

Rhetorical Wh-Questions in Chinese and Feature Movement

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Abstract. In this paper, I show the adjunct-like properties of rhetorical wh-questions (RQs) in Chinese, and review two significant works that examine the phenomenon of RQs in Chinese in the generative grammar, namely Wu (1999) and Hsieh (2001). Wu (1999) proposes a parallel analysis, N(egation)-operator binding, for both wh-movement and wh-in-situ languages. In addition, Hsieh (2001) studies the *na(r)*-RQ construction in Chinese, and proposes that *na(r)* is an overt realization of the negative operator in the Spec of QP. Instead of adopting their analyses (i.e., an operator-binding account), I argue that the wh-words in Chinese RQs undergo feature movement to CP (cf. Pesetsky 2000; Cheng and Rooryck 2002; Soh 2005).

1. Introduction

Different from information-seeking questions (IQs), a rhetorical question (RQ) does not expect to elicit an answer, but has the illocutionary force of an assertion of the opposite polarity from what is apparently asked (e.g., Sadock 1971, 1974; Progovac 1994; Bhatt 1998; Han 2002). In other words, a rhetorical positive question conveys a negative assertion, while a rhetorical negative question expresses a positive assertion, as the sentences in (1) illustrate. In (1a), the wh-question asserts that *John has done nothing for Sam*, and that in (1b) asserts that *John has done everything for Sam*.

- (1) a. What has John ever done for Sam?
b. What hasn't John done for Sam?

The syntax and semantics of RQs in English have been widely discussed in the literature (Han and Siegel 1996a, 1996b; Han 1997, 2002; among others). Han and Siegel (1996a) propose that RQs have a similar syntax to the negative-inversion constructions. Moreover, Han (2002) also elaborates the semantics of RQs and accounts for the source of negation in

such constructions by arguing that the denotation of the wh-words in RQs is the empty set in their denotational domains. As defined in Groenendijk and Stokhof (1985), the semantics of questions is a function that partitions the set of all possible worlds. The partition represents the set of propositions which are possible answers, including the negative answer. Due to the pragmatic principle of informativeness (cf. Grice 1975), the wh-words in RQs are forced to denote the bottom element in their denotational domains, namely the empty set, and map onto negative polarity at the level of post-LF (cf. Bhatt 1998). Thus, the wh-words in RQs are interpreted as negative quantifiers, undergoing movement to the Spec-CP position accompanied by verb movement to C and taking wide scope, which can be parallel to the syntax and semantics of negative-inversion constructions.

Unlike RQs in English, the discussion of Chinese RQs from the generative perspective is limited and most studies are found in the descriptive grammar of Chinese such as Alleton (1988) and references cited there. To the best of my knowledge, Wu (1999) and Hsieh (2001) are two more significant works that examine the phenomenon of RQs in Chinese from the generative viewpoint. In his account of RQs, Wu (1999), following Tsai (1994, 1999a), proposes a parallel analysis, N(egation)-operator binding, for both wh-movement (i.e., English) and wh-in-situ languages (i.e., Chinese). In addition, when focusing on the issues related to the affinity between negation and questions, Hsieh (2001) studies the *na(r)*-RQ construction in Chinese. She proposes that *na(r)* is an overt realization of the negative operator in the Spec of QP. Instead of adopting an analysis of operator-binding, this paper will present the syntactic properties of Chinese RQs, and argue for a movement approach, based on the properties.

This paper is organized as follows. Section 2 presents the characteristics of Chinese RQs, which show that the syntactic conditions RQs can occur are more restricted than those for IQs, and that RQs with a wh-argument display the “adjunct” property. In section 3, I will briefly review the previous studies on Chinese RQs (i.e., Wu 1999; Hsieh 2001), and discuss the problems with their analyses. Section 4 provides my analysis in favor of a movement approach. I will argue that the wh-words in Chinese RQs undergo feature movement to CP. My conclusion is given in section 5.

2. The syntactic properties of RQs

2.1 RQs in English: the root phenomenon and NPI licensing

Before we examine the relevant Chinese data on RQs, let us briefly discuss the syntactic properties of RQs in English. It has been argued that in English, RQs differ from IQs in some respects. The first distinction lies in locality. Han and Siegel (1996a, 1996b) point out that while IQs can have long-distance movement, movement in RQs is clause-bounded. As shown in (2), a wh-NP can move away from its base position, as long as no islands are involved. The example (3) indicates that the RQ reading is ruled out when the wh-NP moves across a

clausal boundary; otherwise, the RQ reading is warranted, as in (4), where the wh-NPs do not move from the embedded clauses.

