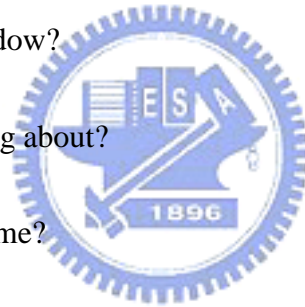


CHAPTER 1

INTRODUCTION

Since Pesetsky (1987) pointed out their significance for the theory of movement, *wh*-questions like (1) have interested many researchers:

- (1) a. Who the hell broke the window?
b. What the hell are you talking about?
c. Why the hell did you lie to me?



This kind of *wh*-the-hell questions has at least the following three properties. First although normal *wh*-phrases may stay in situ as in multiple questions, *wh*-the-hell expressions cannot:

- (2) a. What did you buy for whom?
b. Who bought what for him?
- (3) a. Who the hell saw what?
b. *Who saw what the hell?

Secondly, *wh-the-hell* expressions must occur as a continuous constituent:

(4) a. *What are you talking about the hell?

b. *Who does Tim like the hell?

Thirdly, *the hell* behaves like polarity items in that their occurrence generally requires the presence of a *wh*-word:

(5) *Tim likes Mary the hell.



In this thesis, I shall examine the *wh-the-hell* questions in Mandarin Chinese. In Chinese, questions with the semantics and pragmatics of English *wh-the-hell* questions are usually rendered by sentences containing the attitudinal adverb *daodi* in addition to an appropriate *wh*-word. Thus we may view *daodi* as the near corresponding element of *the hell* in English. *Daodi* emphasizes the interrogative force of the direct/indirect/A-not-A question in which it occurs as illustrated by (6):

(6) a. Ni daodi xihuan shei?

You daodi like who

‘Who the hell do you like?’

b. Wo bu zhidao Laocheng daodi weishenme mei lai.

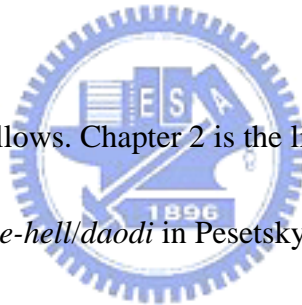
I not know Laocheng daodi why not come

‘I don’t know why the hell Laocheng did not show up.’

c. Daodi ni yao-bu-yao chengren zuocuo-le zhe-jian shi?

Daodi you want-not-want admit do-wrong-PERF this-CL thing

‘Do you fucking want to admit that you have done this thing wrong, or not?’



This thesis is organized as follows. Chapter 2 is the literature review in which I will outline the previous analyses of *the-hell/daodi* in Pesetsky (1987), Kuo (1997), and Huang and Ochi (2004) (H&O 2004, henceforth). In chapter 3, I present some problems that the analyses outlined in chapter 2 cannot explain. Specifically, I discuss the island sensitivity of *daodi*, the 2nd/3rd person asymmetry of the matrix subject of the complex sentence where *daodi* occurs, and *daodi*'s compatibility with *wh*-questions. Then I present my analysis for the syntactic distribution and semantic property of *daodi* in chapter 4. Precisely, I propose the existence of a Perspective Phrase in the left periphery and *daodi*'s need for the perspective-feature valuation with the perspective operator in the specifier of the Perspective Phrase. These two assumptions may help us account for *daodi*'s island (in)sensitivity and the

matrix subject person asymmetry I present in chapter 3. Moreover, the (in)compatibility between *daodi* and *wh*-questions can be handled under my proposal of the semantic denotation of attitudinal adverbs like *daodi*. Chapter 5 is the theoretical consequences and the conclusion of this thesis.



CHAPTER 2

PREVIOUS ANALYSES OF *THE-HELL/DAODI*

2.1 Pesetsky (1987)

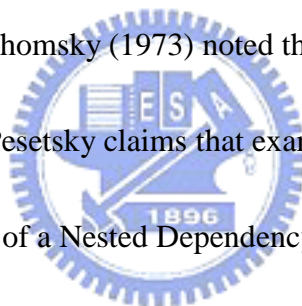
Pesetsky (1987) claims that a *wh*-item must move at LF only if it is non-D-linked.

D-linked *wh*-items do not have to move. He starts his discussion from the absence of

expected Superiority Condition. Chomsky (1973) noted that a Superiority Condition applies

to multiple questions in English. Pesetsky claims that examples showing Superiority effects

may be ruled out by some version of a Nested Dependency Condition as in (2).



(1) Superiority Condition

In a multiple interrogation, where a *wh*-phrase is in Comp and another is in situ, the

S-Structure trace of the phrase in Comp must c-command the S-Structure position of the

wh-in-situ.

(2) Nested Dependency Condition

If two *wh*-trace dependencies overlap, one must contain the other.

The Superiority Condition makes the correct distinctions in examples like (3) and (4).

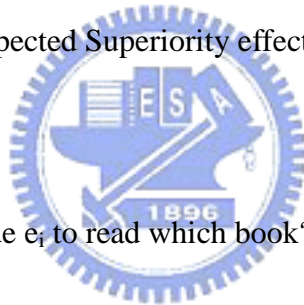
(3) a. Who_i did you persuade e_i to read what?

b. ??What_j did you persuade who(m) to read e_j?

(4) a. Mary asked [who_i [e_i to read what]?

b. *Mary asked [what_j [who to read e_j]?

However, in a number of cases expected Superiority effects do not show up.



(5) a. Which man_i did you persuade e_i to read which book?

b. Which book_j did you persuade which man to read e_j?

(6) a. Mary asked which man_i e_i read which book.

b. Mary asked which book_j which man read e_j.

