the meanings conveyed are not contradictions of the corresponding affirmatives of the rhetorical questions. The meanings conveyed by this kind of rhetorical question are simply the affirmatives in which the gaps represented by the question words or forms are filled by a choice from the context or from the several alternatives in the question sentences. Question types which can be classified into this kind of rhetorical question include wh-questions, disjunctive questions and A-not-A questions.

Some authors think that disjunctive questions and A-not-A questions cannot be rhetorical questions (see Li and Thompson 1979 and 1983, and Alleton 1988). Since they refer to only the rhetorical questions involving contradiction, they are right. But we find that disjunctive questions and A-not-A questions can be used as self-evident rhetorical questions, as we have evidence from our own introspective data and from the works that we investigate. We shall examine the issue in more detail in the next section 3.3. For now, we discuss only wh-questions. Consider the following examples which contain question words:

(18) Who brought you into this world, anyway? Who taught you everything you know, took care of you, worked her fingers to the bone for you?
(19) Wo gen ni jiang guo jici
I with you tell EXP how-many-times
fangxue hou yao mashang huijia?
off-school after need at-once go-home
'How many times have I told you that you need
to go home right after school?'

(20) Jin nian shi nayi nian le? ni hai zai
This year is which year ASP you still at
write 1988
'What year is it now? And yet you are still
writing 1988.'

The meanings imparted by (18)-(20) are respectively (21)-(23).

(21) It is your mother who brought you into this
world, taught you everything you know, took
care of you, and worked her fingers to the
bone for you.

(22) Wo gen ni jiang guo haojici
I with you tell EXP many-times
fangxue hou yao mashang huijia.
off-school after need at-once go-home
'I have told you many times that you need to go
home right after school.'

(23) Jin nian shi 1989 le, ni hai zai xie
This year is 1989 ASP you still at write
1988?
1988
'It is 1989 already, and yet you are still
writing 1988.'

Below are some more examples, which we take from the works
that we have investigated.

(24) Context: A has told B that sometimes he
feels that his wife seems to be not his wife
and B answers with the following sentence.

Zhe shi sheme hua? Ta bu shi ni de
This be what speech She not be you DE
qizi, shi shei de qizi?
wife be who DE wife
'What are you talking about? If she were not
your wife, whose wife was she?'
(Zhong, p. 80)
(25) Context: At a place three lines before the following sentence, the author has written: The fact that we urgently attract others’ attention is itself a manifestation of lack of confidence.

Zhe bu shi xinxu de baofahu
This not be mind-empty DE nouveau-riche
xintai, shi sheme?
mentality be what
'If this were not the confidence-lacking mentality of the nouveau-riche, then what was it?' (Walther, p. 77)

(26) Jintian zhiyou maliya yige wairen
Today only Maria one outsider
jin guo cangku, bu shi ta tou,
enter EXP warehouse not be she steal
you hui you shei ne?
EMP can have who QP
'Today only Maria, an outsider, entered the warehouse. If it were not she that stole, who else could it be?' (Zhou, p. 47)

What the speakers of (24)-(26) intend to convey are the following: for (24), 'she IS your wife,'; for (25), 'this IS the confidence-lacking mentality of the nouveau-riche,'; and for (26), 'it is Maria that stole from the warehouse.'

It is frequently said that rhetorical questions are determined by the context. But by looking at (24)-(26) more closely, especially the English translations which are all characterized by counterfactuality, one may wonder whether questions with a form of these three are not determined more by the form than by the context. However, notice that although in the English renditions the counterfactual mood is grammaticalized, in the Chinese sentences here the counterfactuality is not lexicalized or grammaticalized (but see Eifring 1988). Hence, we cannot say that these
questions are rhetorical questions because they are counterfactual. In fact all the three questions under discussion here can be used as straight questions and be answered in other ways, given appropriate contexts.

Consider the following new contexts:

(24a)
A: Ta bu shi wo de taitai.¹
   She not be I DE wife
   ‘She is not my wife.’

B: Ta bu shi ni de taitai, shi shei de wife
   She not be you DE wife be who DE taitai?
   ‘If she is not your wife, whose wife is she?’

A: Ta shi Lisi de taitai.
   She be Lisi DE wife
   ‘She is Lisi’s wife.’

(25a)
A: Zhe bu shi xinxu de baofahu xintaL
   This not be mind-empty DE nouveau-riche mentality
   ‘This is not the confidence-lacking mentality of the nouveau-riche.’

B: Zhe bu shi xinxu de baofahu xintaL, shi sheme?
   This not be mind-empty DE nouveau-riche mentality be what
   ‘If this is not the confidence-lacking mentality of the nouveau-riche , then what is it?’

A: Zhe shi zidakuang de biaoxian.
   This be megalomania DE manifestation
   ‘This is the manifestation of megalomania.’

(26a)
A: Bu shi Maliya tou de.
   Not be Maria steal DE
   ‘Maria did not steal it.’
Examples (24)-(26) and dialogues (24a)-(26a) indicate that in Chinese, as in English, rhetorical questions are usually determined by the contexts (Hudson 1975:16, but see Alleton 1988, which we will discuss in section 3.4).

3.3 A-not-A and Disjunctive Questions as Rhetorical Questions?

Linguists of Chinese have not reached an agreement as to whether these two types of questions can be used as rhetorical questions. Some linguists think that they cannot. For instance, Li and Thompson 1979 and 1984, and Alleton 1988.

Alleton has cited Zhu 1981 in saying that 'one also finds examples of FWQ [short for the Chinese and English combination phrase fanwen-question; the all Chinese form is fanwenju. Both phrases mean 'rhetorical question'; she alternates between FWQ and FWJ] for every type of interrogation in Chinese grammar books' [underline added], but for A-not-A questions, she cited from Zhu only one example, which is (27) below:
(27) Ni shuo kexiao bu kexiao? (Alleton's (24))
You say funny not funny
'You tell me, is it funny or not?'

she comments, 'A-not-A Questions are not unanimously considered as possibly being FWJ. Example 24 [our (27)] is somewhat special, as it asks something about the other person's statement (ni shuo), and its verb is a Quality Verb (kexiao). That example certainly deserves further analysis but it does not prove the compatibility of rhetorical interrogation with A-not-A Questions.' (p. 288) In her conclusion, she says that 'two types of interrogatives are liable to be used rhetorically in Chinese: intonation/particle question ... and question-words question; most of the authors and our informants agree that no type of disjunctive questions is suitable for FWJ.' (pp. 291-92) I think that by the last quoted clause she means that neither disjunctive questions nor A-not-A questions, which are usually considered to be a subtype of the former, can be used as rhetorical questions.

Li and Thompson 1979 and 1984 reach a similar conclusion. They think that A-not-A questions cannot be rhetorical questions or even if they can they have to be in one very special context (in coaxing children). Li and Thompson did not mention whether disjunctive or alternative questions can be rhetorical questions. In the former paper, they observe that in Chinese A-not-A questions and particle questions are pragmatically different, although Moravcsik
1971 proposes the same semantic underlying representation for both. Their main evidence is the contrasting acceptability between (28) and (29).

(28)  
A: Ni haoxiang shou le yidian.  
You seem thin ASP a-little  
‘You seem to have gotten a little skinny.’

B: shi ma? Ni kan wo shou ma? Wo ziji dao bu be QP you see I thin QP I self EMP not juede.  
feel  
‘Is that so? Do you think I’m skinny? I haven’t noticed it myself.’

(29)  
A: Ni haoxiang shou le yidian.  
You seem thin ASP a-little  
‘You seem to have gotten a little skinny.’

B: ??shi bu shi? ??Ni kan wo shou bu shou? be not be you see I thin not thin  
Wo ziji dao bu juede.  
I self EMP not feel  
‘Is that so? Do you think I’m skinny? I haven’t noticed it myself.’

Notice that the two A-not-A forms in B’s response to A in (29) are very awkward, although they are syntactically well-formed. They think that this contrast arises because in a neutral context either the A-not-A form or the particle question may be used, while in a non-neutral context or ‘conducive context’ as is used in Hudson 1975, only the particle question is possible. After making this insightful observation, Li and Thompson (p.205, note 2) go on to comment, "thus Rygaloff (1973:54) notes that only the particle question is appropriate for ‘rhetorical question’."
In a later paper, Li and Thompson (1984:57-58), although maintaining the same opinion that mostly A-not-A questions cannot be used as rhetorical questions, say that rhetorical A-not-A questions can occur in one special context. The context is that 'in talking to children, where the speaker knows the answer to the question, but intends to convey neutrality in order to coax the child into talking.' They cite one typical example from Lee 1981, which is (30) below:

(30) Shujia shangmian de shi bu shi Minmin
     Bookshelf top DE be not be Minmin
     shu a?
     book SOFTENER
     'Is the book on the bookshelf Minmin's?'

In a note following the example (p. 60, note 5), they cite another one with a different predicate, which is (31) below.

(31) Ni shuo women haowan bu haowan?
     You say we funny not funny
     'Tell me, don't you think we're funny?'

They notice that other linguists have given such examples, too. But they say, "all of their [referring to other linguists] examples of rhetorical questions with A-not-A form, however...were embedded questions following ni kan 'you see...' or ni shuo 'you tell me...' As embedded questions...they cannot appear in particle question form, but must appear as A-not-A questions."

However, we have a different opinion. First, notice that the clauses occurring after ni kan 'you see; you think', ni shuo 'you say; tell me', ni xiang 'you think' and
so on do not have to be A-not-A questions; particle
questions can, too. For instance,

(32)
  a. Ni kan [ta hui lai ma]? (particle Q)
     You see he will come QP
     'Do you think that he will come?'
  b. Ni kan [ta hui bu hui lai]? (A-not-A Q)
     You see he will not will come
     'Do you think that he will come or not?'

(33)
  a. Ni xiang [Lisi lai le ma]? (particle Q)
     You think Lisi come ASP QP
     'Do you think that Lisi has come?'
  b. Ni xiang [Lisi lai le meiyou]? (A-not-A Q)
     You think Lisi come ASP not
     'Do you think that Lisi has come or not?'

Both (32) and (33) show that not only A-not-A questions but
also particle questions may follow ni kan and ni xiang etc.

Second, we think that the clauses enclosed between
square brackets in (32) and (33) are not embedded within a
higher clause. If they are embedded, as Li and Thompson
think, we have to explain how an embedded question form can
change a whole sentence into a direct question. Take (32b)
for example. If ta hui bu hui lai is embedded, why (32b) is
a direct question? Furthermore, if the ni 'you' is
substituted by a third person pronoun, say tamen 'they', why
does the new sentence become unacceptable, as is shown by
(34)?

(34) *Tamen kan [ta hui bu hui lai]?

The fact that (34) is odd is because the verb kan 'see,
think' in Chinese cannot be subcategorized as allowing a
constituent question or a wh-clause. We think that a more plausible analysis is to treat phrases like *ni kan*, *ni shuo* and so on as pragmatic performative markers. They are used as kind of prompt, conveying a meaning like 'I ask you to tell me', or 'I want to hear your opinion'. Related to this analysis, the distinction between the two sentences below deserves study.

(35) Ni shuo ta hui bu hui lai ne?
   You say he will not will come QP
   'Tell me, will he come or not?'

(36) Ni shuo ta hui lai ma?
   You say he will come QP
   a. ‘Tell me, will he come?’
   b. ‘Did you say that he would come?’

Notice first that neither (35) nor (36) is intended to be an imperative sentence like 'Tell me whether he will come or not'. Also notice that while (35) has only one reading, (36) has two readings, (36a) and (36b), if given appropriate intonation. For the reading of (36a), there is usually a pause between *ni shuo* and *ta hui lai ma*. The reading of (36b) will be clearer, if we insert *le* 'past aspect' or *guo* 'experience aspect' right after *shuo*. We think that a syntactic analysis to account for the two readings of (36) would look as follows:

(36a) [[Ni shuo][ta hui lai ma]]?

(36b) [Ni shuo [ta hui lai] ma]?

Sentence (35) has a similar meaning to (36a) and hence is better considered to have a similar syntactic structure like (35a).
The analysis here has shown that A-not-A questions like (35) are not very different from similar particle questions like (36) with the (a) reading and that questions like (35) are not embedded.

Of course, our two arguments above can only invalidate Li and Thompson’s attempt to explain away A-not-A sentences like (31), (32b), (33b) and (35) as marked context. We have not yet shown that these kinds of sentences can be used as rhetorical questions. However, the data which we have collected do show that they can be used as rhetorical questions. For sentences whose contexts are self-evident, we won’t provide any explanation, but for those whose contexts are not obvious, we try to give a brief account of the situations where the sentences are used. Below are some examples.

(37) Wo xiao Rulaifo bi ren hai mang:
I laugh Buddha than man more busy
you yao duhua zhongsheng, you yao
and want convert public and want
baoyou renjia bingtong, dou jiao ta
protect people sickness-pain all make it
su hao, you yao guan renjia de
speedy well and want mind others DE
hunyin, jiao ta chengjiu, ni shuo ke
marriage make it succeed you say Q-marker
mang bu mang? ke haoxiao bu
busy not busy Q-marker funny not
haoxiao? funny
'I laughed at Buddha for being busier than people: he wants to convert the public, and wants to protect people from sickness and pain, making speedy recovery, and wants to mind others' marriage, making it succeed, you tell me, is this busy or not busy? funny or not funny?'

(38) You zhe dian fuyu, zai jiao wo Panshi zhen Have this bit excess and add I Panshi this dian huodongjinger, ni xiang wo hai pa bit energy you think I still fear bu pa ren gen wo daoluan? not fear others with me trouble 'Now that I have this little excessive money, and, what's more, the energy that I Panshi have, do you think that I am still fearful of others causing me trouble or not?' (Cao, p. 312)

(39) Ruguo yige ren zai shehui shang bing bu xuyao duli sikao de nengli, ji need independent think DE ability then neng huode chenggong, you le duli a be get success have ASP independent think DE ability on-the-contrary daochu bengbi, name qingwen everywhere frustrate then please-ask daxuesheng hai hui bu hui college-student still will not will juyou duli sikao de nengli ne? possess independent think DE ability QP 'If a person can succeed in the society without the ability to think independently and on the other hand if a person with the ability to think independently is met with frustration wherever he goes, then let me ask you, will college students possess the ability to think independently or not?' (Walther, p. 62)

(40) Duli sikao nengli hui bu hui Independent think ability will not will pingkongeryou ne? exist-out-of-nothing QP 'Will the ability to think independently come into existence out of nothing or not?' (Walther, p. 64)
(41) **Women you mei you quanli yaoqiu xuesheng**
We have not have right request student
zun wudao de shi?
respect no-knowledge DE teacher
'Do we have the right to request the students
to pay respect to unknowledable teachers or not?' (Walther, p. 67)

(42) **Context:** The husband tried to persuade the
wife to return the extra change that the
clerk of a fast-food store gives to her. But
the wife didn't want to, and she replied as follows.

Shao jia daoxue. Jiaru shi women ziji de
Don't fake moralist If be we self DE
dian, women duo zhao le qian gei
store we extra change ASP money give
keren, keren hui bu hui tui quan?
customer will not will return money
'Don't be a hypocrite. If it is our own
store and if we give the customers extra
change, will they return the money or not?'
(Zhou, p. 28)

(43) **Mai le sanfenzhier, tou le sanfenzhiyi,**
Sell ASP two-thirds steal ASP one-third
ni shuo guang bu guang?
you say gone not gone
'I sold two thirds and got one third
stolen, you tell me, are all gone or not?'
(Zhou, p. 29)

(44) **Context:** A intended to pretend to be dead and
requested B to inform a person named Sasong
that he was dead. When B asked what if
Sasong requested an autopsy or a death
certificate, A replied as follows.
Sasong jibu shi fajing, youbu
Sasong neither be law-policeman nor
shi wo de qinshu, ta ping sheme
be I DE relative he by what
yaoqiu yianshi? ping sheme yaoqiu kan
ask autopsy by what ask see
siwang zhengmingshu? Ni you mei you
death proof you have not have
yian guo Pikaso, Lixiaolung de
examine EXP Picasso Bruce-Lee DE
shiti? Ni you mei you kan guo tamen de
body You have not have see EXP they DE
siwang zhengmingshu?
death proof
'Sasong is neither a court officer nor a
relative of mine. By what can he request
for an autopsy? By what can he request
for a look at the death certificate? Have
you ever examined the bodies of Picasso or
Bruce Lee? Have you ever looked at their
death certificates?' (Zhou, p. 56)

The examples of (37)-(44) have shown us not only that A-not-
A questions can be used as rhetorical questions, but also
that they are abundant and that rhetorical A-not-A questions
are not limited to the linguistic context where they occur
with ni suo, ni kan and other similar phrases. Of the eight
examples, five--(39), (40), (41), (42) and (44)--do not
occur with phrases like ni shuo.

We also observe that the majority of the examples, six
out of eight, convey the meanings indicated by the negative
side of the A-not-A questions. For instance, (40) is meant
to convey that the ability to think independently will not
come into existence out of nothing. This observation is
contrary to Lu’s (1956) claim that rhetorical A-not-A
questions usually assert the positive side. Of course, the
fact that the majority of our examples assert the negative
side does not mean that this is a principle that can apply across the board for all rhetorical A-not-A questions. What our data have shown is merely that whether a rhetorical A-not-A question assures the positive or negative side of the question is usually determined by the real world or the discourse context.

Since we have resolved the issue whether A-not-A questions can be used as rhetorical questions, we move on to consider whether disjunctive questions can be similarly used. Lu (1956:297-98) remarks that 'the rhetorical use of disjunctive questions, like that of A-not-A questions, is not very obvious, but in fact alternative questions may also be used as not real questions. The speaker still may be committed to one of the two choices. In spoken language, rhetorical alternative questions usually assure the latter or the last choice [translation mine].' He cites some examples, but as Li and Thompson 1984 comment, without giving any explanation to the forms or contexts. The data which we have collected, if without any given contexts, do not show how one can tell whether they are rhetorical questions, either. This is understandable, because in form a disjunctive question just lists two or more alternatives; no one can tell from the form alone which choice the speaker is committed to. This also explains why most authors and Alleton's informants do not think that alternative questions can be used as rhetorical questions. But our data do show
that they can be used as rhetorical questions, given appropriate contexts. For instance,

(45) Context: A client protested to a lawyer that he had to live together with the woman with whom he had been illegally arranged to have a false marriage. He said that the law does not state that a married couple has to live together, and the lawyer shouted out the following sentence.