- (2) Who do you think that John will like? ($\sqrt{\text{IQ}}$, *RQ)
- (3) Who does Bill think has ever said anything at the seminar? ($\sqrt{\text{IQ}}$, *RQ)
- (4) a. Who said that Mary ever kissed John? ($\sqrt{\text{RQ}}$)
 b. Who believes that John has ever loved anyone? ($\sqrt{\text{RQ}}$)

In addition to locality, RQs and IQs are also different with respect to scope (Han and Siegel 1996a, 1996b; Han 1997). In RQs, the wh-NPs must take wide scope while those in IQs do not necessarily have wide scope. This can be illustrated in the following examples. For the validity of the RQ reading in (5) and (6), the wh-NPs have to scope over the deontic modal and negation, as indicated in the *b* reading in both examples. However, the wide scope construal is not necessarily required in IQs, as exemplified in (7), where the wh-NP and the universal quantifier can take scope over each other.

- (5) a. What must John do?
 b. There is nothing such that it is obligatory for John to do it.
 c. *It is obligatory for John to do nothing.
- (6) a. Who has John not agreed with?
 b. There is no *x* such that John has not agreed with *x*.
 c. *It is not the case that there is no *x* such that John has agreed with *x*.
- (7) a. What did everybody buy?
 b. What is *x*, for every *y*, such that *y* bought *x*.
 c. For every *y*, what is *x* such that *y* bought *x*.

Concerning licensing of negative polarity items (NPIs), RQs and IQs also behave distinctively, as shown in (8), the examples discussed in Han (1997, 2002).

- (8) a. Positive IQs do not license strong NPIs:
 #Who lifted a finger to help Sam?
 b. Positive RQs license strong NPIs:
 After all, who lifted a finger to help Sam?

- c. Negative IQs license NPIs:
 Who didn't lift a finger to help Sam?
 Who hasn't ever been to Seoul?
- d. Negative RQs do not license NPIs:
 #After all, who didn't lift a finger to help Sam?
 #After all, who hasn't ever been to Seoul?

The reason why negative RQs do not license NPIs has been attributed to the interaction between the surface negation and the abstract negation that the *wh*-words map onto at the post-LF level, which results in a positive assertion. The cases shown in (8) conform to Linebarger's (1981, 1987) claim that what can license NPIs is the existence and availability of a negative implicature (e.g., 8b), in addition to the requirement of Immediate Scope (e.g., 8c).

In the earlier studies (e.g., Borkin 1971; Lawler 1971; Progovac 1994), *wh*-questions with NPIs are supposed to have the RQ reading obligatorily. Han and Siegel (1996a) argue against this. They show that although all adjunct *wh*-questions with NPIs lack the IQ reading, the IQ reading is still available in some, but not all argument *wh*-questions. Certain argument *wh*-questions, such as those in (9) and (10), in which the trace of the *wh*-NP *c*-commands the weak NPI, can have both IQ and RQ readings, whereas only the RQ reading is accessible when this *c*-commanding relationship does not hold, as shown in (11) and (12).

- (9) Who *t* has ever been to Seoul? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
- (10) Who *t* said anything interesting at the seminar? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
- (11) What has Sam ever contributed *t* to the project! ($\sqrt{\text{RQ}}$)
- (12) What did anybody say *t* at the seminar! ($\sqrt{\text{RQ}}$)

The contrast between (9-10) and (11-12) may be related to the issue on intervention effects (cf. Guerzoni 2006).

2.2 RQs in Chinese: adjunct-like *wh*-arguments

In section 2.1, we have discussed the characteristics of English RQs, which display a root phenomenon and relation to NPI licensing. This subsection is devoted to RQs in Chinese. As can be seen later, the syntactic restrictions on RQs are more than those on IQs, due to which, the *wh*-nominal RQs look “adjunct-like”. Besides, only in the RQ context can NPIs be licensed.

Peripheralness

As shown in the following data, IQs in Chinese can also be used as RQs. However, the question in (13) with the wh-word as a subject is easier to be interpreted as an RQ than that in (14), where the wh-word is the object.¹ Also note that the questions in (15) and (16) have a stronger negative implication than those in (13) and (14). This may be because the wh-words in (15) and (16) behave more like an adverbial, rather than a nominal.²

(13) Shei xihuan ta? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 Who like he
 ‘Who likes him?’