The obvious explanation for the lack of Superiority effects in (5b) and (6b) is that

which-phrases in situ, unlike *who* or *what*, do not undergo LF movement. Pesetsky suggests

that the crucial difference between a *which*-phrase and the normal occurrence of *who* or *what*

is found in discourse. Roughly, *which*-phrases are discourse-linked (D-linked), whereas *who*

and *what* are normally not D-linked.

Pesetsky further shows that this distinction extends to languages without overt *wh*-movement like Japanese. In languages like Japanese no *wh*-movement occurs overtly. All *wh*-phrases are in situ, even in embedded questions. An overt Q-morpheme – here, *ka* or *no* – marks the scope of the *wh*-item.

(7) a. Mary-wa John-ni nani-o ageta-no?

Mary-Top John-Dat what-Acc gave-Q

‘What did Mary give to John?’

b. Mary-wa [John-ga nani-o katta-ka] sitte-iru.

Mary-Top John-Nom what-Acc bought-Q know

‘Mary knows what John bought.’

c. Mary-wa [John-ga nani-o yonda to] itta-no?

Mary-Top John-Nom what-Acc read that said-Q

‘What did Mary say that John read?’

Following Huang’s (1981, 1982) analysis of similar phenomena in Chinese, Lasnik and Saito (1984) propose that *wh*-movement does apply in Japanese, much as in English. For them, the salient difference between English and Japanese questions is simply the absence of

wh-movement at S-structure: all *wh*-movements take place at LF. Lasnik and Saito's proposal has a troubling aspect, however. The proposed LF movement appears not to show an important diagnostic of movement – namely, the island condition. For instance, the proposed movement violates the Complex NP Constraint and the constraint on extracting from adjuncts:

(8) a. *What_i did Mary meet [the man who gave e_i to John]?

b. ?*What_i did Mary leave [before John read e_i]?

(9) a. Mary-wa [_{NP} John-ni nani-o ageta hito-ni] atta-no?

Mary-Top John-Nom what-Acc gave man-Dat met-Q

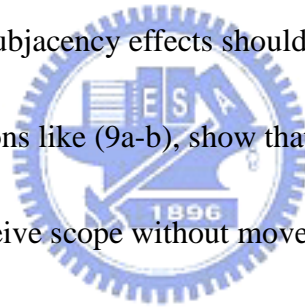
b. Mary-wa [John-ga nani-o yomu mae-ni] dekaketa-no?

Mary-Top John-Nom what-Acc read before left-Q

From facts like these, Huang (1982) as well as Lasnik and Saito conclude that Subjacency does not apply at LF. Pesetsky thinks that this conclusion is perfectly plausible but nonetheless disappointing. Given that island phenomena of this sort are one of the principal diagnostic tests for movement, it becomes harder to argue convincingly that the derivation of LF really does involve movement. A potential argument for the existence of LF thus seems to be missing.

Thus Pesetsky suggests a different approach. Suppose Subjacency does hold at LF. We should investigate whether the apparent absence of Subjacency effects in sentences like (9a-b) is connected to the discourse status of the *wh*-phrases in question. Perhaps Subjacency appears to be violated only when the *wh*-in-situ does not have to move at LF. This approach can be investigated with two experiments:

- a. Force an occurrence of *wh*-in-situ to be aggressively non-D-linked. If the proposed hypothesis are correct, such a *wh*-in-situ must undergo LF movement. If Subjacency holds at LF, then Subjacency effects should show up.
- b. In apparent Subjacency violations like (9a-b), show that the *wh*-in-situ must be D-linked, hence allowed to receive scope without movement.



Pesetsky shows that the first experiment turns out exactly as predicted by the theory.

The second does not. It is the first experiment that concerns us in this thesis. Now we turn to this.

Pesetsky claims that phrases like *what the hell* are good candidates for “aggressively non-D-linked” *wh*-phrases. Roughly speaking, the whole point of uttering a question like (10a) is to express surprise in the answer. The appropriate answer is presumed not to figure in previous discourse. Note the sharp contrast between the colloquial (10a) and

the impossible (10b)¹:

(10) a. What the hell book did you read that in?

b. *Which the hell book did you read that in?

(10b), according to Pesetsky, can be ruled out by the conflict between aggressively D-linked *which* and aggressively non-D-linked *the hell*.

Furthermore, Pesetsky points out that Japanese *ittai* seems to have the same function as

English *the hell*:



(11) Mary-wa John-ni ittai nani-o ageta-no?

Mary-Top John-Dat the-hell what-Acc gave-Q

‘What the hell did Mary give to John?’

Note that, crucially, (12) establishes that *wh*-phrases with *ittai* may take scope outside their

¹ However, as noted by Kuo (1997) and H&O (2004), Chinese and Japanese do not show this contrast, as exemplified by (i) and (ii):

(i) Zhangsan daodi mai-le nei-ben shu?

ZS the-hell buy-Asp which-CL book

‘Which the hell book did ZS buy?’

(ii) Kimi-wa ittai dono hon-o yomi-tai no?

you-Top the-hell which book-Acc read-want Q

‘Which the hell book do you want to read?’

clause and also that *ittai* is not limited to root environments.²

(12) Mary-wa [_{CP} John-ga *ittai nani-o* yonda to] itta-no?

Mary-Top John-Nom the-hell what-Acc read that said-Q

‘What the hell did Mary say that John read?’

Pesetsky has hypothesized (a) that Subjacency does hold of LF movement and (b) that *ittai*

forces a non-D-linked interpretation for *wh*-in-situ. This, combined with Pesetsky’s

hypotheses in (13a) and (13b), entails that *ittai wh*-phrases must move at LF and that

Subjacency effects should be detected. This prediction is born out by the contrast between (9)

and (14). (14a/b) differs from (9a/b) only in that the *wh*-phrase *nani* ‘what’ has been replaced

with *ittai nani* ‘what the hell’. Nonetheless, the result appears to be quite ungrammatical:

(13) a. Every quantifier (operator) occupies an A’-position at LF.

b. Non-D-linked *wh*-phrases are quantifiers and adjoin to S’ (CP).