Shi ni dong falu, huoshi wo dong falu?
Be you know law or I know law
'Who is it that knows about the law? You or I?' (Zhou, p. 126)

(46) Meishuguanzhang shi yishu gongzuozhe haishi Art-museum-curator be art worker or zhengzhanguan? political-warfare-officer
'Is the curator of the art museum an art worker or a political warfare officer? (Walther, p. 129)

(47) Context: The author has criticized the formality of posting banners with slogans and building statues in Taiwan. She states that elementary school students often refrain from going to bathrooms because they are too broken and stinking and that if the school has received a sum of money, the authorities will consider first building statues for politicians, not building bathrooms for the children. She inquires:

Bijing shi jian bu de ren de cesuo
After-all be see not DE man DE bathroom
zhongyao ne? Haishi guangjie timian important QP or shining elegant
de tongxiang zhongyao ne? DE bronze-statue important QP
'Which is more important after all? The not displayable bathrooms or the shining elegant bronze statues?' (Walther, p. 76)

All these three examples have shown that the answers to the questions in fact are evident already before the alternative questions are uttered. In the cases of (45) and (46), the
answers can be obtained from the facts of the real world. A lawyer is expected to know more about the law than a client; the curator of the museum of art is usually an worker for art, not a political warfare officer. In the case of (47), the answer to the alternative question can be obtained from the discourse context. Prior to the questions, the author has clearly indicated that she considers it futile to post banners with slogans or to build statues and that it is more practical and urgent to build bathrooms than to build statues.

In the disjunctive questions of (45)-(47), as in rhetorical A-not-A questions, it cannot be determined from the question form alone which choice out of the alternatives in the question sentence the speaker already has in mind. Only the context can determine what position the speaker takes. But we also notice a special use of alternative questions, that is, alternative questions may be used while the speaker is not committed to any one of the possible choices. In the works that we investigate, we find one example (48).

(48) Context: The wife is jealous of the husband's intimate friendship with his cousin, who stays with them for quite a while and is not married yet. She is trying to matchmake the cousin with a man whom the husband believes to be not suitable for his cousin. The wife says this to the husband:
What does it matter to you if she gets married with somebody? What do you, my lord, care for? Do you want to move over with her as her accompanying maid so as to hold ink-stone and get paper for her? Or to make bed and fold blankets for her and serve as her lover at night?'

(Cao, p. 375)

Though she poses the alternative question sentence, the wife of course is not interested in knowing which of the two alternatives the husband will choose, as it is impossible in the relevant culture for a man to be married off as a maid together with a bride. Rather, she merely intends to be sarcastic of the husband's relationship with the cousin and to insult him.

So far we have seen that in rhetorical A-not-A and disjunctive questions, all the answers are in fact given or known between the speaker and the hearer already before the questions are posed. We might go on to ask another question. What is the use of asking the questions? Or to put it in more general terms, what is the function of the rhetorical questions which do not involve contradiction?
To answer the question, let us consider (45) again. The question by the lawyer to his client asking 'Who knows about the law? you or I?' violates the principle of conversational cooperation or the sincerity condition. But the lawyer's asking the question here does not mean to seek for information. It has a pragmatic function, prompting the hearer to perform a mental process and to search for the known answer to the question. The speaker's purpose is to 'remind' the hearer of a mutually understood fact. By asking a question whose answer the speaker knows that the hearer knows already, the speaker wants the hearer to see for himself again that something is the case. In this way, the proposition solicited through answering the question is separated from other common background propositions, and is brought into the foreground and thus highlighted. That is how we feel that although a sentence like (49)

(49) Bie wang le wo shi lushi. Don't forget ASP I be lawyer 'Don't forget that I am the lawyer.'

can serve the same purpose as (45) to remind the hearer that the speaker knows more about the law, (45) has a stronger force.

To sum up, in terms of contradiction involvement, we may distinguish two types of rhetorical questions. The type that involves negation, as we discussed in 3.2.1, is used to challenge the hearer for counterexamples, whereas the type not involving negation, as has been discussed in section
3.2.2 and in this section, is used to remind the hearer of a mutually understood fact. But in another sense, in terms of the ultimate pragmatic function, these two types behave similarly. Both, by positing a question which is intended either to challenge or to remind, have served to prompt the hearer to bring from the mutual knowledge to the foreground a fact that the speaker thinks is relevant to the situation in the discourse. This same function of foregrounding or highlighting a fact from the common background knowledge explains why rhetorical questions always carry a stronger force than the flat assertions with the same meanings.

3.4 Constructions Affecting the Interpretation of Questions

In the previous sections we have shown that the rhetorical readings of question sentences are usually determined by extralinguistic contexts. In this section we discuss some linguistic constructions or phrases that affect the interpretation of questions as rhetorical questions. We think that there are some linguistic forms that force rhetorical readings on questions and there are also some forms that make rhetorical readings of questions impossible. It should be borne in mind that the linguistic forms which we discuss here are not intended to be exhaustive; rather, we merely try to describe some common and important linguistic constructions or phrases that govern whether the
questions at issue can be interpreted as rhetorical questions.

3.4.1 Polarity Items

In English there are some polarity sensitive items that force question sentences to be read either as straight questions or as rhetorical questions. As is pointed out by Borkin 1971, the following four (a) English sentences can be interpreted only as rhetorical questions.

(50)
   a. Who bats an eye when the boss comes around?
   b. Nobody bats an eye when the boss comes around.
   c. *John bats an eye when the boss comes around.

(51)
   a. Who lifted a finger to help when I needed it?
   b. Nobody lifted a finger to help when I needed it.
   c. *John lifted a finger to help when I needed it.

(52)
   a. Who doesn’t cheat like crazy?
   b. Everyone cheats like crazy.
   c. *John doesn’t cheat like crazy.

(53)
   a. What park isn’t pretty crowded in the summer?
   b. Every park is pretty crowded in the summer.
   c. *Yosemite isn’t pretty crowded in the summer.

The phrases or idioms bat an eye in (50) and lift a finger in (51) are negative polarity items. They make the positive direct answers like (50c) and (51c) unacceptable; only (50b)
and (51b) can be accepted as expected answers. In (52) and (53), the phrases *like crazy and pretty* are affirmative polarity items. They make the negative direct answers like (52c) and (53c) unacceptable; only (52b) and (53b) are acceptable as expected answers, both involving the change from two negatives to one positive statement.\(^\text{13}\)

In contrast to the multitude of English polarity items, the Chinese counterparts are few in number. The more noted ones are two negative polarity items: *sihao '(not) a bit' and conglai '(not) ever'. But unlike the English negative polarity items, they cannot occur in questions without a negative, as is shown by (54) and (55).

(54)
\begin{itemize}
  \item a. Ta sihao bu xihuan shei?
  \hspace{1cm} He a-bit not like who 'Who doesn't he like at all?'
  \item b. *Ta sihao xihuan shei?
\end{itemize}

(55)
\begin{itemize}
  \item a. Ta conglai bu gen shei shuohua?\(^\text{14}\)
  \hspace{1cm} He ever not with who talk 'Who does he never talk to?'
  \item b. *Ta cong lai gen shei shuohua?
\end{itemize}

The two sentences (54b) and (55b) demonstrate that the two Chinese negative polarity items cannot occur in positive questions like the English *bat an eye* and *lift a finger* in (53a) and (54a). Sentences like (54a) and (55a) can only be used as direct questions and require direct answers.

But in Chinese there are at least two phrases which behave very much like the above English negative polarity
items. These two are xiang hua 'appeal to reason' and hao yisi 'appropriate, not ashamed'. The questions containing these phrases can only have the rhetorical readings.

Consider the following sentences:

(56)

a. Ta zhe yang zuo xiang-hua ma?
   He this way do appeal-to-reason
   'Does it appeal to reason that he did it this way?'

b. (Bu,) ta zhe yang zuo bu xiang-hua.
   No he this way do not appeal-to-reason
   'That he did it this way doesn't appeal to reason.'

c. *(Shi,) ta zhe yang zuo xiang-hua.
   Yes
   '(Yes), that he did it this way appeals to reason.'

(57)

a. Ta hao-yisi bu lai ma?
   He not-ashamed not come QP
   'Won't he feel ashamed if he does not come?'

b. (Bu,) ta bu hao-yisi bu lai.
   No he not not-ashamed not come
   '(No), he will feel ashamed if he does not come.'

c. *(Shi), ta hao-yisi bu lai.

(58)

a. Shei hao-yisi bu lai?
   Who not-ashamed not come
   'Who won't feel ashamed if he does not come?'

b. Mei you ren hao-yisi bu lai.
   Not have person not-ashamed not come
   'Everybody will feel ashamed if he does not come.'

c. *Lisi hao-yisi bu lai.\textsuperscript{15}
   Lisi not-ashamed not come
   'Lisi will not feel ashamed if he does not come.'
The (a) sentences in (56)-(58) are all rhetorical questions. If they were real questions, they should be able to take both positive and negative responses as direct answers. But for (56a) and (57a), only (56b) and (57b) can be their respective answers and both answers are negative. And for (58a), only (58b), which is the contradictory of the corresponding declarative of (58a), can be the expected answer. All the (c) sentences in (56)-(58) are in themselves not acceptable and thus cannot be considered to be answers to the (a) questions.

3.4.2 Special Sequences and Frozen Forms

In addition to polarity sensitive items, there are some special sequences of word order or frozen forms that may affect the interpretation of question sentences. Alleton 1988 thinks that in Chinese there are three linguistic contexts where question sentences are unequivocally understood as rhetorical questions. The three contexts that she lists are (1) medium-bound marks, by which she means the constructions characterized by special lexical items, displacement of accent, and body language, (2) position of the negation, and (3) linguistic constructions with the sequence of 'Auxiliary Verb (hui, neng) + Verb + Aspectual Particle (le, guo).’ For contexts like (3), she gives the following examples.
(57) Women hai neng tou le ni de dongxi?
We still can steal ASP you DE thing
'Is it possible that we stole your things?'
(= It is impossible that we stole your things.)

(58) Ta hui qu guo Taianjin ma?
He possible go EXP Tianjin QP
'Is it possible that she has been to Tianjin?'
(= It is impossible that she has been to Tianjin.)

For contexts like (2), she provides (59)-(61).

(59) Ni bu ye hen congming (ma)?
You not also very intelligent QP
'Aren’t you also intelligent?'
(= Of course, you are also intelligent.)

(60) Ta neng bu chouyan (ma)?
He able not smoke QP
'Can he not smoke?'
(= He cannot refrain from smoking.)

(61) Meiyou ta gei ni qian, ni bu dei ai e?
Not he give you money you not must suffer e?
hunger
'Had he not given you money, should you not have suffered from hunger?'
(= Had he not given you money, you should have suffered from hunger.)

As for contexts like (1), Alleton does not give any examples for accents. And as for body language, she mentions that one of her colleagues ‘observed a special movement of one eyelid each time somebody utters a FWJ [rhetorical question], and suggested it is the surest sign of FWJ.’ (p. 283) However, we think that the movement of one eyelid when uttering a rhetorical question is only an idiosyncratic facial expression and that it is not a reliable sign of rhetorical questions. For special lexical items, she
mentions only one adverb nandao 'hard to say' and one frozen phrase which contains a question word. Below are two of the examples that she gives:

(62) Nandao zher bu shi jia?  
NANDAO here not be home  
'How do you dare to say that this place is not home?'  
(= This place certainly is home.)

(63) Qi you ci li?  
How have this rationale  
'How can there be such a rationale?'  
(= It is utterly absurd.)

Sentence (63) is undoubtedly a rhetorical question, but it has become so much frozen that some native speakers consider it an exclamative sentence even though it does have a question word. As for the use of nandao in sentences like (62), Chao (1968:135) and Lu et al. (1980:363) comment that it is used only in rhetorical questions, with an optional final bucheng 'it won't do'.

However, although we agree that (62) is understood as a rhetorical question, we think that the use of nandao in a sentence cannot guarantee that it is a rhetorical question. The uses of nandao in most cases are for rhetorical questions, but not all questions which contain nandao are rhetorical questions. Below we give one example to prove this point.
Wo zhao ni gei wo de dizhi qu
I follow you give I DE address go zhao ta, keshi na shi yige kong
look-for he but that is one empty hu. Nandao ta ban zou le bucheng?
house NANDAO he move away ASP won't-do 'I went looking for him by the address that you gave to me, but that is an empty house. Could it be that he has moved away?'

Wo zhao ni gei wo de dizhi qu
I follow you give I DE address go zhao ta, keshi na shi yige kong
look-for he but that is one empty hu. *Ta mei ban zou.
house He not move away
(* marked in the sense that it does not go with the context)

If the last sentence in (64), Nandao ta ban zou le bucheng?
'Could it be that he has moved away?', is understood as a rhetorical question, then its assertive equivalent would be Ta mei ban zou 'He has not moved (or: did not move) away'. But from (65), we know that this interpretation is impossible. The question whether the use of nandao in a sentence is rhetorical again is mainly determined by the context.

In fact, there are some other frozen forms involving question words, in addition to the one pointed out by Alleton in (63), that are used only in rhetorical questions. These forms include nali 'where', shei shuo 'who say', shei jiao 'who ask', and a group of question words beginning with he 'why': hebi 'why necessary', hebu 'why not', heku 'why bother', hechang 'why ever', and hekuang 'not to mention'. We discuss the he group first.
The *he* group all start with the lexical item *he* 'why; what'; they may be remnants from classical written Chinese. Below we give one example for each of the five *he* phrases.

(66) Ta yijing ren cuo le. Ni hebi zai ma ta (ne)?
    'He already admits that he is mistaken. Why do you have to scold him again?'

(67) Ta xihuan kehuan xiaosuo; ni hebu song ta ji ben zhe yang de shu (ne)?
    'He likes sci-fi stories. Why don’t you send him several books of this kind?'

(68) Ni heku wei zhe dian xiaoshi sheng ta de qi (ne)?
    'Why do you bother to get angry at him because of this triviality?'

(69) Wo hechang bu xiang qu Ouzhou lyou (ne)?
    'How could I not want to travel around Europe? But I am more eager to buy a new car.'

(70) Name gao de shan wo dou pa guo le, hekuang zhege xiao shan (ne)?
    'I have climbed even that high mountain; how do I have to be concerned about this small mountain?'

All these five sentences are not intended to elicit information, but rather to express the speaker’s belief or opinion. They behave exactly like typical rhetorical
questions involving contradiction. If the form is in the positive, then the conveyed meaning is in the negative.

Another frequently used and well-known special lexical item in rhetorical questions is nali, which sometimes appears as nar or na. Note that here we are not discussing the normal nali ‘where’, which if used in the normal way in a question, can be interpreted either as a straight question or a rhetorical question, depending on the context. We are discussing the nali which is used unequivocally in rhetorical questions. For ease of discussion, we call the nali which can be used either in straight questions or in rhetorical questions NALI₁, and the nali that can be used only in rhetorical questions as NALI₂.

These two are both syntactically and semantically different from each other. The former is used as a noun and thus can show up in positions for object of verb or preposition, whereas the latter is used as an adverb and thus can occur only in the adverbial position before verbals. Semantically, NALI₁ refers to an unknown place and is equivalent to the English ‘where’, whereas NALI₂ does not refer to any place and has no lexical meaning. When used in rhetorical questions, the two are interpreted differently, too: NALI₁ is understood as ‘nowhere’ or ‘not ... anywhere’ and NALI₂, as changing a negative rhetorical question into a positive assertion or a positive rhetorical question into a negative assertion.
To illustrate the differences, let's examine the following two examples first.

(71) Wo dao nali qu zhao ta (ne)?
I reach NALI, go find he QP
'Where can I find him?'
(= a. asking for information)
(= b. I can find him nowhere; I cannot find him anywhere.)

(72) Wo nali pa si (ne)?
I NALI, fear death QP
'How can it be that I fear death?'
(= Wo bu pa si. 'I do not fear death.')

In (71), nali is the object of the verb dao, while in (72) nali is an adverb. Sentence (71) has two possible readings. In one reading, it is used as a straight question to elicit information; in another, as a rhetorical question to make an opposite assertion. But (72) can be used only as a rhetorical question. It is not possible to get a reading of real questions. Even as a rhetorical question, (72) is different from the rhetorical reading of (71) in that no place is referred to.

With the distinction of the two nalis, sometimes we can find a sentence which, if there is no given context, is ambiguous in three ways. A good example can be found in (73).

(73) Ta nali mei qu guo?
He NALI not go EXP
a. 'Where did he not go?' (NALI,)
b. = Ta meige difang dou qu guo le. 'He has been to all the places.' (NALI,)
c. = Ta qu guo le. 'He has been there (an understood place in the context).'
(NALI, )
The sentence (73) with the reading of (a) is used when the speaker does not hear clearly where another says that a third person did not go. It is a sort of echo question.

What is more interesting is the contrast between (73b) and (73c). In (73b) the objective NP nali is preposed and its interpretation involves changing an existentially quantified place term to a universally quantified place term. But in (73c), no place is mentioned, though a specific place is understood. The change of meaning from the surface (73a) to (73c) involves only the addition of one negation, and the statement with two negations is logically equivalent to one positive statement. Again, the contrast of (73b) and (73c) is a manifestation of the difference between NALI₁ and NALI₂.

We may say that NALI₂ is a marker for a rhetorical question. Here are some more examples.

(74) Wo na(li) zhidao ta hai mei chi fan (ne\*ma)?
I NALI₂ know he yet not eat rice QP
(= I didn’t know that he didn’t eat yet.)