(14) Ta zuo-le shenme? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 He do-ASP what
 ‘What did he do?’

(15) Zhe you shenme hao? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 This have what good
 ‘What good is this?’

(16) Ni xiao shenme xiao? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 You laugh what laugh
 ‘What are you laughing at?’

The observations presented above show that the RQ reading is available if the wh-word is located peripherally while the accessibility of such interpretation declines if the wh-word is embedded deeply in the structure.

Non-embeddedness

Moreover, as indicated in the unattested *b* reading in (17), RQs cannot be embedded. This property of Chinese RQs is similar to the case in English. Since the RQ expression is a kind of speaker-oriented mood to convey a disapproval of what is apparently asked, it shows

¹ Of the ten informants I consulted, all admit the RQ interpretation in (13) while not everyone can get the RQ reading in (14). Between the grammatical functions different degrees of accessibility arose.

² As shown in Hsieh (2001), the wh-words in the sentences like (15) and (16) cannot be replaced with a nominal expression, unlike that in (14). This may be an indication of grammaticalization of the wh-word, *shenme* ‘what’.

a root phenomenon. Therefore, RQs are not felicitous in the embedded contexts,³ as also indicated in Wu (1999).

- (17) Zhangsan zhidao shei hui lai canjia zhe-zhong wuhui.
 Zhangsan know who will come attend this-CL party
 a. ‘Zhangsan knows who will come and attend this kind of party.’
 b. * ‘Zhangsan knows that no one will come and attend this kind of party.’

Island effects

In addition to the property of not being embedded, RQs cannot appear in syntactic islands, either. This can be illustrated by (18) and (19), both of which are complex NP islands, and (20), an adjunct island. The sentence in (21) exhibits that the RQ reading is not possible within the IF clause. In these cases, the RQ interpretation is not accessible,⁴ though the IQ reading is still available.

- (18) Zhangsan xihuan [[shei xie] de shu]?
 Zhangsan like who write DE book
 ‘Who is the person x such that Zhangsan likes the book which x wrote?’
- (19) Zhangsan huaiyi [[Lisi neng zuo shenme shi] de shuofa]?
 Zhangsan suspect Lisi can do what thing DE story
 ‘What is the thing x such that Zhangsan suspects the story that Lisi can do x?’
- (20) Zhangsan hui [yinwei ta laopo mai-le shenme] shengqi (ne)?
 Zhangsan will because he wife buy-ASP what get-angry Q
 ‘What is the thing x such that Zhangsan will get angry because his wife bought x?’

³ Hsieh (2001) argues that the *na(r)*-RQ construction can be embedded as the complement of *yawei* ‘think’, as shown in (i) below, though it cannot be the complement of a factive verb or an indirect question. In my opinion, *yawei* ‘think’, just like *suo* ‘say’, can be parenthetical or quotative, and the proposition, which looks like a complement, is not really embedded.

- (i) Zhangsan yiwei wo na(r) qu-guo Zhongguo.
 Zhangsan think I where go-ASP China
 ‘Zhangsan thought I hadn’t been to China.’

However, Cheung (2006) makes a wrong claim that there can be indirect RQs. As we mentioned in the text, the RQ interpretation is a root phenomenon. If a question is embedded under verbs that take a *wh*-complement, the RQ reading cannot be available.

⁴ All of the ten informants I consulted rejected the RQ reading in these sentences.

- (21) Ruguo na ge zhexuejia lai, Zhangsan hui gaoxing ne?
 If which CL philosopher come, Zhangsan will happy Q
 ‘Who is x, such that if x is a philosopher and x comes, Zhangsan will be happy?’

The empirical evidence that RQs in Chinese do have the island effects has also been supported by Sprouse’s (2007) observation. Sprouse (2007) points out that all wh-words in RQs in languages without overt wh-movement show island effects, regardless of whether they are arguments or adjuncts. He illustrates this observation with Japanese data, as given below in (22-23). (22) shows an island violation with an argument, and (23) exhibits an island violation with an adjunct.