(9) a. Mary-wa [_{NP} John-ni nani-o ageta hito-ni] itta-no?

² Pesetsky notes that if *ittai* has such limitations, then the examples that follow tell us nothing about Subjacency. Nishigauchi (1985) claims that the acceptability of sentences like (12) is indeed “low” for him, but Pesetsky’s other informants do not share this intuition.

Mary-Top John-Nom what-Acc gave man-Dat met-Q

b. Mary-wa [John-ga nani-o yomu mae-ni] dekaketa-no?

Mary-Top John-Nom what-Acc read before left-Q

(14) a. *Mary-wa [_{NP} John-ni *ittai* nani-o ageta hito-ni] atta-no

Mary-Top John-Nom the-hell what-Acc gave man-Dat met-Q

b. *Mary-wa [John-ga *ittai* nani-o yomu mae-ni] dekaketa-no?

Mary-Top John-Nom the-hell what-Acc read before left-Q

These examples thus provide evidence both for Subjacency at LF and for the connection drawn between obligatory LF movement and discourse. Once we separate the properties of D-linked *wh*-phrases from those of non-D-linked *wh*-phrases, we see that scope assignment to non-D-linked *wh*-phrases has essentially all the properties of syntactic movement.

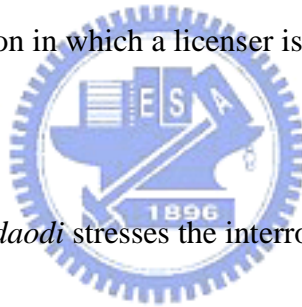
Pesetsky's observation concerning *the hell* in English and *ittai* in Japanese inspired Kuo's (1997) reflection on the corresponding element in Chinese, that is, *daodi*. However, Pesetsky did not consider the possibility that the observed island effect in (14a/b) results from the movement of *ittai* alone. Kuo adopts this hypothesis, that is, the observed island effect results from the covert movement of *daodi* alone. Now we turn to Kuo's analysis.

2.2 Kuo (1997)

Kuo (1997) argues against Tang's (1993) analysis of *daodi* as a *wh*-polarity item.

As pointed out in Tang (1993), *daodi* is a *wh*-polarity item, and thus it must move to CP-spec to check off its *wh*-feature. This analysis can account for *daodi*'s island sensitivity. However, as pointed out by Kuo, this analysis faces the following problems:

- a. Conceptually, if *wh*-nominals in Chinese are also polarity items as claimed in Cheng (1991), how they license another *wh*-polarity item like *daodi* needs to be explained.
- b. Syntactically, *daodi* must c-command *wh*-phrases in overt syntax. If it is a *wh*-polarity item, the licensing configuration in which a licenser is c-commanded by a licensee is quite unnatural.
- c. Semantically, the presence of *daodi* stresses the interrogative force of *wh*-phrases.
- d. Pragmatically, *daodi* expresses impatience for the answer.



From the semantic and pragmatic viewpoints, Kuo assumes that *daodi* is an emphasizer for the interrogative force of *wh*-phrases. Under this assumption, Kuo thinks that the phenomenon that an emphasizee is within the scope of its emphasizer is quite natural.

This explains why *daodi* must c-command *wh*-phrases in overt syntax.

Moreover, Kuo assumes that an emphasizer of a *wh*-phrase has a weak uninterpretable *wh*-feature, which must be checked off by a *wh*-Q-operator. He adopts Tsai's (1994) proposal

that the Q-operator in Chinese merges at the sentential level, i.e., at CP-spec. Therefore, according to the principle Procrastinate, *daodi* needs only to be adjoined to Spec-CP at LF to satisfy the principle of Full Interpretation (FI), i.e., interface levels (LF/PF) can only contain features that they can interpret.

Kuo gives the following examples to illustrate the fact that *daodi* must occur under the scope of a *wh*-Q-operator.

(15) a. *Zhangsan daodi xiangzhidao [Wangwu mai-le shenme]

Zhangsan the-hell wonder Wangwu buy-Perf what

‘ZS wonders what the hell WW bought.’

b. Zhangsan xiangzhidao [Wangwu daodi mai-le shenme]

Zhangsan wonder Wangwu the-hell buy-Perf what

‘ZS wonders what the hell WW bought.’

In (15), we have the verb ‘*wonder*’ as the matrix verb which takes an interrogative clause as its complement. Thus, the scope of interrogative *shenme* is the embedded clause. (15b) is fine because *daodi* occurs under the scope of interrogative *shenme*. Then the reason for the ill-formedness of (15a) is clear — *daodi* is outside of the scope of interrogative *shenme*.

Moreover, the sentences in (16) tell us that *daodi* not only must occur under the scope of

a *wh*-Q-operator but also can affect the scopal interpretation of *wh*-phrases.

(16) a. Zhangsan xiangzhidao [shei mai-le shenme](?)

ZS wonder who buy-Perf what

i 'What is the y such that ZS wonders who bought y?'

ii 'Who is the x such that ZS wonders what x bought?'

iii 'ZS wonders who bought what?'

b. Zhangsan daodi xiangzhidao [shei mai-le shenme]?

ZS the-hell wonder who buy-Perf what

i 'What the hell is the y such that ZS wonders who bought y?'

ii 'Who the hell is the x such that ZS wonders what x bought?'

iii *'ZS wonders who bought what.'