(75) Ta na(li) shi wo de pengyou (ne\*ma)?
He NALI₂ be I DE friend QP
(= He is not my friend.)

(76) Ta na(li) zai sheme difang dushu (ne\*ma)?
He NALI₂ at what place study QP
Ta a, zai fan li shui de zheng
He PART at room inside sleep DE right-now
tian ne.
soundly PART
(= He isn’t studying somewhere. Right now he is sleeping soundly in the room.)
The four examples are especially chosen to show that NALI₂ has lost the meaning 'where' of NALI₁. Take (74) and (75) for example. In the former, the meaning cannot be '*Where did I know that he didn't eat yet?', and in (75) the meaning cannot be '*Where is he my friend?' Particularly, (76) shows clearly that nali cannot be interpreted as referring to a place; otherwise, the occurrence of question words referring to place in the same clause would have made (76) not acceptable. These four sentences also show that the interpretation of NALI₂ as zeme 'how', as some may suggest, though workable with (74), cannot work with the other three sentences. And they show that although the use of NALI₂ forces them to be interpreted like rhetorical particle questions involving negation, the use of the particle question particle ma is not acceptable in all cases. This indicates that semantically (74)-(77) are similar to rhetorical particle questions, but syntactically they still follow the constraint of wh-questions.

Two other frozen forms involving question words are shei shuo 'who say' and shei jiao 'who ask'. We separate these two from the other ordinary rhetorical question-word questions, because these two are different from the others
both syntactically and semantically. Let's see some examples which contain shei jiao first.

(78)

a. Die dao le ba. Shei jiao ni bu xiaoxin zou lu?
   'See, you have tripped. Who are you to blame except yourself since you walked carelessly?'

b. Die dao le ba. ?Sheme ren jiao ni bu xiaoxin zou lu?

c. Die dao le ba. ?Shei hui/neng jiao ni bu xiaoxin zou lu?

(79)

a. Ni ba renjia ma le. Renjia yi qi, danran jiu ba women ci le. Shei jiao wo shi ni de baba ne?
   'You scolded him. He got angry and naturally he fired both of us. Who am I to blame since I am your dad?' (Cao, p. 92)

b. Ni ba renjia ma le. Renjia yi qi, danran jiu ba women ci le. ?Sheme ren jiao wo shi ne de baba ne?

c. Ni ba renjia ma le. Renjia yi qi, danran jiu ba women ci le. ?Shei hui/neng jiao wo shi ni de baba ne?

(80)

a. Shei jiao ta mingtian bie qu ne?
   Wo ask he tomorrow not go QP
   'Who asks him not to go tomorrow?'
   (i.e. a question eliciting information)
   (ii. a rhetorical question; = Nobody asks him not to go tomorrow.)

b. Sheme ren jiao ta mingtian bie qu ne?

c. Shei hui/neng jiao ta mingtian bie qu ne?
The question sentences in (78a) and (79a) exemplify the typical use of shei jiao as rhetorical questions. Syntactically, shei jiao is frozen in that shei cannot be replaced by a synonymous sheme ren, as in (78b) and (79b), and that jiao cannot be preceded by modal verbs like hui 'will' or neng 'can', as in (78c) and (79c).

Semantically, the construction following shei jiao usually refers to a past or present fact that is held by the speaker to be responsible for an undesirable happening. In (78a), ni bu xiaoxin zoulu 'you did not walk carefully' is a fact and is considered to be responsible for the happening that (ni) die dao le 'you have tripped'; in (79a), wo shi ni de baba 'I am your dad' is a fact and is thought by the speaker to be responsible for the unpleasant happening that 'I am fired as well'. In contrast to (78) and (79), in a sentence like (80a), shei can be replaced by the synonymous sheme ren and jiao can be preceded by modal verbs like hui or neng.

Semantically, a sentence like (80a) cannot be used in the same way as (78a) or (79a), for the construction following shei jiao refers to a future act which is indicated by bie 'not (for the future or for imperatives)'. Also note that even when (80a) is used rhetorically the shei in the sentence will be re-interpreted as referring to a null set of persons, while the same lexical item in (78a) and (79a) do not really refer to anybody at all. In other words, the semantic contrast between (78a) and (79a) on the one hand
and (80a) on the other is very clear in terms of negation in rhetorical questions. In the former two, no negation is involved, while in the latter one the interpretation involves negation.

Now let's consider some examples which have shei shuo 'who says'.

(81)
A: Lisi shi hao ren.
   Lisi be good man
   'Lisi is a good man.'

B: Shei/?sheme-ren shuo (*guo) ta shi hao ren?
   Who/what-man say EXP he be good man
   'Who says that he is a good man?'
   (= He is not a good man.)

(82)
A: .... Renjia ziji yao jia ren, ni bu
   She self want marry man you not
   yuanyi ta jia ya!
   willing she marry PART
   'She herself wants to marry a person,
   but you don't want her to.'

B: Shei/*sheme-ren shuo (*guo) wo bu yuanyi
   Who/what-man say EXP I not willing
   ta jia?
   her marry
   'Who says that I don't want her to?'
   (= I do want her to get married.)
   (Cao, p. 376)

(83) Shei/sheme-ren shuo (guo) ta shi hao ren?
    Who/what-man say EXP he be good man
    'Who says (or: has said) that he is a good man?'
    (i. a question seeking information)
    (ii. a rhetorical question, = Nobody says
     (or: has said) that he is a good man.)

The question sentences in (81) and (82) are rhetorical questions. The meaning conveyed by them are similar to typical rhetorical particle questions in that a positive
question means a negative assertive, as in (81) and that a
negative question means a positive assertive, as in (82),
though each sentence starts with a question word. The *shei
shuo* in these two sentences are frozen, like *shei jiao*, in
that *sheme ren* cannot replace *shei* and that *shuo* cannot be
followed by an aspectual particle like *guo 'EXP'*. In
contrast, (83) can have *shei* replaced by *sheme ren* and *shuo*
followed by *guo*. A more interesting formal constraint is
that this kind of rhetorical question like (81) and (82) is
always formed by picking up the statement made by a
conversational partner in the previous turn and placing it
after *shei shuo*. Sentences in linguistic contexts like (81)
and (82) can never be understood as questions seeking
information; speaker B is not interested in knowing who says
the relevant statement, because he just hears A making the
statement. What B tries to convey is merely to deny the
statement made by A. The presence of *shei shuo* in contexts
like (81) and (82) can be seen as merely triggering the
addition of an element of negation in the interpretation of
the rhetorical questions. In contrast, the presence of *shei
shuo* in (83), when used as a rhetorical question, actively
gets involved in the interpretation, referring to a null set
of persons.
3.4.3 Preposed Question Words and Counterfactuals

In the previous section, we have presented polarity sensitive items and special frozen items that force the interpretation of rhetorical questions on question sentences. Now in this section, we examine two more linguistic contexts that also make question sentences understood as rhetorical questions. These two contexts are the counterfactual sentences which contain question clauses and the preposition of question words in negative questions.

When a question word in a negative question grammatically functions as an object of a verb and is preposed to a preverbal or sentence-initial position, then this question sentence is not understood as a real question, but as a rhetorical question. Consider the following sentences:

(84)  
  a.  Ta meiyou nian guo [NP sheme shu]?  
      He not read EXP  what book  
      'Which book didn't he read?'
  b.  Ta [NP sheme shu] meiyou nian guo?
  c.  [NP Sheme shu] ta meiyou nian guo?

(85)  
  a.  Ta bu renshi [NP na yige ren]?
      He not know  which one man
      'Which man doesn't he know?'
  b.  Ta [NP na yige ren] bu renshi?
  c.  [NP Na yige ren] ta bu renshi?  

Sentences (84a) and (85a) are echo questions, asking for some information which the speaker does not hear clearly.
On the other hand, the other four sentences, the (b) and (c) sentences, are more often than not interpreted as rhetorical questions.

Chinese counterfactual sentences are different from the English counterparts in that they do not have an overt grammaticalized form on the part of the verb, and thus are usually not distinguishable from pure conditional sentences. Since counterfactuals and non-counterfactuals have the same form, it is frequently the contexts that determine which interpretation is appropriate. However, as Eifring 1988 points out, the use of bu shi 'not be' in conditional sentences in most cases turns them into counterfactuals and the use of yaobushi 'if not' for some speakers [including us] is solely for counterfactuals. We find that when a question occurs in a counterfactual sentence with the lexical item yaobushi, the question is surely to be interpreted as a rhetorical question. Below we give four examples, two exemplifying particle questions and two exemplifying question-word questions.

(86) Yaobushi ta bangmang ni, ni neng zuo de wan ma?
    If-not he help you you can do finish QP
    'If he had not helped you, could you have finished it?'
    ( = If he had not helped you, you could not have finished it.)
The questions in sentences (86)-(89) are unequivocally rhetorical questions. Positive particle questions convey negative assertions, as in (86), while negative particle questions convey positive assertions, as in (87). Positive question-word questions convey meanings involving a null set of persons, as in (88), while negative question-word questions convey meanings involving universal quantification, as in (89).

Notice that conditional sentences with *yaobushi* is not quite the same as conditional sentences with *yaoshi* ... *bu*. The former can be interpreted only as counterfactual, whereas the latter may be understood as either purely
hypothetical or counterfactual. To see that this is so, consider the following sentences:

(86) Yaobushi ta bangmang ni, ni neng zuo
def wan ma?
'DE finish QP
‘If he had not helped you, could you have
finished it?’
( = If he had not helped you, you could not
have finished it.)

a. *Yaobushi ta bangmang wo, wo (yiyang) neng zuo
de wan. (yiyang ‘still’)
b. Yaobushi ta bangmang wo, wo bu neng zuo de wan.

(90) Yaoshi ta bu bangmang ni, ni neng zuo
def wan ma?
'DE finish QP
i. ‘If he does not help you, can you finish
doing it?’ (purely hypothetical)
ii. ‘If he had not helped you, could you have
finished it?’ (counterfactual)

a. Yaoshi ta bu bangmang wo, wo (yiyang) neng zuo de wan. (yiyang ‘still’)
b. Yaoshi ta bu bangmang wo, wo bu neng zuo de wan.

Before we explain the results of the above sentences, let us explain what a real question is first. A real question is one that seeks information; the speaker is not sure which one of the two possible answers, if it is a case of particle questions, will make a true statement. In this sense, a real particle question can have either a negative or a positive answer. Sentence (90), structurally speaking, can be answered by either (90a) or (90b). On the other hand, a negative answer to sentence (86) is acceptable, while a
positive answer is not acceptable. This confirms our intuition that the question of (86) can be used only as a rhetorical question.

3.5 Concluding Remarks

In this chapter, we have utilized semantic and pragmatic principles to explain why a rhetorical question is in fact a statement rather than a request for information. We claim that there are two types of rhetorical questions, one involving negation and the other not.

We interpret rhetorical questions involving negation as the speaker’s challenge for the hearer to refute a logically necessary deduction, which the speaker believes that the hearer cannot possibly refute on the basis of mutual knowledge. The rhetorical questions not involving negation are used pragmatically to remind the hearer of a fact mutually understood. Both types serve the same function pragmatically: to bring from the pool of common knowledge to the foreground a fact relevant to the situation. It is this foregrounding or highlighting a fact that explains why rhetorical questions always carry a stronger force than the corresponding assertions.

We also find some constructions which, when used in question sentences, usually force a rhetorical reading. But it should be kept in mind that, without these constructions, whether a question is a real question or a rhetorical
question is still primarily determined by the context and the mutual understanding of the speaker and the hearer.
Notes

1. Of course, a lot of linguists in discussing question sentences may mention or briefly discuss rhetorical questions, but to my knowledge these three are the only works which are entirely or mostly devoted to this topic.

2. About a half of this section is taken and revised from my paper, 'Question Words as Quantifiers in Chinese', which was published in *Journal of Chinese Linguistics* 1990, Vol. 19, pp. 1-34.

3. Actually, the deduction process in this case involves more than *modus ponens*. The (a) premise is represented in predicate logic as follows:

\[ \forall x: \text{person}(x) \ [\exists y: \text{person}(y) \ [((x = y) \ & \ (x \text{ speak ill of } y)) \rightarrow \neg(x \text{ is a friend of } y)] \]

Universal instantiation and existential instantiation are also involved in the deduction. But what concerns us here is the principle only, so we omit the details.

4. For the different conversational maxims, see Grice 1967.

5. For instance, see the similar English data discussed by Sadock 1971. But his main emphasis is on the link between rhetorical yes-no questions and tag questions and on what abstract syntax to posit for both kinds of constructions. He neither talks about rhetorical *wh* questions, nor gives any explanation why the negated form is used.

6. A similar sentence with a negation can also be
interpreted as a rhetorical question, as can be seen by (i) below which means (ii).

(i) Doesn’t everybody want a job that good?
(ii) Everybody wants a job that good.

This is an instance of (11) and (12). But not every sentence that involves quantification can be interpreted as a rhetorical question in English. Greg Lee has pointed out to me that he does not consider that (iii) and (iv)

(iii) Does nobody want a job like that?
(iv) Does somebody want a job like that?

can be interpreted as rhetorical questions. He thinks that (iii) with stress on ‘nobody’ and (iv) on ‘somebody’ suggest incredulity, but not as rhetorical questions. For some factors that may affect the interpretation of question sentences preferably as rhetorical questions, see the discussion in section 4.4.

7. This example is from Pope (1976:43).

8. In the dialect that we use, we think it more natural in spoken language to use taitai than gizi.

9. Alleton’s rendition for this example is ‘you’re joking or not? (is what you are saying a joke or not?’ (p. 288), which I think is a mistaken translation.

10. Hudson (1975:13, note 6) comments that he has no objection to the syntactic analysis of yes-no questions as alternative questions, but on the semantic level there are good reasons to distinguish the two types of questions. He
says explicitly that, in particular, alternative questions can never be conducive.

11. The work that Li and Thompson refer to is Lu 1942. I do not have access to the 1942 version, and the version in the University of Hawaii library was published in 1974 in Taiwan by Wenshizhe Chubanshe. But according to Ma's book, *Hanyu Yufaxue Shi 'The History of the Study of Chinese Grammar'* (1986), which lists Lu's work in three versions, (a) 1941-1944, (b) 1956, revised, and (c) 1982, we infer that the version we located must be the 1956 version, as it was published in Taiwan in 1974. Hereinafter, if we refer to Lu 1956 again and cite a page number, we mean the one published in Taiwan.

12. This example is taken from Lu (1956:297).

13. Both Greg Lee and Patricia Lee basically agree with these judgments, but they point out the following two exceptional scenarios:

(i) A: Everyone cheats like crazy.
   B: John doesn't cheat like crazy.
   A: (not hearing quite what B said) WHO doesn't cheat like crazy?

(ii) A: I want to have a picnic; do you know of any parks that aren't pretty crowded in the summer?
   B: Yosemite is one of the few parks that isn't pretty crowded in the summer.

However, the second (A) sentence in (i) only works with
special quotational intonation and echo questions, as is shown in (i). As to the (B) sentence in (ii), it sounds perfectly acceptable to both of them and it's not clear what's going on here.

Patricia Lee also comments that of the sentences in (50)-(53), only those in (50) and (51) have a rhetorical-only interpretation and that seems to relate to their idiomaticity.

14. This is usually interpreted as an echo question.
15. This sentences is not grammatical. But if we add an adverb like juran 'incredible, to my surprise', then the new sentence, though still in the positive form, is acceptable, as in (i).

(i) Ta juran hao-yisi bu lai.
He incredible not-bashful not come
'It is incredible that he unbashfully did not come.'

Even so, (i) cannot be used as answer to the question (a), either.

16. By saying that NALI₂ has lost the meaning 'where' of NALI₁, we assume that historically they may come from the same source. But this may not be right. Taiwanese, which is supposed to retain more proto-Chinese features than Mandarin, does not support this assumption. Consider the data below:

(i) I tue-tsit-ui bo khi kue?
He where not go EXP
a. 'Where did he not go?'
b. as a rhetorical question = 'He has been to all the places.'
The sentence in (i) corresponds to the Mandarin NALI₁, as in (73a) and (73b) and the sentence in (ii), to the Mandarin NALI₂ in (73c). Though the Mandarin NALI₁ and NALI₂ have the same lexical form, the corresponding lexical items in Taiwanese, tue-tsit-ui and na, are different.

17. These examples are taken from Tang (1981:253-54).
4.1 Three Views of the A-not-A Questions

Previous works tend to relate A-not-A questions to other question forms. There are authors who think that A-not-A questions, like alternative questions, are derived from the conjoining of two antagonistic yes-no questions (for instance, Lu 1985). But most authors view A-not-A questions as derived from alternative questions (see Wang 1965 and 1967, Rand 1969, Lin 1974, Tang 1981, and Li and Thompson 1981; hereinafter, we refer to this view as the view of Wang and Rand); most of these works are done in the transformational generative framework of earlier times. Recently, Huang 1988 proposes a third view. He thinks that there are two different types of A-not-A questions: 'AB not A', and 'A not AB'. The former type refers to an A-not-A question like (1) and the latter, (2), with A = xihuan 'like', B = zheben shu 'this book'.

(1) Ta xihuan zheben shu bu xihuan? He like this book not like 'Does he like this book or not?'

(2) Ta xihuan bu xihuan zheben shu? He thinks that these two types of A-not-A questions come from different sources. According to him, none of them comes from coordinate reduction.

Which of these three views offers a more plausible explanation of A-not-A question? If we consider only limited examples within each of the views, all these three
seem to be able to account for their own data. However, to compare and assess these three views, we have to bring in a wider variety of examples and scrutinize each of the views in turn. The view held by Lu 1985 will be examined in section 4.2, while the view of Wang and Rand will be inspected in section 4.3. In section 4.4, we discuss the view of Huang 1988. Then in section 4.5, we present evidence against the view of Wang and Rand, and in section 4.6 we discuss Huang's formulation of A-not-A questions. We provide our view of the formation of A-not-A questions in section 4.7. The final section is a brief conclusion.