- (22) *[John-wa [kare-no okusan-ga nani-o katta kara]
 John-TOP he-GEN wife-NOM what-ACC bought because
 okoru-to iu-no]?
 get.angry-COMP saying-Q
 ‘What would John get angry because his wife bought?’
 ‘‘There is nothing such that John would get angry because his wife bought that thing.’’
- (23) *[John-wa [kare-no okusan-ga naze atarasii doresu-o
 John-TOP he-GEN wife-NOM why new dress-ACC
 katta kara] okoru-to iu-no]?
 bought because get.angry-COMP saying-Q
 ‘Why would John get angry because his wife bought a new dress?’
 ‘‘There is no reason such that John would get angry because his wife bought a new dress for that reason.’’

As also observed by Sprouse (2007), island violations in argument-RQs can be improved with the help of Principle of Minimal Compliance (Richards 1998). This is exemplified below in (24).

- (24) Shei hui [yinwei ziji laopo mai-le shenme] shengqi (ne)?
 Who will because self’s wife buy-ASP what get-angry Q
 ‘Who will get angry because his wife bought what?’

Intervention effects

The following data show the intervention effects occurring in RQs. In the first set of examples, what is interesting is that modals do not block the RQ interpretation of a

wh-nominal (25-26) whereas they function as an intervener for a wh-adverbial (27-28).⁵ The former follows the prediction in Beck (1996), where modals are not included in the class of blocking expressions. However, the latter is surprising. This exception implies that the restrictions on RQs, especially those with a wh-adverbial, are more than on IQs. Note that it is not difficult to get the IQ reading of the wh-word in (27), although there are differences in meaning when the wh-word appears (a) outside and (b) inside the scope of the modal (see Tsai 1999b for further discussion).

Modals:

(25) Shei qu-de-liao Zhongguo? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 Who go-DE-ASP China
 ‘Who can go to China?’

(26) Ta zuo-de-liao shenme shi? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 He do-DE-ASP what thing
 ‘What can he do?’

(27) a. Ta zenme neng zou? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 He how can leave
 ‘How come he can leave?’
 b. Ta neng zenme zou? ($\sqrt{\text{IQ}}$, *RQ)
 He can how leave
 ‘How can he leave?’

(28) a. Ta na(r) neng zou?! ($\sqrt{\text{RQ}}$)
 He where can leave
 ‘How can he leave?!’

⁵ It should be noted that only in the scope of circumstantial or ability modals is the RQ interpretation of a wh-nominal not blocked. In sentences with a deontic necessity modal or an epistemic modal, wh-nominals do not have the RQ reading, as shown in (i) and (ii).

(i) Ta dei zuo shenme shi? ($\sqrt{\text{IQ}}$, *RQ)
 He have.to do what thing
 ‘What does he have to do?’

(ii) Ta keneng mai shenme dongxi? ($\sqrt{\text{IQ}}$, *RQ)
 He be.likely.to buy what thing
 ‘What is he likely to buy?’

I conjecture that such non-blocking of circumstantial or ability modals in argument RQs may be partially due to the semantics of the modals. I leave it for future research.

- b. *Ta neng na(r) zou?!
 He can where leave
 ‘How can he leave?!’

Furthermore, the following sets of data illustrate that negation, universal quantifiers, *only*, and *often* are interveners in Chinese, and they block the RQ interpretation (see Soh 2005 for other interveners in Chinese). The blocking effects caused by negation and universal quantifiers are also noticed by Wu (1999), which he called the roofing effects.

Negation:

- (29) Shei mei qu-guo Zhongguo? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 Who not go-ASP China
 ‘Who hasn’t been to China?’

- (30) Zhangsan bu hui du na yi-ben shu? ($\sqrt{\text{IQ}}$, *RQ)
 Zhangsan not will read which one-CL book
 ‘Which book will Zhangsan not read?’

- (31) a. Ta zenme bu kan zhentan-xiaoshuo? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 He how not read detective-novel
 ‘How come he doesn’t read detective novels?’

- b. Ta bu zenme (chang) kan zhentan-xiaoshuo. (*RQ)
 He not how often read detective-novel
 ‘He didn’t read detective novels very often.’

Universal quantifiers (i.e. every...all):

- (32) Shei hui zuo shu-shang de mei-dao ti? ($\sqrt{\text{IQ}}$, $\sqrt{\text{RQ}}$)
 Who will do book-top DE every-CL item
 ‘Who will do every exercise in the book?’

- (33) Mei-ge xuesheng dou hui kan shenme shu? ($\sqrt{\text{IQ}}$, *RQ)
 Every-CL student all will read what book
 ‘What book will every student read?’