(16a), as pointed out in Huang (1982), is three-way ambiguous: either *shei* takes the matrix scope, or *shenme* takes the matrix scope, or both take the embedded scope. With this in mind, let us turn to (16b). With *daodi* in the matrix clause, (16b) only has the first two readings whereas the third reading is missing because in such configuration *daodi* is not under the scope of a *wh*-Q-operator.

Before we turn to Kuo's observation about *daodi*'s island sensitivity, one clarification is

in order. That is, as noted by Pesetsky (1987) in (12) (repeated here for convenience as (17)),

Japanese *ittai* may take scope outside their clause and *ittai* is not limited to root

environments:

(17) Mary-wa [_{CP} John-ga *ittai* nani-o yonda to] itta-no?

Mary-Top John-Nom the-hell what-Acc read that said-Q

‘What the hell did Mary say that John read?’

However, the use of *itta* ‘say’ as the matrix verb is not a reliable evidence for this point. One may analyze sentences like (17) as a direct quotation of the matrix subject, thus *ittai* is still in the root clause. To see this is the case, let’s consider the typical root phenomenon, that is, the *yes-no* interrogatives as shown in (18) and (19). In (19), the root interpretation (19ii) of the embedded *yes-no* question is not available.³

(18) Zhangsan nandao shi laoshiren ma?

ZS actually is honest-man Q

³ The word *nandao* is somewhat difficult to translate word-by-word. The full meanings of this expression may be gleaned from its components. Literally, *nandao* means ‘difficult-say’, and its full literal meaning might be something like “Might I find it difficult to say/believe [that...]?” A more idiomatic translation would be “Do you mean to say [that...]?” In other words, *nandao* marks incredulity on the part of the speaker. To save space, ‘actually’ is used as word-for-word gloss for *nandao*, but its full meaning must be kept in mind.

‘Is it actually the case that ZS is an honest man?’

(19) Ni renwei [Zhangsan (*nandao) shi laoshiren] ma?

You actually think ZS actually is honest-man Q

i ‘Do you think that ZS is an honest man?’

ii *‘Is it actually the case that ZS is an honest man?’

Similar to *daodi*, *nandao* is also an adverb denoting speaker’s attitude toward an interrogative.

Daodi occurs only in *wh*-interrogatives and A-not-A questions, whereas *nandao* only in

yes-no interrogatives. *Daodi* expresses an urgent desire, even a sense of impatience on the

part of the speaker to get to the specific information being requested, and *nandao* marks

incredulity on the part of the speaker. *Nandao* marks the scope of the yes-no questions. Thus

the ungrammatical occurrence in the embedded clause in (19) tells us that *yes-no* question is a

root phenomenon. However, if we use *shuo* ‘say’ as the matrix verb as in (20), *nandao* can

occur in the embedded clause:

(20) Lisi shuo Zhangsan nandao shi laoshiren ma?

LS say ZS actually is honest-man Q

‘LS said: “Is it really the case that ZS is an honest man?”’

As shown in the paraphrase of (20), because the embedded *yes-no* interrogative ‘*Zhangsan shi laoshiren ma?*’ can be analyzed as the direct quotation of *Lisi*, the matrix subject, the embedding of the *yes-no* question is only apparent and the grammatical apparent embedded appearance of *nandao* follows. Therefore, Pesetsky’s argument based on (17) for the grammatical embedded occurrence of *ittai* in Japanese is nullified.

Nevertheless we can still establish the point that the appearance of *daodi* is not a root phenomenon by replacing the matrix verb *shuo* ‘say’ with other verbs. For instance, we can use *renwei/juede* ‘think’ as in (21)⁴:

- (21) Ni renwei/juede [Zhangsan daodi mai-le shenme]?
- You think ZS daodi buy-Perf what
- ‘What the hell do you think that ZS bought?’



One may think that the ‘*ni/wo renwei/juede*’ chunk in (21), functionally speaking, is like a sentential adjunct which may be omitted, thus in (21) *daodi* is still in a root clause.

⁴ However, if we replace the matrix verb *renwei/juede* “think” with *xiwang* “hope” or *xiangxin* “believe”, the sentence is bad:

- (i) *Ni xiwang [ta daodi mai shenme]?
- ‘What the hell do you hope he bought?’
- (ii) *Ni xiangxin [ta daodi mai shenme]?
- ‘What the hell do you believe he bought?’

As for this contrast, I refer the reader to Stirling (1993) for a detailed classification of propositional verbs.

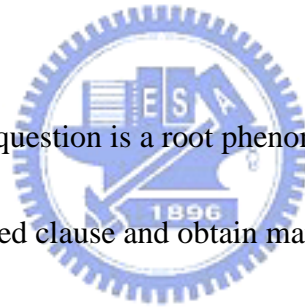
However, if we consider again the case of *yes-no* interrogatives, a typical root phenomenon, we will see that this line of thinking is not correct. As mentioned before, *yes-no* questions are generally regarded as a root phenomenon as illustrated by (22).

(22) Ni renwei [Zhangsan (*nandao) shi laoshiren] ma?

You think ZS (actually) is honest-man Q

(i) ‘Do you think that ZS is an honest guy?’

(ii) ‘*Is it actually the case that ZS is an honest guy?’



Sentence (22) tells us that *yes-no* question is a root phenomenon because it is ungrammatical for *nandao* to occur in an embedded clause and obtain matrix scope. If the chunk ‘*ni renwei*’ is functionally like a sentential adjunct which may be omitted, (19) should have the meaning indicated by (22ii). But our intuition tells us that this is not the case. Thus, I take (21) as a piece of evidence against the claim that *daodi*’s occurrence is only a root phenomenon.