4.2 Lu's View

Of the three different views, Lu 1985 is very simple and can be refuted easily. According to him, both A-not-A questions and disjunctive questions are formed by combining two yes-no questions. The former is different from the latter in that of the two questions the first one is positive and the second one is negative. In his view, a sentence like (3a) is derived by putting (3b) and (3c) together.

\[(3)\]
\[\begin{align*}
\text{a. } \text{Ni qu bu qu?} \\
\text{You go not go} \\
\text{Will you go or not?'}
\end{align*}\]
\[\begin{align*}
\text{b. } \text{Ni qu (ma)?} \\
\text{You go QP} \\
\text{Will you go?'}
\end{align*}\]
c. Ni bu qu (ma)?
    You not go QP
    'Will you not go?'

This postulation is very simple and straightforward, but it is an impossible account for the formation of A-not-A questions for the following reasons.

First, note that the particle that goes with yes-no questions is ma, while that with alternative questions or A-not-A questions is ne, as can be seen in (4).

(4)
a. Ni qu ma? (yes-no)
   You go QP
   'Will you go?'

b. Ni bu qu ma? (yes-no)
   You not go QP
   'Will you not go?'

c. Ni qu bu qu ne? (A-not-A)
   You go not go QP
   'Will you go or not?'

d. Ni jintian qu ne haishi mingtian qu ne?
   You today go QP or tomorrow go QP
   'Will you go today or tomorrow?'
   (alternative question)

Second, note that for adverbs that usually go with question sentences, some can only go with yes-no questions, whereas some others can go only with A-not-A questions.

Consider (5)-(8).

(5)
a. Ni zhende xihuan ta ma? (yes-no)
   You really like he QP
   'Do you really like him?'

b. Ni zhende bu xihuan ta ma? (yes-no)
   You really not like he QP
   'Do you really not like him?'

c. *Ni zhende xihuan bu xihuan ta? (A-not-A)
Sentences (5) and (6) show that zhende and nandao can go with yes-no questions only. Sentences (7) and (8), on the other hand, show that daodi and jiujing can go with A-not-A questions only. If A-not-A questions are derived in the way as Lu believes, there should be no such differences. The fact that A-not-A and yes-no question go with different adverbs indicate that his postulation cannot be maintained.

Third, notice that yes-no questions may be found in sentences involving a quantifier, whereas A-not-A questions cannot have one preceding the A-not-A form. Consider (9) and (10) for example.
(9)  
a. Ta meitian lai (ma)? (yes-no)  
   He each day come (QP)  
   'Does he come every day?'  

b. Ta meitian bu lai (ma)? (yes-no)  
c. *Ta meitian lai bu lai (ne)? (A-not-A)

(10)  
a. Meige ren yao lai (ma)? (yes-no)  
   Each man want come (QP)  
   'Does everyone want to come?'  

b. Meige ren bu yao lai (ma)? (yes-no)  
c. *Meige ren yao bu yao lai (ne)? (A-not-A)  

Again, if what Lu postulates is feasible, we should be able to get (9c) from (9a) and (9b), and get (10c) from (10a) and (10b). But the data of (9) and (10) have shown us that quantifiers like meitian 'every day' and meige ren 'everybody' make the two A-not-A questions unacceptable.

Furthermore, our intuition of a typical A-not-A question is that it just asks one question, not two questions which are syntactically as well as semantically contradictory to each other. In all, our intuition and the above three kinds of evidence have made us believe that Lu 1985 cannot be right. Now we turn to the next section to present the view of Rand and others, reserving criticism against their approach in sections 4.4 and 4.5.

4.3 The View of Wang and Rand

In this view, the A-not-A questions are usually considered to be a subtype of the choice type or disjunctive
questions and the former is also considered to be derived from the latter. But it is recognized that they are not quite the same. For instance, in the disjunctive questions the constructions involved in questioning may be two or more sentences or parts of sentences like adverbs, verbs and nouns, whereas in the A-not-A questions the elements involved in questioning are always two verbals, such as adjectives, auxiliary verbs or verbs, with the affirmative one preceding the corresponding negative one. Rand (1969:55) considers that the second construction is the 'syntactic negative' of the first construction. Wang (1965:464) has the same view, although he does not explicitly say so. He formulates a phrase structure rule to derive the negative morpheme.

According to this view, different forms of A-not-A questions are all derived either from disjunctive questions (Rand's version) or from disjunctive predicates (Wang's version) through an ordered set of rules. The major rule is a transformation rule like (11a) or (11b).

(11)


\[
\text{Structural Description:} \\
\text{Nom} \quad *\text{VP} \quad X \quad \text{BU} \quad *\text{VP} \quad X \\
1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \\
\]

\[
\text{Structural Change:} \\
(a) \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \\
(b) \quad 1 \quad 2 \quad 4 \quad 5 \quad 6 \\
\]
Conditions:
(i) $2 + 3 = 5 + 6$
(ii) if $2 = BA$ or BEI, or $3$ contains COMP then only (b) change is possible.

b. A-not-A Deletion (Rand 1969:55)

Structural Description:

<table>
<thead>
<tr>
<th>X</th>
<th>Y*</th>
<th>Z(FP)</th>
<th>haishi</th>
<th>X</th>
<th>Y*</th>
<th>Z(FP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Structural Changes:
(a) $4 \rightarrow$ null
(b) $\{3, 7\} \rightarrow$ null
(c) $5 \rightarrow$ null

Conditions:
(i) as with T-haishi [this is not relevant here, but we list it here for reference]
(ii) $2 = 6$ except 6 also contains BU, which is the negative morpheme
(iii) the $Y^*$ of the second clause is not equal to the syntactic negative of the $Y^*$ of the first clause

In Wang’s version (11a), the symbol *VP is intended to denote the leftmost constituent dominated by VP; COMP refers to complement. In Rand’s formulation (11b), FP means final particle; the use of $Y^*$, as he admits (p. 35), is ad hoc and is used to indicate primary stress and its immunization from certain deletions and pronominalization. He comments that structural change (a) deletes *haishi ‘or’ if the two clauses joined by it differ only by the second clause being the syntactic negative of the first clause and that structural change (b) deletes from either $S_1$ or $S_2$ [the first clause or the second clause] the identical elements following the negated item. He adds that structural change (c) deletes the identical elements preceding BU ‘not’ in $S_2$.² Putting
aside the formalized differences and some vagueness, the spirit of Wang’s and Rand’s formulations is basically the same. Namely, they both believe that A-not-A questions are derived from juxtaposed constructions. Whereas Wang thinks that the juxtaposed are one affirmative predicate and one negative predicate without haishi, Rand thinks that the juxtaposed are one affirmative clause and one negative clause jointed by a disjunctive haishi.

In A-not-A question sentences like (12), which are usually considered in Chinese linguistics to have a neutral aspect,

(12)

a. Ta xihuan zheben shu (haishi) ta bu xihuan
   He like this book or he not like zheben shu?
   this book
   ‘Does he like this book or not?’

b. Ta xihuan zheben shu bu xihuan zheben shu?

c. Ta xihuan bu xihuan zheben shu?

d. Ta xi bu xihuan zheben shu?

e. Ta xihuan zheben shu bu xihuan ?

f. Ta xihuan zheben shu bu 

(12c)-(12f) are considered in this view to be derived from either (12a) or (12b). Sentence (12b), if not considered to be generated at the level of phrase structure rule, is derived from (12a) with the deletion of the conjunctive haishi ‘or’ first and then the subjective NP or the second clause. Sentence (12c) is derived from (12b) through the reduction of the objective NP in the first clause. And
(12d) is obtained through a phonological rule. This rule is to the effect that in a sentence with the structure of NP₁ + V₁ + BU + V₂ + NP₂ where V₁ = V₂, the second syllable of V₁, if disyllabic, gets deleted. These sentences have one part of the first or the left predicate deleted. In contrast, (12e) and (12f) have one part of the second or the right predicate deleted. In (12e) the deleted part is the objective NP and in (12f) everything right after the negative BU 'not' is deleted.

As to A-not-A sentences with the experiential aspect guo or the perfective aspect le, the primary rule is still the transformational rule for A-not-A deletion, with the addition of two rules to take care of the aspectual problems. For instance, in examples like (13),

(13)  
  a. Ta (you) mai shu BU you mai shu?  
      He YOU buy book not YOU buy book  
      'Did he buy books?'  
      (you here is considered to be a perfective  
      aspect marker, and BU is the underlying  
      negative morpheme)  

     b. Ta you mei you mai shu?  
     c. Ta mai le shu mei you ?  

Both Wang and Rand consider (13b) and (13c) to be derived from the underlying (13a). Sentence (13b) is obtained by first deleting the VP of the first predicate and then changing the BU into mei. And the derivation of (13c) from (13a) takes three steps. First, delete the VP of the second predicate, then change BU into mei and finally shift the
aspectual you of the first predicate to the postverbal position within the same predicate and change it into le.

This view seems to have at least three advantages. First, in the phrase structure rules, there is no need for two separate derivations to generate both A-not-A questions and alternative questions. One derivation is sufficient, for the former is transformationally derived from the latter through reduction. The second advantage is that this view can account for the close relation in meaning between these two kinds of question forms. They consider that Lisi qu bu gu? 'Will Lisi go or not?' is synonymous with Lisi qu haishi Lisi bu gu? 'Will Lisi go or Will he not go?'. This seems to be intuitively acceptable, as both questions seem to request the hearer to choose between an affirmative and a negative answer to the question whether Lisi will go or not (but see the next two sections). The third advantage is that this formulation seems to reflect the fact that the A-not-A questions are combinations of the direct positive answers and negative answers to the questions. For instance, to the A-not-A question, ta lai bu lai? 'Will he come or not?', the directive positive answer is ta lai 'he will come' and the negative answer is ta bu lai 'he won't come'. It is intuitively plausible that ta lai bu lai? is the combination of the positive ta lai and the negative ta bu lai, with the second subject ta deleted. In the next two
sections, however, there is evidence that these three advantages of the formulation of Wang and Rand do not hold.

4.4 Huang's View

Huang 1988 proposes a view different from that of Wang and Rand. He does not deny that semantically A-not-A questions and alternative questions are similar to each other, but he rejects the view that A-not-A questions are syntactically related to alternative questions. He argues that A-not-A questions are not syntactically derived from alternative questions through coordinate reduction. His arguments are basically of the following two types: (1) lack of observing the constraints of coordinate reduction, and (2) polarized acceptability with respect to the constraints of lexical integrity, preposition stranding and wh-island condition.

However, we find that of all his arguments only the contrastive acceptability in terms of his so-called wh-island condition can be used against the view of Wang and Rand. In what follows, we present Huang's arguments and discuss why all of them except one do not work as he expects them to.
4.4.1 Directionality Constraint and Immediate Dominance Condition

The first type of Huang's arguments is based on the reasoning that if A-not-A questions are derived via coordinate reduction, then they should observe the constraints on coordinate reduction. The two constraints that Huang discusses are directionality constraint and Immediate Dominance Condition. According to him (Huang 1988:248), directionality constraint "is proposed by Ross (1967) and is already proved to be universal" [translation mine]. This constraint states that if the identical constituents are on left branches, deletion applies forward and that if they are on right branches, it operates backward. Huang cites the following English examples to illustrate this constraint.

(14)
   a. John sang and John danced.
   b. John sang and danced.
   c. * Sang and John danced.
a. John danced and Mary danced.

b. John and Mary danced.

c. *John danced and Mary

Sentence (14a) can undergo forward deletion and derive (14b), but it cannot undergo backward deletion to derive (14c). The reason that the derivation of (14b) is grammatical, but not (14c), is because the identical constituent, John in this case, is on the left branch as is shown by the underlying tree structure. The different acceptability of the sentences in (15) can be accounted for similarly.

He says that this constraint also applies in Chinese. His examples are below:

(16)

a. Zhangsan changge, Zhangsan tiaowu.
Zhangsan sang  Zhangsan danced
'Zhangsan sang and Zhangsan danced.'

b. Zhangsan changge, tiaowu.

c. * Changge, Zhangsan tiaowu.

(17)

a. Zhangsan changge, Lisi changge.

b. Zhangsan , Lisi changge.

c. *Zhangsan changge, Lisi

These two sentences can be explained in exactly the same way as sentences (14) and (15).

Referring to the sentences in (12) (repeated here for ease of discussion) and its underlying tree structure (18),
Huang says that only the derivation of (12b)-(12d) observes the directionality constraint.

(12)
  a. Ta xihuan zheben shu (haishi) ta bu xihuan
     He like this book or he not like
     zheben shu?
     this book
     'Does he like this book or not?'
  b. Ta xihuan zheben shu bu xihuan zheben shu?
  c. Ta xihuan bu xihuan zheben shu?
  d. Ta xi bu xihuan zheben shu?
  e. Ta xihuan zheben shu bu xihuan ?
  f. Ta xihuan zheben shu bu ?

(18)

Forward deletion is applied to delete the second ta 'he' to derive (12b) from (12a), because it is on the left branch. The deletion of the first zheben shu 'this book' in (12c) is backward deletion, because it is on the right branch. He also says that the first huan, which in fact is the second
syllable of the verb, gets deleted through backward direction; we do not know how this can be done in his postulation, but we let it go at that anyway. The derivations of (12e) and (12f), which have zheben shu ‘this book’ and xihuan zheben shu ‘like this book’ deleted respectively, are by means of forward deletion. But these derivations do not follow the directionality constraint, according to which the deletion of the two phrases should apply backward, as they are on left branches. Huang thus concludes that at least some A-not-A questions are not derived through coordinate reduction.

But can this argument of his really count as evidence against the view of Wang and Rand? We do not think so. Recall that Huang bases this argument on two crucial assumptions. His first assumption is that Wang and Rand consider A-not-A transformation as coordinate reduction and his second assumption is that the directionality constraint on coordinate reduction is, as Huang puts it, 'proved to be universal'.

However, contrary to Huang’s first assumption, Wang (1967:234) clearly says, "there are, however, several related coordinate constructions which do not conform to these principles of conjoining and deleting". He mentions two types: disjunctive questions and A-not-A questions. And Rand also says that A-not-A is "a limited case of the choice type [the disjunctive questions]" (p.34). All that Wang and
Rand asserts that A-not-A questions come from disjunctive or alternative questions.

Furthermore, even if one accepts that A-not-A transformation belongs to coordinate reduction, the argument that the directionality constraint on coordinate reduction is universal is doubtful. It is true that this constraint can explain both the grammatical and ungrammatical sentences in (14)-(17), but there are some counterexamples. Sanders (1970:498, n. 13) notices that the directionality constraint does not hold with the following sentences.

(19) John can play the piano, and Bill can, too.
(20) John didn't sing, and Bill didn't, either.
(21) Sweden might go to war, and even Monaco might.
(22) Did John sing or did Bill?
(23) Are you going or not?

We also find that the constraint cannot hold with the following English and Chinese sentences.

(24) John likes Mary, but Peter doesn't.
(25) John is a student, isn't he?
(26) Ta yao qu kan dianying, wo ke bu qu. He want go watch movie I EMP not go
     'He wants to go watch the movie, but I don't'
(27) Zhangsan zhu fan, Lisi chi. Zhangsan cook rice Lisi eat
     'Zhangsan cooked rice and Lisi ate it.'

Lin (1974:57) also observes that the directionality constraint does not hold for reduced disjunctive questions in Taiwanese, as is shown by (28) and (29).
In view of the counterexamples listed above, we agree with Lin when he says, "we tend to think that both the rule of Gapping and the directionality constraint in conjunction reduction are not universal, but language-specific. The directionality condition may even be structure-specific." (p. 57). We also think that he is well grounded in saying, "in view of the fact that none of the previous formulations about conjunction or coordination reduction can handle the deletions in conjunctions as well as those in disjunctions [see his discussion on pp. 57-63], we are going to treat the reduction of disjunctive questions as a distinct type of reduction from conjunction or coordination reduction" (p. 63).

To counter the view of Wang and Rand, we think, Huang has to first present new data which cannot be accounted for by their formulation rule and then propose his own formulation to include the new data. But instead of doing this, he merely ascribes two assumptions to their view and discuss the same kind of data on the basis of these two assumptions, though he later does offer an alternative formulation. But the problem with his argument is that these two assumptions are false. Therefore, we do not think
that his argument of directionality constraint can invalidate the view of Wang and Rand.

Huang's second argument is conducted in the same way as the first one. He cites Tai 1969 and says that coordinate reduction in Chinese must observe the constraint of Immediate Dominance Condition in addition to the directionality constraint. The Immediate Dominance Condition is phrased as in (30).

(30) In a coordinate structure, only constituents which are immediately dominated by conjuncts can undergo identity deletion (Tai 1969:79).

Huang says that this condition nicely explains the following sentences in Chinese, which are in sharp contrast to the corresponding English sentences.

(31)
      'Zhangsan ate rice and Lisi ate noodles.'

   b. *Zhangsan chi fan, Lisi mian.
The reason that (31b) is not grammatical in Chinese is because the deleted verb chi 'eat' of S₃ is not immediately dominated by the second conjunct, S₃ here, as is shown in (31c). The sentences in (32) are explained similarly. This condition is said to be unique to Chinese, as the two English sentences (33) and (34), which correspond with (31b) and (32b), respectively, do not observe this constraint.

Huang says that, however, in Chinese sentences like (35), mentioned previously as (27), and (36) violate this condition.
(35) Zhangsan zhu fan, Lisi chi.
Zhangsan cook rice Lisi eat.
'Zhangsan cooked rice and Lisi ate it.'

(36) Ni quan ta mai shu bu quan ta mai
You advise he buy book not advise he buy?
'Did you advise him to buy books or not?'

In (35), the deleted fan 'rice' in the second conjunct is not immediately dominated and yet it is grammatical. In (36), shu 'book' is not immediately dominated by the second conjunct bu quan ta mai shu 'not advise him to buy books' and yet it is perfectly acceptable. At this point, he concludes that "like the directionality constraint discussed in the last section, we have reasons to believe that Tai's Immediate Dominance Condition is rather explanatory and convincing. Thus the grammaticality of (15) and (16) [our (35) and (36)] once again indicates that some sentences which seem to be derived from coordinate reduction are in fact derived from other sources." [translation mine] (p. 249).