- (34) a. Ta na(r) mei-ci dou lai?! ($\sqrt{\text{RQ}}$)
 He where every-time all come
 ‘How can it be the case that he came every time?!’

- b. *Ta mei-ci dou na(r) lai?!
 He every-time all where come
 ‘How can it be the case that he came every time?!’

Only:

- (35) Shei zhi kan zhentan-xiaoshuo? (\sqrt{IQ} , \sqrt{RQ})
 Who only read detective-novel
 ‘Who only reads detective novels?’
- (36) Ni zhi kan shenme xiaoshuo? (\sqrt{IQ} , *RQ)
 You only read what novel
 ‘What novel do you only read?’
- (37) a. Ta na(r) zhi kan zhentan-xiaoshuo?! (\sqrt{RQ})
 He where only read detective-novel
 ‘How can it be the case that he only reads detective novels?!’
 b. *Ta zhi na(r) kan zhentan-xiaoshuo?!
 He only where read detective-novel
 ‘How can it be the case that he only reads detective novels?!’

Often:

- (38) Shei chang qu kan dianying? (\sqrt{IQ} , \sqrt{RQ})
 Who often go see movie
 ‘Who often goes to the movies?’
- (39) Ta chang qu kan shenme dianying? (\sqrt{IQ} , *RQ)
 He often go see what movie
 ‘What movie does he often go to see?’
- (40) a. Ta na(r) chang qu Taipei?! (\sqrt{RQ})
 He where often go Taipei
 ‘How can it be the case that he often goes to Taipei?!’
 b. *Ta chang na(r) qu Taipei?!
 He often where go Taipei
 ‘How can it be the case that he often goes to Taipei?!’

NPI licensing

It has been argued that IQs cannot license NPIs such as *renhe* ‘any’ and wh-indefinites.

A question containing two wh-words can only be construed as a multiple question. Neither of them can have an indefinite interpretation (Li 1992; Wang and Hsieh 1996). However, as indicated by Cheung (2006) and Hsieh (2001), various NPIs can be licensed in the RQ context. Examples in (41-43) show that the wh-indefinite *shenme* ‘what’, the weak NPI *renhe* ‘any’, and the minimizer *ban-mao qian* ‘half a cent’ are licensed in the scope of *na(r)* ‘where’.⁶ The NPI-licensing effects displayed in RQs containing other wh-words are illustrated in (44-46). Note that the sentences in these examples imply a strong negative proposition.

- (41) Ta na(r) chi-guo shenme dongxi?! (√RQ)
 He where eat-ASP what thing
 ‘How can it be the case that he has eaten anything?!’
- (42) Ta na(r) you chi renhe dongxi?! (√RQ)
 He where have eat any thing
 ‘How can it be the case that he has eaten anything?!’
- (43) Ta na(r) you gei-guo wo ban-mao qian?! (√RQ)
 He where have give-ASP I half-cent money
 ‘How can it be the case that he has given me any money?!’
- (44) Ta zenme keneng chi-guo shenme dongxi?! (√RQ)
 He how possible eat-ASP what thing
 ‘How can it be possible that he has eaten anything?!’
- (45) (You) shei gei-guo wo ban-mao qian?! (√RQ)
 Have who give-ASP I half-cent money
 ‘Who has given me half a cent?!’
- (46) (You) shei wei wo zuo-guo renhe shi?! (√RQ)
 Have who for I do-ASP any thing
 ‘Who has done anything for me?!’

We have sketched the syntactic properties of RQs in Chinese, as summarized in table 1 below. As shown in the table, the IQ reading of wh-arguments such as *shei* ‘who’ and *shenme* ‘what’ is possible in all syntactic conditions we examined, whereas their RQ interpretation is

⁶ See Li (1992) for the discussion of wh-indefinites as polarity items, Wang and Hsieh (1996) for *renhe* ‘any’ as an NPI, and Hsieh (2001) for the minimizers.

not accessible in all the conditions except the intervention by circumstantial or ability modals. Besides, NPIs can only be licensed in the RQ context, as indicated in the table. The implication brought out here is the adjunct-like property of Chinese RQs.