Another piece of evidence against viewing the chunk ‘*ni/wo renwei*’ as a sentential adjunct comes from the occurrence of sentential adverbs. If the chunk ‘*ni/wo renwei*’ is a sentential adjunct, we should be able to insert other sentential adverbs between the chunk and the complement clause. However, as shown in the following contrast between (23) and (24), this prediction is not born out and the sentential adverbials can only precede the chunk ‘*ni/wo*

renwei'.

(23) a. *Ni renwei, laoshishuo, [Zhangsan daodi mai-le shenme]?

you think frankly-speaking ZS daodi buy-Perf what

'Frankly speaking, what the hell do you think that ZS bought?'

b. *Wo renwei, laoshishuo, [Zhangsan bu-shi yi-ge hao-ren].

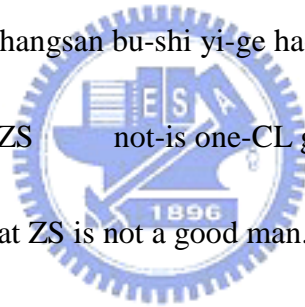
I think frankly-speaking ZS not-is one-CL good-man

'Frankly speaking, I think that ZS is not a good man.'

c. *Wo renwei, buxing-di, [Zhangsan bu-shi yi-ge hao-ren].

I think unfortunately ZS not-is one-CL good-man

'Unfortunately, I think that ZS is not a good man.'



(24) a. Laoshishuo, ni renwei [Zhangsan daodi mai-le sheme]?

b. Laoshishuo, wo renwei [Zhangsan bu-shi yi-ge hao-ren].

c. Buxingdi, wo renwei [Zhangsan bu-shi yi-ge hao-ren].

With the embedded occurrence of *daodi* as in (21) justified, we now may turn to Kuo's observation of *daodi*'s island sensitivity.

A piece of evidence for *daodi*'s covert feature-checking movement comes from complex

NP island construction.

(25) a. Tamen zhengzai taolun [shei keyi qu taipei de shi] (ne/ma)?

they Prog discuss who can go-to Taipei Mod matter (Q-marker)

‘Are they discussing the matter that who can go to Taipei?’

‘Who is the person x such that they are discussing the matter that x can go to Taipei?’

b. Tamen zhengzai taolun [daodi shei keyi qu taipei de shi] (*ne/ma)?

they Prog discuss the-hell who can go-to Taipei Mod matter (Q-marker)

‘Are they discussing the matter that who the hell can go to Taipei?’

c. Tamen zhengzai taolun [Zhangsan weishenme keyi qu taipei de shi]

they Prog discuss ZS why can go-to Taipei Mod matter

(*ne/ma)?

(Q-marker)

‘Are they discussing the matter that why ZS can go to Taipei?’

According to Kuo, as for the sentences in (25), because the embedded CP-spec is not occupied by a null operator, its corresponding C^0 is either [+WH] or [-WH] in terms of Spec-head agreement. Without *daodi*, sentence (25a) is ambiguous depending on the matrix or embedded merger position of the *wh*-Q operator which unselectively binds *shei* and gives

interrogative quantificational force to *shei*. But when we add *daodi* in the complex NP in sentence (25b), *shei* can only take narrow scope, that is, the *wh*-Q operator must be merged at the embedded CP-spec. The reason for this is quite clear. If the Q-operator is merged at the matrix CP-spec, then *daodi* must move across the complex NP island for feature checking. This would lead to ungrammaticality and so the unambiguity of (25b) follows. (25b) can be treated on a par with (25c). In (25c), the *wh*-element *weishenme* is a *wh*-adverb which has to move to take its scope (assuming with Tsai 1994) and the unambiguity follows.

Before leaving this section, I would like to provide three more sets of data to illustrate *daodi*'s island sensitivity. As exemplified by the following sentences, *daodi* can occur neither in an adverbial island nor in a subject complex NP.



(26) a. Zhangsan [zai jian-dao shei zhihou] cai shengqi?

ZS when meet who after then angry Asp

‘Who is the x such that ZS got angry after meeting x?’

b. Daodi Zhangsan [zai jian-dao shei zhihou] cai shengqi?

Daodi ZS when meet who after then angry ASP

‘Who the hell is the x such that ZS got angry after meeting x?’

c. * Zhangsan [zai daodi jian-dao shei zhihou] cai shengqi?

ZS when daodi meet who after then angry ASP

‘Who the hell is the x such that ZS got angry after meeting x?’

(27) a. [Zhangsan zai shenmeshihou xie de wenzhang] zui jingdian?

ZS at what-time write Mod article most classical

‘What is the time x such that the article that ZS wrote during x is most classical?’

b. Daodi [Zhangsan zai shenmeshihou xie de wenzhang] zui jingdian?

Daodi ZS at what-time write Mod article most classical

‘What the hell is the time x such that the article that ZS wrote during x is most classical?’

c. *[Zhangsan daodi zai shenmeshihou xie de wenzhang] zui jingdian?

ZS daodi at what-time write Mod article most classical

‘What the hell is the time x such that the article that ZS wrote during x is most classical?’

(28) a. [Mama wei shei dun de niurou] zui haochi?

Mother for whom stew Mod beef most delicious

‘Who the hell is the x such that the beef that mother stews for x is most delicious?’

b. Daodi [Mama wei shei dun de niurou] zui haochi?

Daodi mother for whom stew Mod beef most delicious

‘Who the hell is the x such that the beef that mother stews for x is most delicious?’

c. *[Mama daodi wei shei dun de niuro] zui haochi?

Mother daodi for whom stew Mod beef most delicious

‘Who the hell is the x such that the beef that mother stews for x is most delicious?’