But Lin (1974:73) notes that some coordinate sentences are not constrained by the Immediate Dominance condition, though he admits that this condition "is essentially right." Below are his examples.
(37) a. Ta xihuan da wo, ta xihuan ma wo.
He like beat me he like scold me
'He likes to beat and he likes to scold me.'
b. Ta xihuan da wo, xihuan ma wo.

c. Ta xihuan da wo, ma wo.
d. *Ta xihuan da ma wo.

(38)

a. Ni ai ta haishi ni hen ta?
You love he or you hate he
'Do you love him or hate him?'

\[
S \\
\text{haishi} \quad S \\
\text{NP} \quad \text{VP} \\
\text{ni} \quad \text{ai} \quad \text{ta} \\
\text{NP} \quad \text{VP} \\
\text{ni} \quad \text{hen} \quad \text{ta}
\]

b. Ni ai ta haishi hen ta?

\[
S \\
\text{NP} \quad \text{VP} \\
\text{haishi} \\
\text{VP} \\
\text{NP} \\
\text{V} \\
\text{ni} \\
\text{ai} \quad \text{ta} \\
\text{VP} \\
\text{NP} \\
\text{V} \\
\text{hen} \quad \text{ta}
\]

c. *Ni ai haishi hen ta?

Sentences (37b) and (38b) are derived from (37a) and (38a), respectively, first by deleting the repeated subject NP in the second conjunct and then by tree-pruning and relabeling.
And (37c) is further derived from (37b) through an analogous process. Now, in both (37c) and (38b), two identical object NP's have come to be immediately dominated by conjuncts, but neither of them can be deleted, as is shown by the ungrammaticality of (37d) and (38c).

Again, like the argument about the directionality constraint, this argument about the Immediate Dominance Condition cannot be counted as evidence against the view of Wang and Rand. What Huang has argued, if valid, only says, in effect, that some A-not-A questions do not follow the Immediate Dominance Condition. His argument cannot disprove the view of Wang and Rand that A-not-A questions come from disjunctive questions.

4.4.2 Lexical Integrity and Prepositional Stranding

The second type of Huang's arguments is pertinent to the contrastive acceptability with lexical integrity, preposition stranding, and island condition. In this section, we discuss only the first two, leaving the island condition for Section 4.4.3.

Lexical integrity refers to the constraint in which a syntactic rule which belongs to the level of phrases cannot directly involve the internal structure of lexical items or words. The following pair of sentences illustrates the contrast with respect to lexical integrity.
(39)

a. Ta ke bu keyi chu lai?
   He KE not can out come
   'Can he come out or not?'

b. *Ta keyi chu lai bu ke?

In (39), the ke is only the first syllable of the auxiliary verb keyi. Notice that the syllable can stand alone as in (39a), but not in (39b). According to Huang, (39a) violates the otherwise valid constraint of lexical integrity. He concludes that (39a) cannot be derived through coordinate reduction or in the way described by Wang and Rand.

But of course Wang and Rand never consider that the change from keyi into ke is a syntactic process. Both Wang (1965:465) and Rand (1969:62) make it very clear that they consider this change a phonological rule. Their formulation states that in A-not-A questions when it is of the form 'v bu v' and when the V is disyllabic, then the second syllable of the first V can be deleted by a phonological rule. Their formulation can account for both the grammatical (39a) and the ungrammatical (39b). So again Huang's argument based on lexical integrity cannot counter the view of Wang and Rand. 5

Preposition stranding refers to the phenomenon in which a preposition is left stranded without having an object NP. Huang says that preposition stranding is forbidden in Chinese and that some A-not-A questions do not observe this constraint, as in (40) and (41).
He considers the *cong 'from' in (40) and *ba in (41) to be prepositions. He says that (40b) and (41b) are not acceptable because they violate the constraint of preposition stranding. But notice that (40a) and (41a) are perfectly good sentences. This, he says, explains that at least some A-not-A questions such as the (a) sentences in (40)-(41) are not derived through coordinate reduction.

We think that whether or not the name of the transformation which (40a) and (41a) undergo is 'coordinate reduction' is not an important issue. The real issue is that since Huang is to propose an alternative formation of A-not-A questions which he thinks is better than that of Wang and Rand, he should have proved that theirs cannot account for (40a) and (41a). But the formulations in (11) by Wang and Rand can account for (40a) and (41a) and prevent the derivation (40b) and (41b). The (ii) condition of (11a) clearly states that if the verb is *ba or *bei then only structure of the type of (41a) will be derived, but not that of (41b). Notice that the *ba's in (41) are what Li and
Thompson (1974, and 1981:356-369) call co-verbs, which are historically verbs but are now used sometimes as verbs and behave partly like verbs and partly like prepositions. The cong of (40) is considered to belong to this category, too. Here Huang again is merely trying to offer another alternative without proving that the formulation of Wang and Rand does not work.

4.4.3 Island Condition

Huang’s last argument concerns the different acceptability between A-not-A questions and disjunctive questions when they each occur as sentential subjects or as relative clauses. He says that the difference is because A-not-A questions have to observe the wh-island condition, whereas disjunctive questions do not. He cites the following sentences to support his argument.

(42)

a. *[Wo qu bu qu Meiguo] bijiaohao?
   I go not go America better
   ‘Which is better, I go to America or not go to America?’

b. [Wo qu Meiguo haishi bu qu Meiguo]
   bijiaohao?

(43)

a. *Ni xihuan [zunzhong ni bu zunzhong
   You like respect you not respect
   ni de] ren?
   you DE person
   ‘Which kind of person do you like, those who respect you or those who do not?’

b. Ni xihuan [zunzhong ni haishi bu zunzhong ni
de] ren?
The clauses within the square brackets in (42) are sentential subjects and those in (43) are relative clauses. The (a) clauses in (42) and (43) are A-not-A questions, whereas the (b) sentences are disjunctive questions. According to Huang, the fact that the (a) sentences are not grammatical but (b) ones are is evidence that A-not-A questions and disjunctive questions do not belong to the same syntactic category.

This time we think that Huang has really given very strong evidence that A-not-A questions are not syntactically derived from disjunctive questions. The derivation of the bracketed clauses in the (b) sentences from the (a) sentences completely follows the formulation of Wang and Rand. But then why are the (b) sentences, which are derived from the grammatical (a) sentences, ungrammatical? We support this argument of Huang's because we do not think that the work of Wang and Rand can offer any answers to this question. A reasonable answer is, as Huang has argued, that A-not-A questions are not derived from disjunctive questions.

4.5 More Evidence Against the View of Wang and Rand

In the last section, Huang has presented a very strong argument against the view of Wang and Rand that A-not-A questions are derived from disjunctive questions. In this section, we try to provide more evidence against this view.
Our arguments are based on the relation of A-not-A questions and the following: negation and aspect, modification by adverb, and quantification.

4.5.1 Negation and Aspect

There are three negative forms in Mandarin: bu, mei(you), and bie. The negative bie is used only in imperative sentences, whereas the two other negative forms cannot be used there, as can be seen in (44).

(44) 
  a. Qing bie chao wo. 
     Please not bother me 
     'Please don't bother me.' 
  b. *Qing bu chao wo. 
  c. *Qing mei(you) chao wo. 

In non-imperative sentences, the principal difference between bu and mei(you) is whether completion is involved. The use of bu is to negate an action which does not involve completion, whereas mei(you) is to deny the existence of an action or state which involves completion. Thus sentences which have auxiliary verbs, or have as their main predicate stative adjectives and verbs (the verb you 'have' is an exception), are negated with bu and not with mei(you). This is illustrated by the following examples.

(45) 
  a. Ta shi lushi. 
     He be lawyer 
     'He is a lawyer.' 
  b. Ta bu shi lushi. 
     'He is not a lawyer.'
c. *Ta mei(you) shi lushi.

(46)

a. Wo zhidao ta zhu zai Taibei.
   I know he live in Taipei
   'I know that he lives in Taipei.'

b. Wo bu zhidao ta zhu zai Taibei.
   'I don't know that he lives in Taipei.'

c. *Wo mei(you) zhidao ta zhu zai Taibei.

(47)

a. Ta (hen) gao.
   He very tall
   'He is (very) tall.'

b. Ta bu (hen) gao.
   'He is not (very) tall.'

c. *Ta mei(you) (hen) gao.

(48)

a. Ta hui lai.
   He will come
   'He will come.'

b. Ta bu hui lai.
   'He won't come.'

c. *Ta mei(you) hui lai.

Sentences (45)-(48) contain shi 'be', zhidao 'know', gao 'tall', and hui 'will', respectively; all of them are verbals indicating states. But sentences which contain non-state verbals and do not involve completion may also be negated by bu, as in (49)-(51).

(49) Ta bu lai. (action verb)
   He not come
   a. 'He won't come.'
   b. 'He refuses to come.'
In these sentences, the meaning inferred from the bu is the denial of a future action or a habit, or refusal to take an action (see Li and Thompson 1981:424-26).

In contrast, sentences which have non-state verbals and involve completion of an event or whose main predicate contains the word you 'have', are negated with mei(you) and not with bu, as can be seen by the following examples.

(52)

a. Ta mai le shu.
   He buy PERF book
   'He bought books.'

b. Ta mei(you) mai shu.
   'He didn't buy shu.'

c. *Ta bu mai le shu:

(53)

a. Ta you hengduo qian.
   He have much money
   'He has a lot of money.'

b. Ta mei(you) hengduo qian.
   'He doesn't have a lot of money.'

c. *Ta bu you hengduo qian.

Notice that the meaning of completion is indicated by le in (52). The le after a verb is usually considered to be a perfective aspect marker in Chinese linguistics (see, for
instance, Chao 1968:246). It is primarily because of data containing this perfective le, together with the experiential marker guo, that Wang 1965 considers that an A-not-A question sentence like ta mai le shu meiyou? is derived from the juxtaposition of (52a), ta mai le shu, and (52b), ta mei(you) mai shu.

But in Mandarin Chinese there is another le, which is usually called sentence-final le. As Teng 1973 observes, the sentence-final le is an inchoative aspect marker, indicating change of state or new situation. Consider the following examples:

(54) Ta mai shu le.
He buy book INCH
'He buys books now; he has bought books.'
(with now stressed)
(= 'It has come about that he buys books.')

(55) Ta bu mai shu le.
He not buy book INCH
'He doesn't buy books any more.'
(= 'It has come about that he doesn't buy books.')

(56) Ta yao chu qu le.
He want out go INCH
'He wants to go out now.' (with now stressed)
(= 'It has come about that he wants to go out.')

(57) Ta bu yao chu qu le.
He not want out go INCH
'He doesn't want to go out any more.'
(= 'It has come about that he doesn't want to go out.')

What (54) conveys is that 'in the past he didn't buy books, but now he buys books'. Likewise, (55) imparts that 'in the past he did buy books, but now he does not buy books'. A
more accurate translation of (54) is 'it has now come about that he buys books' and that of (55) is 'it has now come about that he doesn't buy books'. The same can be said of (56) and (57); see the paraphrases within the parentheses above. In this sense, the inchoative *le* is semantically the main predicate of the whole sentence. In a sentence like (55), we may say that the scope of the negative is within the scope of the inchoative *le*, as can be seen in (55a).

(55)  
   a. Ta [VP [bu [mai shu]] le].

Another way of looking at these sentences is to acquire the help of the notions of 'given' vs. 'new', or assertion vs. presupposition. Take (55) again for example. What is new or is asserted is that 'he doesn't buy books now (with now unstressed)' and what is given or is presupposed is that 'in the past he bought books'. Hence, as far as the inchoative *le* is concerned, (55) is not the negation of (54), and neither is (57) of (56).

The semantically negated sentences of (54)-(57) are respectively (58)-(61).

(58) Ta hai mei(you) mai shu.  
    He still not buy book  
    'He hasn't bought books yet.'  
    (= 'It has not yet come about that he buys books.')

(59) Ta hai mai shu.  
    He still buy book  
    'He still buys books.'  
    (= 'It has not yet come about that he doesn't buy books.')
We say that these four sentences (58)-(61) are the respective negation of (54)-(57), because the former sentences negate only the assertion of the latter ones, with the presuppositions preserved. Take (59) for example. The presupposition is that 'he bought books in the past' and the assertion is that 'he buys books now.' This presupposition is the same as that of (55). And the assertion of (59) is exactly the opposite of that of (55).

We now discuss whether the formulation of A-not-A questions proposed by Wang and Rand is supported in terms of the interaction of negation and the inchoative aspect.

First, compare (62) with (63) below:

(62)

a. Ta mai le shu meiyou?
   He buy PERF book not-have
   'Did he buy books?'

b. Ta mai le shu.
   He buy PERF book
   'He bought books.'

c. Ta mei(you) mai shu.
   He not-have buy book
   'He didn’t buy books.'
(63)

a. Ta mai shu le meiyou?
   He buy book INCH not-have
   'Has it come about that he buys books?'
   (= 'Has he bought books?')

b. Ta mai shu le.
   He buy book INCH
   'It has come about that he buys books.'
   (= 'He has bought books.')

c. Ta hai mei(you) mai shu.
   He still not-have buy books
   'It has not yet come about that he buys books.'
   (= 'He hasn’t bought books yet.')

The two (a) sentences are A-not-A questions. And the (b) sentences are direct affirmative answers to the questions, while the (c) sentences are direct negative answers. Notice that (62a) and (63a) differ in the use of different aspect markers in different positions of the sentence. Thus their corresponding affirmative and negative answers are also slightly different. In the negative answers, (63c) has the word hai 'still', though (62c) doesn’t. According the formulations of Wang and Rand, (62a) is derived from the juxtaposition of (62b) and (62c), with the subject of the latter deleted. But the sentences in (63) pose a problem to their formulation. For if we juxtapose (63b) and (63c) and delete the subject of the second clause, then we derive the sentence Ta mai shu le hai mei you?, which has one word too many in comparison with (63a), the word hai ‘still’.

Similarly, (65) in comparison with (64) poses a problem to the analysis of Wang and Rand.
(64)
a. Ta mai bu mai shu?
   He buy not buy book
   'Does he want to buy books or not? or,
   Will he buy books or not?'

b. Ta mai shu.
   He buy book
   'He wants to buy books; he will buy books.'

c. Ta bu mai shu.
   He not buy book
   'He doesn’t want to buy books; he will not
   buy books.'

(65)
a. Ta hai mai bu mai shu?
   He still buy not buy book
   'Does he still buy books or not?'

b. Ta hai mai shu.
   He still buy book
   'He still buys books.'

c. Ta bu mai shu le.
   He not buy book INCH
   'He doesn’t buy books any more.'

The (a) sentences are also considered to be A-not-A questions. And the (b) sentences are affirmative answers to the questions, while the (c) sentences are negative answers. Sentence (64a) can be accounted for by the formulations of Wang and Rand. In their formulations, roughly (64a) is derived from the juxtaposition of (64b) and (64c), with the subject of (64c) deleted first and then the object of (64b) deleted. But if (65a) is also derived in this way, then we would have the sentence Ta hai mai bu mai shu le?, for in (65c), there is an extra inchoative aspect marker le.
A more serious problem arises when the inchoative aspect marker is used together with stative verbs in A-not-A questions. Consider the following sentences:

(66)

a. Ta xianzai hui youyung le meiyou?
   He now know-how-to swim INCH not-have
   'Does he know how to swim now?'

b. Ta xianzai hui youyung le.
   He now know-how-to swim INCH
   'He knows how to swim now.'

c. Ta xianzai hai bu hui youyung (ne).
   He now still not know-how-to swim (ne).
   PART
   'He still doesn't know how to swim now.'

d. *Ta xianzai mei(you) hui youyung (ne).

(67)

a. Ta zhidao zhejian xiaoxi le meiyou?
   He know this information INCH not-have
   'Does he know this information now?'

b. Ta zhidao zhejian xiaoxi le.
   He know this information INCH
   'He knows this information now.'

c. Ta hai bu zhidao zhejian xiaoxi.
   He still not know this information
   'He still doesn't know this information.'

d. *Ta mei(you) zhidao zhejian xiaoxi.

(68)

a. Ta xihuan he kafei le meiyou?
   He like drink coffee INCH not-have
   'Has he come to like drinking coffee?'

b. Ta xihuan he kafei le.
   He like drink coffee INCH
   'He has come to like drinking coffee.'

c. Ta hai shi bu xihuan he kafei.
   He still not like drink coffee
   'He still doesn't like drinking coffee.'

d. *Ta mei(you) xihuan he kafei.
All the (a) sentences are A-not-A questions with the (b) sentences as direct affirmative answers and the (c) sentences as direct negative answers. According to the formulations of Wang and Rand, the (a) sentences should be formed by the combination of the (b) and (c) sentences. But this cannot work, for the (c) sentences are negated with *bu* and not with *mei(you)*. For their formulation to work, one would have to postulate the (b) and (d) sentences as the underlying structures for the (a) sentences. But this has two problems. First, the (d) sentences are not acceptable. Recall that we have previously shown that stative verbs are negated with *bu* and not with *mei(you)*. Second, even if the (d) sentences were considered acceptable, they are not the direct negative answers to the A-not-A questions.

**4.5.2 Adverb Modification**

In the formulations proposed by Wang and Rand, as in (11), nothing much is mentioned about how alternative sentences containing adverbs might become A-not-A questions. But judging from the structural descriptions in (11), we think that the following sentences would be acceptable as derived alternative questions. In fact, of the three sentences below, (70) and (71) are taken from Rand 1969.