Table 1: The comparison between IQs and RQs in various syntactic conditions
(√ means “no effect”, and X means “ungrammatical”)

Syntactic conditions	Argument-IQs	Argument-RQs	Adjunct-IQs	Adjunct-RQs
Embedded clauses	√	X	√	X
Islands	√	X	X	X
Intervention of negation	√	X	X	X
Intervention of universal quantifiers	√	X	X	X
Intervention of <i>Only</i>	√	X	X	X
Intervention of <i>Often</i>	√	X	X	X
Intervention of modals	√	X (√ only for circumstantial/ability modals)	X	X
NPI licensing	X	√	X	√

3. Previous studies on RQs in Chinese

In this section, I will review two previous accounts of RQs in Chinese, and discuss the problems with the analyses. Section 3.1 first discusses Wu’s (1999) analysis, and Hsieh’s (2001) account is provided subsequently.

3.1 Wu (1999)

Following Tsai (1994, 1999a), Wu (1999) proposes a parallel analysis, N(egation)-operator binding, to account for the syntactic behaviors of English and Chinese RQs. Wu argues that the *wh*-words in English RQs can be treated on a par as a constituent consisting of an N-operator and a variable, and must move overtly to Spec-PolP (Culicover 1991) to check the strong neg-feature before Spell-Out. One difference from Tsai’s (1994, 1999a) proposal is that in his analysis, the operator-variable relation in English RQs is restricted to matrix clauses only. He also points out that although the syntactic representation of RQs in English looks like negative inversion (cf. Han and Siegel 1996a), they are distinctive because of the matrix-clause-only characteristic of RQs, as can be seen in (47) and (48) below.

- (47) a. At no time has John said anything like that.
 b. John believes that at no time has Mary said anything like that.
 c. John likes the book that never has anyone read.

- (48) a. *John said what Mary ever knows.
 b. *The book that who likes to read has been published.

In (47), negative inversion can occur in (a) a matrix clause, (b) an embedded clause, and (c) an island, while RQs can appear neither in an embedded clause nor in an island.

Regarding RQs in Chinese, Wu (1999) adopts Tsai's (1994, 1999a) analysis of unselective quantification, via which the whs-in-situ in RQs are bound by the N-operator, and interpreted as negative quantifiers. Wu further argues that similar to argument-IQs, argument-RQs in Chinese observe no island effects. He uses the following examples to account for the insensitivity of RQs to any strong island.

(49) Subject Island

[Shei chang zhe-shou ge] hui haoting ne?
 Who sing this-CL song will pleasant-to-ear Q

- a. No one can sing this song very well.
 b. *It will be pleasant to ear that no one sings this song.

(50) Complex NP Island

Zhangsan hui xihuan [na ge zuojia xie de shu] ne?
 Zhangsan will like which CL writer write DE book Q

- a. Zhangsan will not like any books written by any authors.
 b. *Zhangsan will like the books that no author writes.

(51) Adjunct Island

Zhangsan hui [yinwei na ge xuesheng bu lai] shengqi ne?
 Zhangsan will because which CL student not come angry Q

- a. Zhangsan will not be angry about any student's absence.
 b. *Zhangsan will be angry because every student is present.

Like IQs, the argument-adjunct asymmetry also exists in Chinese RQs in that the adjunct *weishenme* is subject to the island conditions, as exemplified in (52), where neither the IQ reading nor the RQ interpretation is possible.

- (52) *Lisi hui [yinwei Zhangsan weishenme bu qu] er shengqi ne?
 Lisi will because Zhangsan why not go then angry Q

Wu noticed that the Chinese RQs show the properties of not being embedded and blocked by some interveners, but wrongly claimed that the argument-RQs do not show any island effect,

to which I will return shortly below.

Although Wu (1999) provides a more unified syntactic analysis of RQs for both wh-movement and wh-in-situ languages, there are some theoretical and empirical problems with his analysis. The theoretical problem is concerned with the unselective binding of the N-operator. In his discussion of Chinese RQs, Wu argues that the N-operator merged into the root CP can bind the RQ-arguments in strong islands, just like its counterpart Q-operator. However, the N-operator binding is different from the Q-operator binding in that the Q-operator can bind variables inside the embedded clauses and observes no intervention effects, whereas the N-operator cannot bind into the embedded clauses and shows such blocking effects. The restriction on the unselective N-operator binding proposed by Wu leads us to question about the application of such quantificational operation. Cheng and Rooryck (2002) propose that unselective binding is not subject to intervention effects. Following their assumption, I cast a doubt on Wu's analysis.