In sum, Kuo has assumed that *daodi* is an emphaser for *wh*-phrases, and thus it must c-command the *wh*-phrase(s) emphasized by it in overt syntax. In addition, he assumed that *daodi* contains a weak uninterpretable *wh*-feature needing to be checked off by a *wh*-operator. Therefore, *daodi* must occur under the scope of a *wh*-interrogative operator, and due to the feature-checking-motivated covert movement, *daodi* must observe the island constraints.

2.3 Huang and Ochi (2004)



H&O further elaborate Kuo's (1997) observation about the behavior of *daodi*. Here is a summary of it:

- (29) a. *Daodi* must occur in construction with a *wh*-phrase (including an *A-not-A* phrase in an *A-not-A* question) in its c-domain.
- b. *Daodi* is an adverb occurring in a preverbal or pre-IP adjunct position, while the *wh*-associate occurs in an argument position or non-argument position.
- c. *Daodi* and its *wh*-associate occur in situ.
- d. *Daodi* questions imply some attitude of impatience or annoyance on the part of the

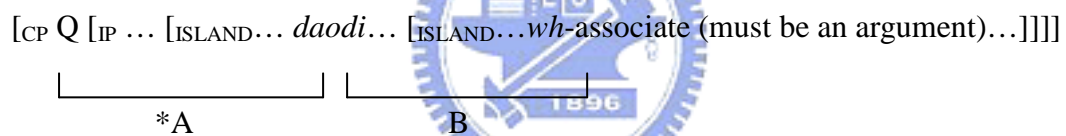
speaker.

e. *Daodi* must occur in the scope of an interrogative CP.

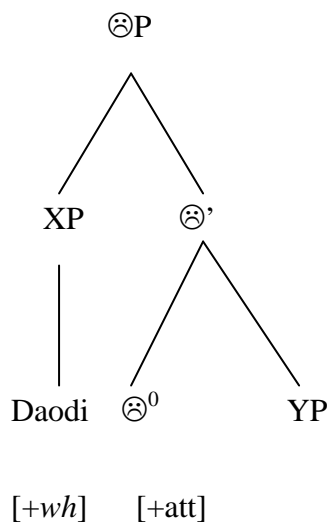
From these properties of *daodi*, H&O (2004, p.4) claim that there are three elements that enter into the formation of a Chinese *daodi* question: a Spec of CP with [+Q], the adverbial *daodi*, and the *wh*-associate, which form a chain of successive c-command.

Furthermore, their main two proposals are the following two configurations:

(30) The pattern: two dependencies



(31) The Attitude Phrase



The gist of (30) is to capture the island facts associated with *daodi* questions, with a discontinuous sequence of three elements that form two kinds of dependencies. A *daodi* question can co-occur with a *wh*-associate embedded in a syntactic island only if (a) *daodi* is itself outside of the island, and (b) the *wh*-associate is an argument, but not if *daodi* is itself inside the island or the *wh*-associate is an adjunct.

Next, in the wake of Cinque (1999), H&O propose the existence of an (interrogative) Attitude Phrase (\textcircled{P} , read ‘Attitude Phrase’) in the left periphery of IP which gives rise to the special pragmatic flavor of *daodi* questions as noted in (29). In other words, the existence of this projection signals that you have “a question with an attitude.”

More specifically, according to H&O (p. 7), *daodi* is an adverb that occupies the specifier of \textcircled{P} . And the head of \textcircled{P} contains “the logophoric feature of attitude.”⁵ *Daodi* contains a (weak) [+*wh*] feature which requires checking by some *wh*-phrase in its c-domain. This is done by covertly moving the *wh*-associate to \textcircled{P} , adjoining it to *daodi* (Dependency B as illustrated in (30)).⁶ This covert movement does not exhibit island effects if it is *wh*-argument involved; it does exhibit island effects if adjunct *wh*-phrases are involved. The interrogative CP dominating \textcircled{P} has [+Q] that needs to be checked off. This is done by covert

⁵ The logophoric feature of attitude indicates the attitude belongs to the speaker, external or internal.

⁶ Under Chomsky’s minimalist framework, it is usually the head containing the uninterpretable feature(s) that triggers the movement. But under H&O’s account, it is *daodi*, an XP, at the specifier position doing the work.

movement of the adjoined *wh*-associate + *daodi* (or *daodi* + *wh*) into CP-spec (Dependency A as illustrated in (30)).⁷ This covert movement will exhibit island effects because the *daodi* + *wh* phrase is an adjunct. For familiar minimality reasons, the movement in Dependency B must occur prior to that in Dependency A. Furthermore, as noted in their footnote 6, the ⊕P is not unlike the Source/Self/Pivot phrase or Point-of-View phrase as proposed in Huang and Liu (2001) for hosting logophoric reflexives. In the typical cases, the ⊕P expresses the attitude of the speaker or the matrix subject (what Sells 1987 calls the external or internal Source).

The main difference between H&O's and Kuo's approach is that H&O's proposal of dependency B and ⊕P. According to Kuo's analysis, *daodi* moves to the specifier of interrogative CP independently. One of H&O's arguments for positing Dependency B is that in addition to the requirement that *daodi* and the *wh*-associate must be in the c-domain of the interrogative CP, *daodi* must also c-command the *wh*-associate, not the other way around.