(69) Ta feichang xihuan ni (haishi) ta
He very like you or he
feichang bu xihuan ni?
very not like you
‘Does he like you very much or does he dislike you very much?’
(70) Tamen dou hui lai (haishi) tamen dou
    They all will come or they all
    bu hui lai?
    not will come
    'Will they all come or will they all not
    come?' (Rand 1969:60, Sentence 132a)

(71) Zheben shu tai gui (haishi) zheben
    This book too expensive or this
    shu bu tai gui?
    book not too expensive
    'Is this book too expensive or is this book
    not too expensive?' (Rand 1969:60, Sentence
    136a)

If we follow their formulations, and, as is said by Rand
(p.55), "delete haishi if the two S's [sentences] joined by
haishi differ only by the second S being the syntactic
negative of the first S"; "delete from either S₁ or S₂ the
identical elements following the negated item"; and "delete
the identical elements preceding BU [the underlying negative
morpheme in their view] in S₂", then we would have the
following corresponding sentences.

(72) *Ta feichang xihuan bu xihuan ni?

(73) *Tamen dou hui bu hui lai?

(74) *Zheben shu tai bu tai gui? (Rand 1969:60,
    Sentence 136b)

But all these three sentences are not grammatical (note that
Rand accepts (74) as grammatical).

One may attempt to salvage their formulations by saying
that the notion of 'syntactic negative' probably is not
right and that only the notion of semantic negation is
applicable to derive A-not-A questions, as we have argued in
(54)-(61). And this argument seems to be reasonable, as the
translations of (69) and (70) show that indeed the second clause in each sentence is not the semantic negation of the first clause. But even if the notion of semantic negation is applied, the formulations of Wang and Rand still will not work with the sentences with adverbs, as the clauses in (71) involve semantic negation already and yet the derived (74) is not acceptable. But let's apply the notion of semantic negation and change (69) and (70) into (69a) and (70a) anyway, so as to see whether their respective derivations (72a) and (73a) are acceptable or not.

(69a) Ta feichang xihuan ni (haishi) ta
     He very like you or he
     bu feichang xihuan ni?
     not very like you
     'Does he like you very much or does he not like you very much?'

(70a) Tamen dou hui lai (haishi) tamen bu
     They all will come or they not
     dou hui lai?
     all will come
     'Will they all come or will they not all come?'

(72a) *Ta feichang bu feichang xihuan ni?

(73a) *Tamen dou bu dou hui lai? (Rand 1969:60, Sentence 132b)

Our intuition is that the derived (72a) and (73a) are not acceptable, though Rand considers (73a) acceptable [we have checked with other native speakers and found that none considers (73a) acceptable].

Sentences (69)-(74) have demonstrated that some acceptable alternative questions, if undergoing the formulations of Wang and Rand, would result in unacceptable
A-not-A questions. The evidence manifested in these sentences has shown that their formulations, if not utterly incorrect, are inadequate.

Notice that the adverbs we have discussed here are VP internal adverbs; feichang 'very' and tai 'too' are degree adverbs, and dou is a scope adverb. Related to our evidence here is an observation made by Li and Thompson 1979 about A-not-A questions. They have observed that verbs modified by manner adverbs cannot form A-not-A questions, as in (74).

(74)  
(a) Ta jingjing de tiaowu.  
He silently DE dance  
'He dances silently.'

(b) *Ta jingjing de tiaowu bu tiaowu.

(c) *Ta jingjing de tiao bu tiaowu.

Their explanation is that in a sentence in which there is a manner adverb, the adverb is the focus of the information, not the verb and that since the adverb has the focus already, this sentence cannot have the verb to form an A-not-A question which, if formed, is itself a focus. If what Li and Thompson have pointed out is correct, this will have to be added as a semantic constraint on the formation of A-not-A questions.

Tang 1984, however, thinks that Li and Thompson's condition is inadequate and incorrect; instead, he posits a syntactic account for how to form A-not-A questions with adverbials. He cites other sentences which are related to (74) but are acceptable.
He says that sentences (75b)-(75e), which contain manner adverbials, still can form A-not-A questions because in all these sentences the element A in A-not-A c-commands the adverbial. The tree diagrams that he draws for the predicate phrases of (75a)-(75e) are listed as (76a)-(76e), respectively.

(76)  
(76) a. 

```
(76)  
(76) a. 

```

```tex
(75)  
(75) a. *Ta jingjing de tiao bu tiaowu? (= 74c)
(75) b. Ta keng bu keng jingjing de tiaowu? (keng = will)
(75) c. Ta shi bu shi jingjing de tiaowu?
(75) d. Ta you meiyou jingjing de tiaowu?
(75) e. Ta jingjing de tiao le wu meiyou?
```

He says that sentences (75b)-(75e), which contain manner adverbials, still can form A-not-A questions because in all these sentences the element A in A-not-A c-commands the adverbial. The tree diagrams that he draws for the predicate phrases of (75a)-(75e) are listed as (76a)-(76e), respectively.
b.  
\[
\begin{array}{c}
V''
\end{array}
\]
\[
\begin{array}{c}
V''
\end{array}
\]
\[
\begin{array}{c}
V''
\end{array}
\]
\[
\begin{array}{c}
V
\end{array}
\]
\[
\begin{array}{c}
ADV
\end{array}
\]
\[
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\begin{array}{c}
N
\end{array}
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keng
\end{array}
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\begin{array}{c}
'willing'
\end{array}
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\begin{array}{c}
jingjing de
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'silently'
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tiao
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'jump'
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wu
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c.  
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\begin{array}{c}
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\begin{array}{c}
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'dance'
\end{array}
\]
He says that if his analysis is correct, then he has proposed a more adequate syntactic account than Li and Thompson's deficient semantic principle, and also that the autonomy of syntax is well supported. 12

But I think the comparison of the two claims--Tang on the one hand and Li and Thompson on the other--is not
appropriate, as each of the two sides bases its claim on different subject. Li and Thompson merely say that the verbs modified by manner adverbs cannot be used as A in the A-not-A questions; they do not mean that any sentence which contains manner adverbs cannot form A-not-A questions. Tang, however, tries to prove that sentences containing manner adverbs still can form A-not-A questions, so long as there is a word or phrase c-command the adverbs.

Nevertheless, let's see whether Tang's claim is valid in itself. I find that even if we adopt the framework he uses, we can find some problems with his analysis. First, look at (76e), in which le is treated as the verb immediately dominated by V'''. He says that in this case he takes the le to be a variant of you 'have'. If that is correct, a V''' phrase like bu renshi Lisi le 'not recognize Lisi any more' should also be able to form an A-not-A, for le c-commands bu renshi Lisi. But *bu renshi Lisi le meiyou is not acceptable. Then, let's look at (76a). I agree that tiaowu 'dance' can be analyzed as in (76a); it need not be analyzed as one indivisible word consisting of two morphemes. And indeed, as Tang says, tiao does not c-command the adverb. But does this explain why (74a) cannot turn into (75a)? No. The node V' in (76a), which indicates the word or phrase tiaowu 'dance', does c-command the adverb, but we still cannot accept (74b), which is *ta jingjing de tiaowu bu tiaowu? Also notice that if we
substitute *xiaο 'laugh' for tiaοwu 'dance', then xiaο 'laugh' c-commands jingjing de 'silently', but we cannot accept *ta jingjing de xiaο bu xiaο? All these, I hope, have shown that Tang's syntactic analysis cannot account for Li and Thompson's example.

An explanation of the phenomenon pointed out by Li and Thompson can be given from another semantic perspective. Bellert 1977 has observed that sentences containing manner adverbs imply the corresponding sentences without adverbs; that is, truth conditions of the latter are the necessary truth conditions of the former.¹³

(77) Ta dasheng de ma xiaohai. --> (78)
He loud DE scold kid
'He loudly scolded the kid.'

(78) Ta ma xiaohai.
If (77) is true, (78) is necessarily true. This is also true of negative or interrogative sentences, especially when the adverb occurs under the main stress, as in (79)-(82).

We can say all these sentences imply or presuppos (78).

(79) Ta meiyou DASHENG de ma xiaohai. --> (78)
(80) Ta DASHENG de ma xiaohai ma? --> (78)
(81) Ta shi bu shi DASHENG de ma xiaohai? -->
(78)
(82) Ta you meiyou DASHENG de ma xiaohai? -->
(78)

Of course, one will not and cannot ask what one presupposes. This is the essential meaning of Li and Thompson's point: one cannot ask about the verb modified by a manner adverb.
They do not mean that one cannot ask about other elements in the sentence, or about a state of affair. Without the main stress, (80) can be used to question whether a state of affair as indicated by (77) is true; (81) and (82) are ambiguous between the reading of asking a state of affair, as in (80) without the main stress, and the reading of asking about whether it is in that manner.

4.5.3 Quantification and Scope

The following sentences are perfectly grammatical in Chinese.

(83)

a. Youxie ren xihuan ta.
   Some man like he
   'Some men like him.'

b. Youxie ren bu xihuan ta.
   Some man not like he
   'Some men do not like him.'

(84)

a. Henduo ren mai shu.
   Many man buy book
   'Many men buy books.'

b. Henduo ren bu mai shu.
   Many man not buy book
   'Many men do not buy books.'

(85)

a. Dabufende ren neng lai.
   Most man can come
   'Most men can come.'

b. Dabufende ren bu neng lai.
   Most man not can come
   'Most men cannot come.'
The (a) and (b) sentences are alike in that they have the same NP as subject, but they also differ in that the VP part of (b) sentences are syntactic negatives of the corresponding VPs in the (a) sentences. If we follow the A-not-A formulation rules of Wang and Rand, we may derive the respective (c) sentences below:

\[(83c) \quad *\text{Youxie ren xihuan bu xihuan ta?}\]
\[(84c) \quad *\text{Henduo ren mai bu mai shu?}\]
\[(85c) \quad *\text{Dabufende ren lai bu lai?}\]
\[(86c) \quad *\text{Meige ren yao bu yao qu?}\]

Since the derivations of the (83c)-(86c) strictly observe the rules of Wang and Rand, they are supposed to be grammatical and acceptable. But, in fact, they are not. This fact shows that Wang and Rand’s formulation rules are either flawed or inadequate.

One might try to rescue the formulations of Wang and Rand by adding one constraint. This constraint is to the effect that the subject NP must be definite, but not indefinite or that the subject NPs of the two clauses must refer to the same entities. This constraint can account for the ungrammaticality of (83c)-(85c), because the (a) and (b) sentences of (83)-(85) violate it. For youxie ren ‘some
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men' of (83a) and of (83b) may not refer to the same group of persons and the same is true of henduo ren 'many men' in (84) and dabufen de ren 'most men' in (85). Yet meige ren 'everybody' in (86) poses a problem to this constraint, since the same whole group of persons in the universe of discourse is referred to in both (86a) and (86b). But let's be lenient and accept the reasoning that universally quantified subject is different from the definiteness of the subject in grammatical behavior.

However, sentences which have quantifiers at positions other than the subject and yet simultaneously before the A-not-A form are still problematic to the formulations of Wang and Rand, even with the addition of the constraint discussed above. For example,

(87)

a. Ta youshihou chi fan.
   He sometimes eat rice
   'He sometimes eats rice.'

b. Ta youshihou bu chi fan.
   He sometimes not eat rice
   'He sometimes does not eat rice.'

c. *Ta youshihou chi bu chi fan?

(88)

a. Ta zai henduo chang he shuohua.
   He at many occasion speak
   'He speaks at many occasions.'

b. Ta zai henduo chang he bu shuohua.
   He at many occasion not speak
   'He doesn't speak at many occasions.'

c. *Ta zai henduo changhe shuohua bu shuohua?
(89)

a. Ta dabufende shijian jiang yingyu.
   He most time speak English
   'He speaks English most of the time.'

b. Ta dabufende shijian bu jiang yingyu.
   He most time not speak English
   'He does not speak English most of the time.'

c. *Ta dabufende shijian jian bu jiang yingyu.
   He most time speak not speak English

(90)

a. Ta meitian lai.
   He everyday come
   'He comes everyday.'

b. Ta meitian bu lai.
   He everyday not come
   'Everyday he doesn't come.'

c. *Ta meitian lai bu lai?

All the (a) and (b) sentences of (87)-(90) are grammatical, but the (c) sentences are not. The fact that (87c)-(90c) are not grammatical illustrates that the attempted constraint based on definiteness does not work.

What we can generalize from the ungrammaticality of (83c)-(90c) is that A-not-A questions of the form V-not-V(O) cannot occur to the right of quantifiers; or, in other words, quantifiers cannot precede the V-not-V(O) form.

Now we turn to the A-not-A questions of the form V...le meiyou or V_le...meiyou, of which the former is considered indicating the coming about of a new situation or state and the latter, involving completion of the action indicated by the verb. This form differs from the V bu V form in that
sentences of this form allow quantifiers to precede the VP. For instance, (91c)-(94c) below are acceptable.

(91c) You ren lai le meiyou?
Have man come PERF not-have
'Has anybody come or not?'

(92c) Henduo ren cizhi le meiyou?14
Many man resign INCH not-have
'Have many people resigned?'

(93c) Dabufende ren jiao le qian meiyou?
Most man hand-in PERF money not-have
'Have most people handed in their money or not?'

(94c) Meige ren (dou) qian le ming meiyou?
Every man all sign PERF name not-have
'Has everybody signed his name or not?'

The quantifiers preceding the VP in sentences (91c)-(94c) are respectively 'some', 'many', 'most' and 'every'. And yet, unlike sentences (83c)-(90c), these four sentences are perfectly grammatical in Chinese. Our concern now is whether sentences like these can be derived by applying the formulation rules of Wang and Rand. According to their formulation, to derive (91c)-(94c), we need to have the following sentences.

(91)
  a. You ren lai le.
     Have man come ASP
     'Somebody has come.'

  b. You ren meiyou lai.
     Have man not-have come
     'Someone hasn't come.'

(92)
  a. Henduo ren cizhi le.
     Many man resign ASP
     'Many persons have resigned.'
b. Henduo ren meiyou cizhi.
   Many man not-have resign
   'Many persons haven't resigned.'

(93)
a. Dabufende ren jiao le qian.
   Most man hand-in PERF money
   'Most people have handed in their money.'

b. Dabufende ren meiyou jiao qian.
   Most man not-have hand-in money
   'Most people haven't handed in their money.'

(94)
a. Meige ren (dou) qian le ming.
   Every man all sign PERF name
   'Everyone has signed his name.'

b1. Meige ren (dou) meiyou qian ming.
    Every man all not-have sign name
    'Everyone hasn't signed his name.'

b2. *Meige ren meiyou (dou) qian ming.

And indeed all the (a) and (b) sentences in (91)-(94) are acceptable. However, this fact does not indicate that (91c)-(94c) are derived from the formulation of Wang and Rand, for the (b) sentences are not direct negative answers to the (c) A-not-A questions, as can be seen from the dialogues below using (91) and (94) sentences as examples.

(95)
Q: You ren lai le meiyou? (91c)
   Have man come PERF not-have
   'Has anybody come or not?'

A: Meiyou.
   Not-have.
   'No.'

*You ren meiyou lai. (91b)
   Have man not-have come
   'There is someone who didn't come.'
   (marked * in the sense that it cannot be used as a direct negative answer to the question)
Q: Meige ren (dou) qian le ming meiyou? (94c)

Every man all sign PERF name not-have
'Has everybody signed his name or not?'

A: Meiyou.

Not-have
'No.'

*Meige ren (dou) meiyou qian ming. (94b1)

Every man all not-have sign name
'Everyone did not sign his name.'

(mark **ed** in the sense that it cannot be used as
a direct negative answer to the question)

The (b) sentences of (91)-(94) cannot be accepted as direct
negative answers because they are merely syntactic
negatives, not semantic negatives, of the (a) sentences.

The most natural and appropriate direct negative answers,
which are also semantic negatives of the (a) sentences, are
(91d)-(94d) below:

(91d) (Hai) meiyou ren lai.

Still not-have man come
'Nobody has come yet.'

(92d) Zhiyou shaoshude ren cizhi le.

Only a-few man resign PERF
'Only a few persons have resigned.'

(93d) Zhiyou yixie ren jiao le qian.

Only some man hand-in PERF money
'Only some persons have handed in their money.'

(94d) (Hai) you ren meiyou qian ming.

Still have man not-have sign name
'There are still some persons who haven’t
signed their names.'

Obviously, the formulation of Wang and Rand cannot be
applied to the (a) and (d) sentences of (91)-(94), and
therefore cannot derive the (c) sentences.
One may argue for the formulation of Wang and Rand by pointing out that if (91a) is analyzed as a subjectless sentences in which you 'have; some' is treated as a verb instead of an indefinite marker, then the formulation can apply to (91a) and (91d), and derive (91c). But this argument does not hold for sentences (92a)-(94a) and (92d)-(94d) for two reasons. First, each of the sentences (92a)-(94a) does not begin with the verb you and clearly each has its own subject; they cannot be considered subjectless sentences. Second, unlike (91d), sentences (92d)-(94d) do not begin with meiyou 'not have'.

To further defend the formulation of Wang and Rand, one may still argue that though (92d)-(94d) are 'the most natural direct negative answers' and do not begin with meiyou, there may be other sentences which can serve as direct negative answers to (92a)-(94a) and which begin with meiyou. For this argument, one may have in mind the following (92e)-(94e) sentences.

(92e) %Meiyou henduo ren cizhi.
Not-have many man resign
'Not many persons have resigned.'

(93e) *Meiyou dabufende ren jiao qian.
Not-have most man hand-in money
'Not most persons have handed in their money.'

(94e) *Meiyou meige ren (dou) qian le ming.
Not-have every man all sign PERF name
'Not everybody has signed his name.'

But notice that although (92e) and (94e) may be acceptable to the person who argues for the formulation of Wang and
Rand, (93e) is definitely unacceptable. Furthermore, different people have different judgements as to the acceptability of (92e) and (94e). Take (94e) for example. Some Mandarin speakers whose native language is Taiwanese may consider this sentence acceptable. But some other people with the same background consider it very odd. When the latter are asked not to use the most natural (94d), but to use as much as possible from the original A-not-A question (94a), in their answer, they choose to use the sentence, bu shi meige ren (dou) qian le ming 'it is not the case that everybody has signed his name’, rather than (94e). Several native Mandarin speakers from Peking and the neighboring Tianjin also consider (94e) unacceptable. We think that the patched argument defending the formulation of Wang and Rand is not valid, for it requires odd or unacceptable sentences as underlying structures to derive grammatical sentences. Besides, if the revised argument is correct, then we would need ta lai le 'He came' and *meiyou ta lai 'He didn't come' to produce ta lai le meiyou?; that is obviously intuitively implausible.