Moreover, as have been mentioned previously, RQs in English are clause-bounded and restricted to matrix clauses only. RQs in Chinese show the same condition, since they cannot be embedded. If the N-operator merged in the root CP cannot bind into the embedded clauses, how can such binding relation survive within a strong island? This question brought out the empirical problem in Wu's analysis.

Wu (1999) argues that similar to IQs, argument-RQs in Chinese observe no island effects, either. The examples he gives to illustrate this are repeated in (53-55).

(53) Subject Island

[Shei	chang	zhe-shou	ge]	hui	haoting	ne?
Who	sing	this-CL	song	will	pleasant-to-ear	Q

'No one can sing this song very well.'

(54) Complex NP Island

Zhangsan	hui	xihuan	[na	ge	zuojia	xie	de	shu]	ne?
Zhangsan	will	like	which	CL	writer	write	DE	book	Q

'Zhangsan will not like any books written by any authors.'

(55) Adjunct Island

Zhangsan	hui	[yinwei	na	ge	xuesheng	bu	lai]	shengqi	ne?
Zhangsan	will	because	which	CL	student	not	come	angry	Q

'Zhangsan will not be angry about any student's absence.'

However, even though these three sentences can have the RQ reading, it does not mean that there are no island effects in argument-RQs in Chinese, since the examples offered by him

may be acceptable for independent reasons, say, D-linking (Pesetsky 1987). The counterexamples to the island insensitivity, which have been shown above, are repeated below. The wh-words in these cases do not have the RQ interpretation.

(56) Zhangsan xihuan [[shei xie] de shu]?

Zhangsan like who write DE book

‘Who is the person x such that Zhangsan likes the book which x wrote?’

(57) Zhangsan huaiyi [[Lisi neng zuo shenme shi] de shuofa]?

Zhangsan suspect Lisi can do what thing DE story

‘What is the thing x such that Zhangsan suspects the story that Lisi can do x?’

(58) Zhangsan hui [yinwei ta laopo mai-le shenme] shengqi (ne)?

Zhangsan will because he wife buy-ASP what get-angry Q

‘What is the thing x such that Zhangsan will get angry because his wife bought x?’

The fact that the RQ reading cannot be obtained within a syntactic island immediately explains Wu’s puzzle on the IF-island, which is unexpected in his analysis.

3.2 Hsieh (2001)

Hsieh (2001) focuses on the discussion of a special type of question that employs the question form *na(r)* ‘where’. She called this question type the “*na(r)* rhetorical question”, since it denies what is said and implies a negative proposition obligatorily.⁷ The goal of her argument is to support the claim that negation can be expressed by a question form. She argues that the question form *na(r)* ‘where’ is not located in a position where a negative marker is, which can be illustrated by the following examples (Hsieh 2001: ch.6, (26-27)).

(59) a. Tamen dou mei(you) qu-guo Zhongguo.

They all not(have) go-ASP China

‘None of them has been to China.’

b. Tamen mei(you) dou qu-guo Zhongguo.

They not(have) all go-ASP China

‘Not all of them have been to China.’

⁷ Hsieh (2001) noticed that a *na(r)*-RQ, unlike other RQs, cannot occur with *daodi* ‘indeed’. Also, it cannot function as an indirect question selected by the verbs like *wun* ‘ask’. Cheung (2006), based on these characteristics and some other evidence from Cantonese, argues that a *na(r)*-RQ is not a rhetorical question, but a negative wh-construction. Nevertheless, Cheung (2006) admits that RQs and the negative wh-construction in his sense share some similarities, and may be treated in a similar way.

- (60) a. *Tamen dou na(r) qu-guo Zhongguo?!
 They all where go-ASP China
 ‘How is it possible that all of them have been to China?!’
- b. Tamen na(r) dou qu-guo Zhongguo?!
 They where all go-ASP China
 ‘How is it possible that all of them have been to China?!’

In addition, sentences containing *na(r)* ‘where’ can license various NPIs such as wh-indefinites and minimizers. The relevant examples are repeated in (61-63). This motivates Hsieh (2001) to propose that *na(r)* is an overt realization of the negative operator generated in the Spec of QP.

- (61) Ta na(r) chi-guo shenme dongxi?!
 He where eat-ASP what thing
 ‘How can it be the case that he has eaten anything?!’

- (62) Ta na(r) you chi renhe dongxi?!
 He where have eat any thing
 ‘How can it be the case that he has eaten anything?!’