Under Kuo's (1997) approach, it is not clear why there is such a hierarchical asymmetry

⁷ If the *wh*-associate is an argument, then it must stay in situ due to the observed island insensitivity. However, at this point, a problem naturally emerges. Under H&O's approach, it is the [+Q] in the C head triggering the movement of adjoined *wh*-element (which adjoins to *daodi* for checking *daodi*'s *wh*-feature), so the movement of *daodi* is just an epi-phenomenon, that is, by itself, *daodi* has no motivation moving because it is the *wh*-element adjoining to it that qualifies for the movement. When the *wh*-associate is an argument, the checking of *daodi*'s *wh*-feature and C's Q-feature must resort to unselective binding because *wh*-argument does not move in Chinese. Under this circumstance, the movement property of *daodi* cannot be derived. Even if we claim that *wh*-argument can move to adjoin to *daodi* and then brings *daodi* together to move upward to CP-spec, the structure preserving principle is violated because the *wh*-associate begins as an argument but ends up as an adverb with island sensitivity.

between the two elements. H&O claim that their analysis provides a simple explanation for this fact. It is *daodi* that requires the presence of a *wh*-phrase, but the latter does not require the presence of the former. Thus it is the requirement of *daodi* that motivates Dependency B. Given the recent target-based view of movement (Attract or Agree), it is natural that *daodi* must occur higher than the *wh*-associate.



CHAPTER 3

THE NEW DATA

Both of Kuo's (1997) and H&O's (2004) analyses are interesting. Kuo provides a valuable pool of data for future research and a fundamentally correct approach for the interesting behavior of *daodi* and its interaction with *wh*-in-situ phrases in Chinese. H&O, based on Kuo's pioneering work on *daodi*, further elaborates Kuo's analysis and posits the two kinds of dependencies among *wh*-in-situ phrases, *daodi*, and interrogative CP. Moreover, their hypothesis about the existence of \ominus P is particularly interesting because \ominus P not only plays a syntactic role in the two kinds of dependencies but also stands as a gate from syntax/grammar to pragmatics/discourse because it captures the essence of the pragmatic flavor of *daodi*.

In the following three sub-sections, based on Kuo's and H&O's insights, I provide three sets of data to suggest that there's something more lying beneath the behavior of *daodi*.

3.1 On Island Sensitivity

Both Kuo (1997) and H&O (2004) argue for the covert movement and island-sensitivity

of *daodi* (or the adjoined *wh*-associate + *daodi*). However, they seem to neglect the following data:

(1) a. [Zhangsan *daodi* *gai* yon shenme-fangshi nian-shu] bi-jiao yo-xialui?

ZS *daodi* should use what-way study more efficient

‘What the hell is the way x such that it is more efficient for ZS to study in x way?’

b. [Women *daodi* weileshenme dushu] cai you-yiyi?

We *daodi* for-what-purpose study such-that meaningful

‘What the hell is the purpose x such that it is meaningful for us to study for x?’

c. [Laochen *daodi* shuo le shenme] rang ta mama name shenqi?

Laochen *daodi* say Perf what make his mother so angry

‘What the hell did Laochen say such that his mother got so angry?’

The sentences in (1) contain a sentential subject, which is known as one of the typical island constructions, and *daodi* and the *wh*-phrases both occur within the sentential subject island. It is clear that these sentences have matrix *wh*-interrogative reading, thus the matrix CP-spec must host the Q-operator necessary for the interpretation of *wh*-in-situ phrases located in the sentential subject island. If Kuo and H&O are correct, *daodi* (or *daodi* + adjoined *wh*-associate) must undergo covert movement to matrix CP-spec for feature-checking. Then it

is obvious that *daodi* must cross the sentential subject island to reach the matrix CP-spec, leading to ungrammaticality. Contrary to the prediction, the sentences in (1) are perfect with matrix interrogative reading.

To see the island effect of a sentential subject, let us consider the sentences in (2):

(2) a. *[Women weishenme dushu] cai you-yiyi?

we why study such-that meaningful

‘Why should we study such that it is meaningful for us to study?’

b. *[Hsiao-min yao-bu-yao lai] rang Zhangsan hen shengqi?

Hsiao-min want-not-want come make ZS very angry

‘*Whether Hsiao-min is coming or not makes ZS very angry?’



Both *weishenme* and *A-not-A* phrase cannot obtain their matrix interrogative interpretation via unselective binding by a Q-operator at matrix CP-spec because unlike *wh*-nominals, *weishenme* and *A-not-A* do not contain a variable that can be unselectively bound by the Q-operator (following Huang 1982 and Tsai 1994). Thus they must undergo covert movement to establish their scope/interpretation. But in (2), to move into the matrix CP-spec to acquire the intended matrix interrogative reading, *weishenme* and the *A-not-A* operator must move across the sentential subject island, hence the ill-formedness. Thus we witness the blocking

force of sentential subject islands. However, the grammatical occurrence of *daodi* within a sentential subject island as shown in (1) is not predicted by Kuo's (1997) and H&O's (2004) analyses which assume the covert movement of *daodi*.

Moreover, as pointed out by Jowang Lin (personal communication), *daodi* is also allowed in the antecedent clause of *cai*-conditionals:

(3) Wo doadi yao suo shenme, ni cai bu hui shengqi?

I daodi should say what you then not will angry

'What the hell should I do such that you will not be angry?'



However, *wh*-adverbials such as reason *why* 'weishenme' and manner *how* 'zenmeyang', which are generally taken as elements that would undergo covert movement (following Huang 1982 and Tsai 1994), cannot occur in the antecedent clause of *cai*-conditionals.

(4) a. *Wo weishenme chiao ke, laoshi cai bu hui shengqi?

I why skip-class teacher then not will angry

'What is reason x such that I skip because x, then the teacher would not be angry with me?'

b. *Wo zenmeyang dun niuro, ni cai hui jue de haochi?

I how stew beef you then will think delicious

Intended: ‘What is the manner *x* such that I stew beef in *x*, then you would think that the beef I stew is delicious?’

The grammatical occurrence of *daodi* in (3) also casts doubt on the covert movement of *daodi* as claimed by Kuo (1997) and H&O (2004).