4.6 Huang’s Formulation and Its Inadequacy

Based on his arguments which we have discussed in section 4.4, Huang concludes that A-not-A questions cannot be derived from alternative questions. He considers that of the A-(haishi)-not-A questions, only those without haishi
'or' are real A-not-A questions (see the contrast in (42) and (43)). He also suggests that the A-not-A questions be divided into two types: 1. 'A not AB', and 2. 'AB not A'. The former refers to sentences like (12c) and (12d), whereas the latter, (12e) and (12f).

(12)
c. Ta xihuan bu xihuan zheben shu?
d. Ta xi bu xihuan zheben shu?
e. Ta xihuan zheben shu bu xihuan ?
f. Ta xihuan zheben shu bu ?

As to sentences like (97) and (12b),

(97) Ta lai bu lai?
He come not come
'Will he come or not?'

(12b) Ta xihuan zheben shu bu xihuan zheben shu?
he says that both can be viewed as belonging to either the 'A not AB' type or the 'AB not A' type with the B equalling null.

He proposes an underlying structure like (98) for the 'A not AB' type sentences like (12b)-(12d).
He says that the [+Q] triggers a reduplicating process, which copies whatever constituents to the right of it and insert a bu 'not' between the original and the copy. He also says that the scope of reduplicating is flexible; it may be just the first syllable of the verb, as in (12d), or the whole verb, as in (12c), or the VP, as in (12b).

For the type 'AB not A' sentences, he proposes a different underlying structure. He thinks that for this kind of A-not-A question the underlying structure is 'AB not AB'; it is the juxtaposition of the positive predicate followed by a negative predicate. Sentences like (12b), in addition to being possibly derived from reduplication, can be viewed as the product of the 'AB not AB' underlying structure. As to a sentence like (12e), according to him, it is formed by applying anaphoric ellipsis.
We believe that this view of A-not-A questions formation, putting aside the problems in some of his arguments, is a more plausible one than the view that they are derived from alternative questions. Our belief is based on not only Huang's argument of island condition, which proves that a grammatical underlying structure will result in an ungrammatical sentence if it follows the formulation of Wang and Rand, but also on several other arguments of our own, which were presented in section 4.5.

Although his formulation is more plausible than that of Wang and Rand, it is not exempt from problems. Note first that included in the works of Wang and Rand as A-not-A questions are sentences like (13b) and (13c), repeated below.

(13)

b. Ta you __ mei you mai shu?  
   He have __ not have buy book  
   'Did he buy books?'

c. Ta __ mai le shu __ mei you __ ?

But sentences like these two are not discussed by Huang. In terms of syntactic structure, (13b) is not much different from (12c), and neither is (13c) from (12f), except that the aspect of sentences in (12) is considered to be neutral and that of sentences in (13) is perfective. Sentence (13b) seems to belong to the 'A not AB' type, while (13c) seems to belong to the 'AB not A' type. If that is so, then we would expect that these two sentences have the corresponding (99) and (100) sentences below.
If (13b) is the 'A not AB' type, then according to Huang's formulation, the different scope of reduplication would produce (99a)-(99b). But the two sentences are either strange or unacceptable. Likewise, if (13c) is the 'AB not A' type, then according Huang's formulation, we would have (100a)-(100b) after different anaphoric ellipsis. But again the two sentences are either strange or unacceptable.

When one sees the (a) and (b) sentences of (99) and (100) are either odd or not acceptable, one may conjecture that either (13b) and (13c) are not A-not-A questions or Huang's formulation for A-not-A questions is wrong or not adequate. Since (13b) and (13c) are formally similar to typical A-not-A questions except in aspect, and since we say that we accept his formulation for the sentences discussed in his work, we tend to think that we need another formulation for the kind of A-not-A question like (13b) and (13c).

In addition to the omission of (13b)-(13c), Huang does not talk about sentences like (101) and (102).
Since in his analysis, (101c) and (102c) belong to the type 'A not AB', the different scope of reduplication would produce other acceptable sentences as well. But (101a) and (102a) are odd and (101b) and (102b) are not acceptable.

In view of the sentences of the form 'A not AB', that is, sentences in (99), (101), and (102), we think that the scope of reduplication is limited to the highest verbal only and that it cannot be extended, as Huang claims, to cover the whole VP, as is shown by the odd (a) sentences and the unacceptable (b) sentences.

Even within the types of sentences which Huang deals with, those having quantifier phrases as the subjects pose a problem to his formulation. Consider the following sentences:

(103) Youxie ren xihuan ta.
    Some man like he
    'Some men like him.'

(104) Henduo ren mai shu.
    Many man buy book
    'Many men buy books.'
All of the sentences have quantified phrases as subject. If we follow his formulation for the 'A not AB' type of A-not-A question, we will have the following sentences.

(103c) *Youxie ren xihuan bu xihuan ta?
(104c) *Henduo ren mai bu mai shu?
(105c) *Dabufende ren lai bu lai?
(106c) *Meige ren yao bu yao qu?

The fact that all these sentences are ungrammatical shows again that Huang's formulation is inadequate.

In short, the A-not-A questions which contain the form of either you meiyou 'have not have' or V le meiyou and which Huang ignores in his discussion do not follow his formulation of A-not-A questions. In addition, some sentences which have quantified phrases as subjects, if his formulation is applied, do not generate grammatical sentences. This indicates that his formulation needs amending. We will present our own formulation in section 4.7.

4.7 A Fourth View of A-not-A Question Formulation

We agree with Huang 1988 that syntactically A-not-A questions do not come from disjunctive questions, though in
most cases they are semantically related and that A-not-A questions consist of only the juxtaposed positive and negative constructions without hashi 'or'. As to their formulation, we are of the opinion that there are two kinds of A-not-A questions in terms of aspect: those with neutral aspect and those with non-neutral aspect. By neutral aspect we mean the situations in which verbs are used to refer to future or habitual action or the verbs themselves are inherently stative and which are always negated with bu (the you NP, which belongs to this group, is the only exception and is negated by mei). We say they are 'neutral' in the sense that the verbs are not grammatically marked. On the other hand, by non-neutral aspect we mean the situations in which verbs are used to refer to durative, past, experiential, or completed actions or events or the verbs themselves involve completion. We say they are 'non-neutral' in the sense that the verbs used in these situations are usually grammatically marked by aspectual suffixes like zhe (durative), le (perfective or inchoative), guo (experiential), dao (completed); verbs used in these situations are negated by meiyou (see the section on aspect and negation in 4.5.1). Note that we consider A-not-A questions with the form of you meiyou NP 'have not-have NP' belong to the neutral aspect group. We think that they are different from A-not-A questions with the form of you meiyou VP 'have not-have VP', which we regard as resulting from
language contact and the competition of different syntactic forces (more discussion on this later).

Those with neutral aspect, in our opinion, should be further divided into two categories and each is formulated differently. The two categories are the 'AB not A' type and the 'A not AB' type. Following Huang 1988, we think the 'AB not A' type is formulated through the application of anaphoric ellipsis to 'AB not AB'. But for A-not-A questions of the type of 'A not AB', we advocate a formulation which is slightly different from that of Huang. Namely, if they can form A-not-A questions,\(^{17}\) they are formulated by reduplicating the highest verbal,\(^{18}\) either just the first syllable or the whole verbal, and inserting the negative bu or mei (in the case of you NP 'have NP') in between the two copies of the verbal. Our formulation is different from that of Huang in that we allow the reduplication to apply to the verbal only, while Huang's reduplication may extend over the whole VP. We think that ours is just right, while Huang's is over-stretched. This can be illustrated by the following sentences. The A-not-A question Ta shi bu shi hui lai? 'Is it the case that he will come?' can be derived from the sentence Ta shi hui lai 'It is the case that he will come,' but neither *Ta shi hui bu shi hui lai?, which is a reduplication of two verbals, nor *Ta shi hui lai bu shi hui lai?, which is a reduplication of the whole VP, can be accepted.
On the other hand, those with non-neutral aspect, we think, are derived in a completely different way. We think so because syntactically this type of 'V le meiyou' is not parallel to those with neutral aspect. This can be clearly seen in the following comparison of the two types of sentences.

(107)

a. Ta mai shu bu mai shu?
   He buy book not buy book
   'Will he buy books?'

b. Ta mai bu mai shu?
c. Ta mai shu bu mai ?
d. Ta mai shu bu ?

(108)

a. *Ta hui jiang yingyu le meiyou hui jiang
   He can speak English INCH not can speak
   English

b. *Ta hui jiang le meiyou hui jiang
   yingyu?
c. *Ta hui jiang yingyu le meiyou hui jiang
   ?
d. Ta hui jiang yingyu le meiyou
   ?

For the type of A-not-A questions with neutral aspect, (107a)-(107d) are all acceptable, but of all the corresponding sentences in (108), only sentence (108d) is acceptable.

Furthermore, these two types of A-not-A questions also differ in whether they can have a preceding quantified phrase. In section 4.5.3, we have shown that a quantified phrase can precede an A-not-A question of the type 'V le meiyou', but not of the type 'A bu AB' or 'AB bu A'. Here
we use two more contrasting pairs of sentences to exemplify this point.

(109)  
  a. *Meige ren lai bu lai?  
      Every man come not come  
      'Will everyone come?'

  b. Meige ren lai le meiyou?  
      Every man come PERF not-have  
      'Did everyone come?'

(110)  
  a. *Youren lai bu lai?  
      Somebody come not come  
      'Is anybody coming?'

  b. Youren lai le meiyou?  
      Somebody come Perf not-have  
      'Did anybody come?'

The sentences of (109) each have a universal quantifier and those of (110) each have an existential quantifier. In both pairs, only the (b) sentences can have a preceding quantifier.

It is because of these syntactic dissimilarities that we postulate for sentences with non-neutral aspect a formulation rule different from those for sentences with neutral aspect. If they can form A-not-A questions, they are formulated by adding meiyou 'not have' at the end.

Our view of the formulations of all A-not-A questions can be schematically summarized as follows (for the convenience of later reference, the rules are randomly assigned as A, B, and C):
The A-not-A questions with the form of A-not-AB or AB-not-A, as we have observed in section 4.5.3, is susceptible to a constraint which forbids a sentence with a quantifier phrase preceding the VP to be changed into an A-not-A question. Thus a sentence like *Henduo ren yao bu yao lai? or *Henduo ren yao lai bu yao? 'Do many people want to come?' is unacceptable.

In fact, the rule (B) is used more frequently than (C). Zhu 1990 points out that A-not-A questions of the type V-not-V [AB-not-A in (111)] are more preferable in the northern Chinese dialects, especially among the older generation, while those of the type V-not-VO [A-not-AB in
(111)] are more preferable in Southern Chinese dialects.\footnote{20}
He admits that the latter type is becoming more popular in the northern China among the young generation. We have conducted a small survey, asking twenty subjects, who come from cities ranging from Beijing, Shanghai, Fuzou, to Hong Kong and Taipei, to indicate how often they use the following sentences.

(112) Ta xihuan zheben shu bu xihuan zheben shu?  
He like this book not like this book  
'Does he like this book?'

(113) Ta xihuan bu xihuan zheben shu? (B)

(114) Ta xi bu xihuan zheben shu? (B)

(115) Ta xihuan zheben shu bu xihuan ? (C)

The result reveals that of the subjects 50% use A-not-AB sentences like (113) often and 45% sometimes; 95% use A-not-A questions like (114) often and 5% sometimes; but none uses AB-not-A sentences like (115) often and only 15% use it sometimes. The use of (113) and (114), especially the latter, clearly outshadows that of (115). Our survey confirms Zhu's observation and shows that obviously rule (C), the rule of anaphoric ellipsis, is losing to (B), the reduplication rule, in the competition.

There are four possible reasons for the preference of (B) to (C). First, a lot of constructions take the form of 'V not V' and thus impose a force of analogy on other verbs when forming A-not-A questions. These constructions are: 1. sentences whose VPs are made up of intransitive verbs or
adjectives only; 2. sentences in which the direct objects are preposed; and 3. tag questions. Because these constructions do not take NPs in the object positions or, if they do, have the NPs preposed, it is impossible for them to form A-not-A questions like (115). Second, if there is a long string of NP or complement after VP, A-not-A questions like (115) are either awkward or burdensome to memory.

Consider the following four sentences.

(116)

a. Ni yuanyi bu yuanyi bang wo qu quan
   You will not will help me go advise
   wo taitai bu yao tiantian tiaowu da
   I wife not want everyday dance play
   majiang? (from Tang 1981)
   mahjong
   'Will you help me advise my wife not to dance and play mahjong everyday?'

b. ?Ni yuanyi bang wo qu quan wo taitai bu yao
tiantian tiaowu da majiang bu yuanyi ?

(117)

a. Ni yao bu yao mai zuotian Lisi gen women
   You want not want buy yesterday Lisi to us
tueijian de naben xiaoshuo?
   recommend DE that novel
   'Do you want to buy the novel which Lisi recommended to us yesterday?'

b. ?Ni yao mai zuotian Lisi gen women tueijian de	naben xiaoshuo by yao?

Sentences (116a) and (117a) are perfectly clear and acceptable with the two contrasting verbals next to each other, whereas (116b) and (117b), with the contrasting verbs separated by a long string, are rather awkward, if not unacceptable. Third, the overall regulation of VO over OV in Chinese may result in the more frequent use of the pattern V-bu-VO, i.e., A-not-AB, as in (113) and (114), than
the use of VO-bu-V, i.e., AB-not-A, as in (115). Finally, Ockham's razor--the principle of economy--may be working here, too, as is shown by the fact that even within the A not AB sentences, (114) is notably preferred to (113).

In fact, the analogy force of rule (B) is so strong that the A not AB form spreads to even the sentences with non-neutral aspect, competing with the V le meiyou form. As many Chinese linguists have noted, sentences like (118b) and (119b) below are more and more frequently found in people's talk and are considered acceptable, especially among those whose native languages are the southern dialects of Chinese.

(118)
  a. Ta lai le meiyou?
     He come Perf not-have
     'Did he come? or: Has he come?'

  b. Ta you meiyou lai?
     He have not-have come
     'Did he come? or: Has he come?'

(119)
  a. Ni chi le fan meiyou?
     You eat Perf rice not-have
     'Did you have your meal? or: Have you had your meal?'

  b. Ni you meiyou chi fan?
     You have not-have eat rice
     'Did you have your meal? or: Have you had your meal?'

As to the presence of sentences like (118b) and (119b), Cheng 1989 insightfully observes that they are indicative of a new syntactic rule through language contact. These two sentences are the result of the interaction of the semantic feature of the southern dialects, Taiwanese in Cheng's
discussion, and the syntactic feature of the Mandarin Chinese. In Taiwanese, but not in Peking Mandarin, the modal verb 有 'have' is used before verbals to stress the existence or occurrence of an action or state. But when Taiwanese speakers pick up their Mandarin at school, somehow this modal verb is carried over from Taiwanese into Mandarin. So a sentence like **Ta you lai 'He came'** is acceptable in Taiwanese Mandarin, though not in Peking Mandarin, in which the equivalent has to be **Ta lai le**. We may say that in terms of cognitive construction of thought, this is obviously influenced by Taiwanese. Yet, interestingly, when a sentence like that in Taiwanese Mandarin is to be expressed in the A-not-A question form, it adopts the Peking Mandarin syntactic form of V not V, as the **you meiyou VP 'have not have VP'** in (118b), but not the Taiwanese form of **u VP bo 'have VP not-have'**, which if translated into Mandarin should be **you VP meiyou 'have VP not-have'**.

Cheng also notices that although in Taiwanese Mandarin forms like **you VP** and **you meiyou VP** are influenced by Taiwanese, this influence does not prevail over all the items in the lexicon. And he thinks that the principle of lexical diffusion as advocated in William Wang 1969 and Chen and Wang 1975 can be applied to syntactic changes. He thinks that the occurrence of sentences like (118b) and
(119b) indicates the competition of the V-not-V form against the V-le meiyou in Mandarin Chinese. This is also our view.

We think that now in both Peking and Taiwanese Mandarin the V-not-V form even spreads to non-verbals such as adverbials. The example we have in mind is the use of chang 'often' as is used in (120) below.

(120) Ta chang bu chang qu Taipeii?
He often not often go Taipei
'Does he often go to Taipei?'

But this is the only adverbial that we can find so far. It remains to be seen whether the form of V-not-V will spread to other adverbials or even other kinds of constructions in forming A-not-A questions.²²

4.8 Concluding Remarks

Our view is different from previous works in five ways. The first and most important difference is that we do not think that one general and unified rule, such as the one proposed by Wang and Rand, though ideal, can explain all the A-not-A question forms. Rather, we think that three rules are needed: reduplication of the verbal with the insertion of bu or mei between the two copies, anaphoric ellipsis applied to two juxtaposed antagonistic verbal phrases, and the addition of meiyou to those with non-neutral aspect.

The second difference is that we treat as one category the forms like you mei you 'have not have' and lai bu lai
'come not come', whereas the former is treated by most linguists of Chinese as grouped together with V le meiyou.

Third, we consider that the three rules of A-not-A, though coexisting at the moment, are competing against each other. The most prevalent rule is the reduplication of verbals with the insertion of bu or mei. This rule has won over that of the anaphoric ellipsis, as is shown by the great disparity in preference between the two rules by native speakers. This rule is also starting to rival with that of the V le meiyou form.

Fourth, we find that the reduplication rule is sensitive to a semantic constraint if there is a quantified phrase preceding the verbal phrase.

Last but not least, we find that the relation between the juxtaposed predicates in the A-not-A questions is not that one is the syntactic negative of the other; rather, it is a relation of semantic contradiction.