- (63) Ta na(r) you gei-guo wo ban-mao qian?!
 He where have give-ASP I half-cent money
 ‘How can it be the case that he has given me any money?!’

Nevertheless, there are some problems with Hsieh’s proposal. First, it is not clear what variable in sentences like (64) the negative operator binds. The operator-variable relation is governed by the well-formedness conditions on quantification. The Condition on Quantifier Binding prevents an operator from binding no variable (cf. Huang 1982).

- (64) Ta na(r) neng zou?!
 He where can leave
 ‘How can he leave?!’

Second, it has been evidenced above that a *na(r)*-RQ, like other RQs, is subject to the intervention effects. The pair of sentences in (65) (as well as the examples given in the foregoing section) demonstrates the blocking effect coming up in the *na(r)*-RQ construction. This is unexpected in Hsieh’s analysis.

- (65) a. *Henshao ren na(r) lai?!
 Few person where come
 ‘How can it be the case that few people came?!’
- b. Na(r) henshao ren lai?!
 Where few person come
 ‘How can it be the case that few people came?!’

In short, the studies we have reviewed in this section cannot provide a better analysis to account for the phenomena relating to RQs in Chinese. In the next section, I will suggest an analysis which is in favor of a movement approach (cf. Sprouse 2007; Barry Yang, p.c.).

4. Feature movement in Chinese RQs

The syntactic characteristics of RQs, presented in section 2, imply that RQs should be treated in a more restricted way. Based on the fact that in Chinese IQs, unlike nominal wh-words like *shei* ‘who’, and *shenme* ‘what’, adverbial wh-words such as *weishenme* ‘why (reason)’ may not take wide scope across an island (Huang 1982; Tsai 1994, 1999a), recent studies (e.g., Tsai 1994, 1999a), have argued that only adverbial wh-words move to Spec-CP at LF, while nominal wh-words remain in-situ throughout the derivation, licensed by a question operator in C via unselective binding. The observation that wh-nominal RQs in Chinese look adjunct-like implies that they undergo covert movement, just like adverbial wh-words.

Before going further, let’s briefly talk about the movement operations. Pesetsky (2000) has argued that there is another type of movement operation that does not affect the phonology, that is, feature movement, in addition to (covert) phrasal movement. On his account, feature movement is subject to intervention effects, while (covert) phrasal movement is not, and island effects detect phrasal movement, rather than feature movement. Following Pesetsky (2000), Soh (2005) argues for the claim that both adverbial and nominal wh-words in Chinese undergo covert movement. She argues that adverbial wh-words undergo covert feature movement (See Cheng and Rooryck 2002 for the same proposal), while nominal wh-words undergo covert phrasal movement.

Adopting the assumption that feature movement, but not phrasal movement, is sensitive to intervention effects, I follow Soh (2005) in assuming that all wh-words in Chinese, nominal and adverbial, LF-raise to their scope position. As evidenced in section 2, both wh-nominal and wh-adverbial RQs show intervention effects. This lends support to an analysis of feature movement in Chinese RQs. This operation enables the feature of all RQ wh-words to move to CP or ForceP in the sense of Rizzi (1997). Here I will simply assume that the moved feature is an operator feature, which obtains the value of negative assertion in ForceP.

Recall that a rhetorical wh-word can license NPIs in its scope. It may be plausible to

assume that NPIs, like other intervening elements, can block feature movement, if we consider the following sentences. It has been argued that an A-not-A question can license NPIs, as shown in (66a) (Wang and Hsieh 1996), and that the Q-operator in an A-not-A question is like a wh-adverbial, hence undergoing feature movement (Soh 2005). The ungrammaticality of (66b) demonstrates the blocking effect on feature movement in an A-not-A question.

- (66) a. You-mei-you renhe ren zai ting?
 Have-not-have any person ASP listen
 ‘Is anyone listening?’
- b. *You renhe ren lai-bu-lai?
 Have any person come-not-come
 ‘Will anyone come?’

5. Concluding remarks

I have shown the syntactic properties of RQs in Chinese, as summarized in table 1 above, and presented the potential challenges to the two previous analyses (i.e., Wu 1999 and Hsieh 2001). Based on the adjunct-like behavior that RQs in Chinese show, I argue for an analysis of feature movement on such constructions, instead of adopting an analysis of operator-binding.

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