The first three differences, in actuality, are reflections of the complexity of a language at a transitional stage. This complexity may result from the complicated interaction of language contact, the competition of different rules in process, the inner structure of language and the principle of economy.
Notes


2. Notice that his conditions (ii) and (iii) are in fact contradictory. But according to him, condition (iii) is 'added there because also possible is' the derivation of sentences (ii) and (iii) from (i) below (pp. 55-56):

(i) Ta chi fan haishi ta bu chi fan?
   He eat rice or he not eat rice
   'Does he eat rice or not?'

(ii) Ta chi fan bu chi ?

(iii) Ta chi fan bu ?

It is not clear to us why he thinks so.

3. A sentence of this type is considered to be ungrammatical by Wang (1965:462, example 10) and is not discussed by Huang 1988. But Rand (1965:57) has collected many examples and we also find a lot in Cao's drama. We will discuss this further in a later section.

4. This is only implicitly mentioned in Ross (1967:97), but it is clearly stated in Ross (1970:251).

5. Dai 1990 tries to use another more general principle to account for both Huang's lexical integrity and preposition stranding, but we find that we cannot accept many of his examples. Zhu 1990 points out that in Peking vernacular there are counterexamples to Huang's lexical integrity. The examples that he cites are:

(i) Xiawu xuexi bu xue__?
   Afternoon learn not
'Will you study this afternoon?'

(ii) Mingtian kaoshi bu kao__?
    Tomorrow test not
    'Will we have a test tomorrow?'

6. Although Huang's Chinese examples which we are going to present do not involve moving wh words, he still considers these sentences to be related to wh-island condition. This has to do with his assumptions in the framework that he does his research. He assumes that even though Chinese does not have overt wh-movement, it can be viewed to exist in LF and that real questions, which have the scope of question over the whole sentence, are those which have their wh-word preposed to sentence-initial position in LF. I leave it open whether these assumptions are valid.

7. Li and Thompson (1981:415) list an additional mei. But judging from the fact that the you in mei(you) is optional and the fact that in their later discussion (pp.415-29) they mix the latter with the former, we do not see any reason to differentiate mei and mei(you). Note that there are some other remnants of negation from archaic Chinese, such as mo, fei, wu, fou (see Wang Li 1958:324-28, Yang 1971, and related works cited there). But these are rarely used and are usually frozen now.

8. The meaning of completion may be expressed by other words as well in Mandarin Chinese. The words that we can think of now include diao 'off, away', dao 'reach, achieve',
wan 'finish', guo 'past, ever', and some verbs which inherently have the meaning of completion, such as faxian 'find out' and kanjian 'see'. Sentences with these verbs or with these words immediately following verbs are also negated with mei(you) and not with bu.

9. The two sentences (56) and (57) are taken from Teng (1973:27).

10. This sentence is taken from Teng (1973:28, sentence 40b). But our translation differs from his slightly. He translates this sentence into 'He doesn’t want to go out yet'.

11. In the original passage by Rand, an ‘s’ is attached to the word ‘delete’; otherwise, all is quoted in his exact words.

12. In defending the autonomy of syntax, Tang seems to have forgotten that he has said, "whether an auxiliary verb can be used to form A-not-A construction depends on its illocutionary force as well as on its verbal features."
[translation mine] (p. 391). From the context before the quotation in Tang's work, it is obvious that he has the following sentences in mind.

(i) Ta yinggai bu yinggai lai?
He should not should come
'Should he or shouldn’t he come?'

(ii) *Ta yinggai bu yinggai hui lai?
He should not should will come
'*Should I say that he will come?'
He correctly explains that when *yinggai* and *hui* are used together, the speaker *has made* a conjecture and thus it is impossible for him to inquire about his own attitude shown in the modality.

13. Although truth conditions cannot apply to all types of sentences, for instance, question sentences, and the theory as a whole may not correctly explain the uses and meanings of human languages (for a work with the latter view, see Grace 1987), I agree that in doing semantic analysis they are often very helpful.

14. The judgments as to whether this sentence is acceptable vary with different people. For those who think this is marginal or not acceptable, the arguments related to (92c) can be ignored. But please note that the other three sentences—(91c), (93c) and (94c)—have the same structure as (92c) and they are acceptable.

15. I am grateful to Long-Yi, Chen Xin, Liu Xin, who come from Peking, and Mrs. Wu Zhen Kang, who comes from Tianjin, for discussing this with me.

16. The choice of these two terms, those with neutral aspect vs. those with non-neutral aspect, to distinguish the two kinds of A-not-A questions is not to our full satisfaction. We have considered two other pairs of contrastive terms: *irrealis* vs. *realis* and *unbounded* vs. *bounded*. But we have found that they have their
classificatory problems, too. If realis is chosen to replace non-neutral aspect, it is fine, as the situations seem to exist as reality from the viewpoint of the speaker. Yet the contrasting term irrealis cannot account for habitual actions and the uses of stative verbals like kao 'tall' and kuai 'fast'. Similarly, if the term unbounded is used to substitute for neutral aspect, it seems to work well, as future or habitual actions, and situations indicated by stative verbs seem to have no boundary. The use of 'bounded', however, to refer to durative action is odd. It remains to be seen whether more descriptive and appropriate terms can be found to make this distinction.

17. We say 'if they can form A-not-A questions' because it is well known that not all declarative sentences can have corresponding A-not-A question sentences. For example,

(i) Ni yiding yao lai. 
   You certainly must come
   'Certainly, you must come.'

(ii) *Ni yiding yao bu yao lai?
   '*Must you certainly come?'

(iii) Xinghao, ta zhaodao le chezi. 
   Fortunately, he found PERF car
   'Fortunately, he found his car.'

(iv) *Xinghao, ta zhaodao chezi meiyou?
   '*Did he fortunately find his car?'

18. By highest verbal we mean the leftmost verbal that one can find in the syntactic tree diagram of the questioned sentence or clause. We do not refer to the verb of the
higher sentence once popular with the Performative Hypothesis.

19. Robert Cheng (personal communication) points out to me that the unacceptability of sentences like *Henduo ren lai bu lai? 'Will many people come?' perhaps can be accounted for by his principle of unified focalization in Cheng 1983, by which he means that where there is more than one focus device in the same sentence, they all focus on the same element. The problem in the above A-not-A question is that it seems to have two different focuses. The quantified phrase henduo ren seems to be a focus, as in henduro ren lai ma? 'Do many people come?' what is being asked seems to be whether the number of people who come is 'many', not whether certain number of people come or not come. The A-not-A form lai bu lai 'come not come' in a sentence like ta lai bu lai 'will he come or not?' is a focus. This is an interesting account pending further studies.

20. This information and Zhu's article was drawn to my attention by Robert Cheng and Y.-C. Li.

21. Robert Cheng brought my attention to this possible cause. For the regulating features in Mandarin Chinese, see Cheng 1985.

22. Zhu 1990 has cited from a dialect in Sichuan two examples in which the A of A-not-A questions has included nouns. They are:
(i) Da bu dasauchu?
    not big-clean-up
    'Will we have a big clean-up?'

(ii) Zheng bu zhengzhi xuexi?
    not politics study
    'Is there going to be a politics study?'

But these two are still not acceptable in our Taiwanese Mandarin.
5.1 Summary

This dissertation studies three areas of interrogativity in Mandarin Chinese: the interpretation of question words as quantifiers, the explanation of rhetorical questions, and the formulation of A-not-A questions.

Chapter two deals with how question words can be semantically interpreted. Except for the non-quantificational uses, question words are generally classified into two contexts. One is that question words are followed by a dou 'both; each; uniformly' and the other is that question words are used in question sentences or used as indefinite nouns. The former type of question words is interpreted as the universal quantifier, whereas the latter type, as the existential quantifier.

The claim that question words can be interpreted as the existential quantifier, in fact, has been made by many scholars. But this claim is usually based on the existential presupposition and is frequently only mentioned in passing. In this dissertation, we provide five arguments to support the view that question words without a following dou can be semantically interpreted as the existential quantifier in addition to the pragmatic speech act operator. These arguments are (a) definiteness restriction, (b) lexical cooccurrence restriction, (c) scope ambiguity, (d) the relation between yes-no questions and their answers, and
(e) the relation of rhetorical questions and their implied assertive meanings.

The argument from definiteness restriction is based on the two following observed phenomena. First, question words without a following dou can occur in existential or presentational sentences. Second, they cannot occur as topics in sentences, since the nouns that can serve as topics are required to be either definite or generic. It is shown that the existential quantifier shows these two characteristics, too.

The second argument is based on the similar lexical cooccurrence restriction between question words without a following dou and the existential quantifier. Both are shown to be able to occur together with zhiyou 'only', but not with either jihu 'almost' or cabuduo 'nearly'.

The third argument is related to scope ambiguity. It is shown that question words without a following dou behave in the same way as the existential quantifier, no matter whether there are scope ambiguities or not.

The fourth argument takes as evidence yes-no questions like Ta chi le sheme ma? 'Did he eat anything?' and its negative answers like (a) Bu, ta mei chi sheme 'No, he didn’t eat anything' or (b) Bu, ta sheme dou mei chi 'No, he didn’t eat anything'. The semantic representation of (a) is \([-\text{Ex: thing(x)}][\text{he ate x}]\) and that of (b), \([-\text{Ax: thing(x)}][\text{he ate x}]\). If we interpret the sheme 'what' without a
following *do* in the question sentence and (a) as existential quantifier and the sheme 'what ' with a following *do* in (b) as universal quantifier, then the meaning relation between the question sentence and its negative answers can be adequately explained.

The fifth argument is based on rhetorical questions and their implied assertive meanings. We interpret them pragmatically as efforts by the speaker to challenge the hearer to refute the conclusions which anyone must logically deduce from the context; this interpretation is discussed in more detail in chapter three. This pragmatic interpretation of rhetorical questions themselves and the interpretation of question words as the existential quantifier can nicely explain the fact that a negative rhetorical question expresses a positive assertion and a positive rhetorical question conveys a negative assertion.

In chapter three, we have explored the topic of rhetorical questions. We have shown that linguistically interesting rhetorical questions can be classified into two types: those involving contradiction or negation, and those not involving negation.

The former type includes particle yes-no questions and question-word questions. The negative rhetorical questions are intended to convey positive assertions, whereas the positive rhetorical ones mean to impart negative assertions. Semantically, we have demonstrated that the relation between
this type of rhetorical question and its conveyed meaning can be considered as one manifestation of the logical contradictory relations. Pragmatically, we interpret this kind of rhetorical question as the speaker's challenge to the hearer for disproving a logically unavoidable deduction from given premises. The latter type includes disjunctive questions and A-not-A questions. The meanings of these kinds of rhetorical questions are obtained by having the gaps represented by the question forms filled with choices from the real world or from the linguistic context. We interpret the latter type of rhetorical question as the speaker's reminding the hearer to bring back one known fact from the vast information in the hearer's consciousness. These two types of rhetorical questions share one thing in common, namely, they are assertions in the disguise of questions, representing the speaker's effort of asking the hearer to do the retrieval of information himself, thus making the questions to convey meanings stronger than direct assertions.

Although it is frequently said that the use of questions as rhetorical questions is usually determined by the context, we have shown that some linguistic constructions or phrases in Chinese do influence the interpretation of questions. Those which force the questions to have the rhetorical readings are some polarity sensitive items and special sequences and frozen forms. The
polarity items include xiang hua 'appeal to reason' and hao yisi 'not bashful, appropriate'. The special sequences and frozen forms are a group of question phrases beginning with he 'why', and three rhetorical question markers: nali, shei shuo, and shei jiao. Question words in negative question sentences, if preposed, also produce rhetorical questions. Another affecting construction is question sentences which contain a counterfactual conditional clause using the phrase yaobushi 'if not'.

In chapter four we examine different views of the formulations of A-not-A questions. We first eliminate the view of Lu 1985 that A-not-A questions are derived from the juxtaposition of two antagonistic yes-no questions. Then after presenting the view of William Wang 1965 and Rand 1969, which maintains that A-not-A questions are derived from disjunctive questions, we discuss whether Huang 1988 is adequate to counter the view of Wang and Rand. Though we find some of his arguments questionable, we think that the view of Wang and Rand can be refuted by his example sentences like *Wo qu bu qu Meiguobijiaohao? 'Which is better, I go to America or not go to America?' and Wo qu Meiguohaishi bu qu Meiguobijiaohao? 'Which is better, I go to America or not go to America?' For if the first sentence comes from the second sentence, as would be claimed by Wang and Rand, there is no explanation why the first one should become ungrammatical.
To argue against the view of Wang and Rand, we also provide our own example sentences. Our three arguments are from aspect and negation, adverb modification, and quantification and scope. In all these three arguments, we find that A-not-A questions are not the juxtaposition of two constructions one of which is the syntactic negation of the other; instead, the juxtaposed constructions are semantically contradictory.

We think that A-not-A questions are derived through three different rules. The ones with neutral aspect and the form of VP-not-V are derived by means of anaphoric ellipsis while the ones with the same aspect and the form of V-not-VP are derived by the reduplication of the verb and an insertion of the negative *bu* or *mei*. And the A-not-A questions with non-neutral aspect such as perfective, experiential, or inchoative aspect are derived by the addition of *meiyou* 'not-have' to the end of the sentence.

Our formulations are different from those of previous studies in five aspects. First, we have three formulation rules, while others have one or two. Second, we treat sentences of the form *you meiyou* 'have not have' as belonging to the category of *lai bu lai* 'come not come', while others treat them as related to sentences of the form *V le meiyou*. Third, extending the observation of Cheng 1989, we think that the three rules are competing against each other and that the reduplication rule is the one that
is prevalent, while others either think that there is only one rule and thus no competition exists, or they do not say, if they believe that more than one rule is needed, whether one is preferable to another. The fourth one is that we think a semantic constraint needs to be imposed on the reduplication rule, stating that A-not-A forms cannot be formed with preceding quantified phrases. The last one is that we think the relation between the juxtaposed constructions are semantically contradictory rather than syntactic negation.

5.2 Implications

Each of the three areas that we have studied in this dissertation—the interpretation of question words, the explanation of rhetorical questions, and the formulation of A-not-A questions—points to further problems that need more exploration. The interpretation of question words as quantifiers makes us wonder what may be responsible for the two different explanations, one as existential quantifier and the other as universal quantifier, and whether it is possible to find a more generalized theory to unify the two explanations. The pragmatic and semantic explanation of rhetorical questions, on the other hand, leads us to ask why some syntactic frozen sentences have to be interpreted rhetorically, while many, if not most, can be interpreted as either rhetorical questions or real questions. Finally, the study on the formulation of A-not-A questions makes us
ponder why so many forms coexist and when each arises in the evolution of Chinese.

Although our study in chapter two has offered five arguments to assert that common question words in Chinese can be interpreted as the existential quantifier, there are some questions left unanswered. The first question is why some question words should be interpreted as the universal quantifier in some special contexts. These contexts include a question word followed by dou 'all' and a question word each in the two clauses of a conditional sentence. This question leads to other questions. What is the semantic and syntactic function of the word dou? How should we represent the question word preceding dou? And what will be the best explanation for the question words in conditional sentences? Following Heim 1982 which treats indefinites as free variables, I have speculated in section 2.2 that question word before dou is to be treated as variable and the two question words in conditional sentences as coindexed variables. If this speculation is correct, then we may have a unified explanation for all question words. Of course, more work has to be done before this speculation can be confirmed.

In our explanation of rhetorical questions, we apply both semantic and pragmatic principles. If our explication is acceptable, then this implies that to explain some sentences in human languages syntax may have to resort to
the help of semantics and pragmatics. But again, we are puzzled by why some question sentences with frozen syntactic forms have to be interpreted as rhetorical questions, but not real questions, while many question sentences can be interpreted either way. We can understand why some of the frozen forms, for instance the polarity items, would force the rhetorical readings on the otherwise normal questions sentences. They are interpreted rhetorically, because the polarity items discussed in chapter 3 can occur with negation only. But we do not know why question sentences with other frozen forms have to be explained as rhetorical questions. Especially, we do not know why of the two closely similar phrases, yaobushi 'if not' and yaoshi...bu 'if...not', only the former forces a rhetorical reading on a question sentence containing it. If we are not satisfied with description only and demand for an explanation, these frozen forms deserve more investigation.

In the study of A-not-A questions, we find that this kind of question is not as homogeneous as the category name may suggest. We think that there are three subtypes: VP-not-VP, which further changes into VP-not-V, if undergoing through anaphoric ellipsis; V-not-VP; and V le meiyou. Though these three forms coexist, they show different degree of preference by native speakers. The V-not-VP is obviously preferred to the VP-not-VP or its derivative VP-not-V. And one further subtype of V-not-VP, i.e., you meiyou VP 'have
not-have-VP', also seems to be gaining over \textit{V le meiyou}, though the popularity of the former still lags behind that of the latter. We have viewed this difference in preference among the three subtypes as a result of three competing syntactic rules, with the V-not-VP being the predominant one. Following Cheng 1989, we think that contact between Southern Chinese dialects such as Taiwan and Mandarin Chinese may be responsible for the emerging competition between \textit{you meiyou VP} and \textit{V(P) le meiyou}.

But it is not clear to us what may cause the competition between V-not-VP and VP-not-V(P). We have vaguely suggested in section 4.8 that responsible are the principle of economy and the inner structure of the language, such as those constructions in which the main verbs are intransitive verbs without NP as their objects or those in which the NPs are preposed. Yet it remains to be seen whether we can find support for this suggestion from historical studies. It might be interesting to know why A-not-A questions arise, which, generally speaking, are semantically the same as yes-no questions, and it might also be worth while to study when each subtype of A-not-A questions comes into existence in the evolution of Chinese.

To conclude, the fact that as it spreads to vast regions of different dialects, Chinese is at a transitional stage and the fact that interrogative sentences involve not only syntax but also pragmatics and semantics make studies
of interrogativity in Chinese very complicated but rewarding. Our studies in this area are an attempt to contribute to the understanding of interrogativity, especially in Chinese. Our studies, however, also indicate that in this area more questions are to be answered and further explorations are needed.
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