3.2 On the Person Asymmetry of the Matrix Subject

As noted in chapter 2, *daodi* may occur in an embedded clause and get a matrix interpretation:



(4) a. Ni renwei [Zhangsan *daodi* mai-le shenme]?

You think ZS *daodi* buy-Perf what

‘What the hell do you think that ZS bought?’

It is interesting to note that the embedded occurrence of *daodi* is actually highly restricted.

The matrix subject can only be of second person. Replacing the matrix second person subject in (4) with a third person subject makes the sentence ungrammatical as shown by (5):

(5) *Lisi renwei [Zhangsan daodi mai-le shenme]?

LS think ZS daodi buy-Perf what

‘What the hell does LS think that ZS bought?’

At first blush, (5) sounds ok, but actually the required root question reading is difficult to obtain. I provide more examples of this kind of contrast below:

(6) a. *Zhangsan renwei [Lisi daodi xihuang shei]?

ZS think LS daodi like who

‘Who the hell does ZS think that LS likes?’

b. Ni renwei [Lisi daodi xihuang shei]?

You think LS daodi like who

‘Who the hell do you think that LS likes?’

c. Zhangsan daodi renwei [Lisi xihuang shei]?

ZS daodi think LS like who

‘Who the hell does ZS think that LS likes?’

d. Ni daodi renwei [Lisi xihuang shei]?

You daodi think LS like who

‘Who the hell do you think that LS likes?’

As shown by (6c), if you replace the matrix subject with a third person NP, *daodi* can only occur in the matrix clause. And if the matrix subject is of second person, *daodi* is free to occur in the matrix clause or in the embedded clause.

Meanwhile, as exemplified by (7), when *daodi* occurs in the embedded clause, the ungrammaticality observed in (6a) remains even if we replace the embedded subject with a first or second person pronoun. The general observation is that the matrix subject cannot be third person when *daodi* occurs inside the embedded clause and the matrix verb selects a declarative complement clause.



(7) a. *Zhangsan renwei [wo/ni daodi xihuang shei]?

ZS think I/you daodi like who

‘Who the hell does ZS think that I/you like?’

b. Zhangsan daodi renwei [wo/ni xihuang shei]?

ZS daodi think I/you like who

‘Who the hell does ZS think that I/you like?’

Also, the matrix subject can be second person regardless of the person feature of the embedded subject and the position of *daodi*.

(8) a. Ni renwei [Zhangsan xihuang shei]?

You think ZS like who

‘Who do you think ZS likes?’

b. Daodi ni renwei [Zhangsan xihuang shei]?

Daodi you think ZS like who

‘Who the hell do you think that ZS likes?’

c. Ni renwei [Zhangsan daodi xihuang shei]?

You think ZS daodi like who

‘Who the hell do you think ZS likes?’



The generalization is illustrated as the following diagram:

(9) a. 1st/2nd (*daodi*)... [3rd (*daodi*)...]?

b. 3rd *daodi*... [1st/2nd/3rd ...]?

c. *3rd ... [1st/2nd/3rd *daodi*...]?

Under Kuo's and H&O's accounts, the matrix subject's person asymmetry observed in this section is not accounted for. More specifically, the pure syntactic account in terms of covert

movement of *daodi* fails to depict the whole story.

3.3 On *Wh*-question Compatibility

As noted both by Kuo and H&O, *daodi* must c-command its *wh*-associate and occur under the scope of a *wh*-Q-operator. However, not all kinds of *wh*-interrogatives are compatible with *daodi*. According to Tsai (1999, 2000), pre-modal *zenme* has a causal reading similar to *how come* in English:

(10) a. Ta zenme hui mei lai?

He how would not come

‘How come he did not show up?’



b. Ta zenme ku-le?

He how cry-Asp

‘How come he is crying?’

Interestingly, this kind of *wh*-questions with causal reading of *zenme* is not compatible with *daodi*. The ungrammaticality of (11) is not predicted under Kuo’s and H&O’s analyses.

(11) a. (*Daodi) ta (*daodi) zenme hui mei lai?

(Daodi) he (daodil) how would not come

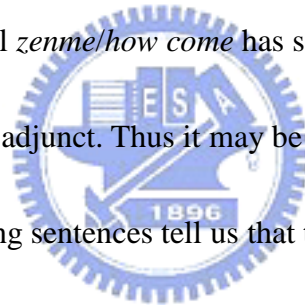
‘*How come the hell he did not show up?’

b. (*Daodi) ta (*daodi) zenme ku-le?

(the-hell) he (the-hell) how cry-Asp

‘*How come the hell he is crying?’

From the paraphrase of (11), it's worth noting that English observes the same compatibility constraint between *the hell* and *how come*. Moreover, one may think that the incompatibility between *daodi/the hell* with causal *zenme/how come* has something to do with the difference between a *wh*-argument and a *wh*-adjunct. Thus it may be solved with a pure syntax mechanism; however, the following sentences tell us that this is not so and a pure syntactic account is not sufficient to depict the whole story about the occurrence of *daodi*.



(12) a. Ta daodi weishenme bu-xie zuoye?

He daodi why not-write homework

‘Why the hell doesn't he write homework?’

b. Ni daodi zenme xiu-hao zhe-liang che?

You daodi how fix-good this-CL car

‘How the hell did you fix this car?’

CHAPTER 4

THE ANALYSIS

In this section, I would like to take advantage of two recent developments of the theory of phrase structures. One of them is the cartographic approach to the phrase structures in the left periphery championed by Rizzi (1997, 1999) and Cinque (1999) among others. The other is the proposal that syntactic projections may encode pragmatic features championed by Tenny and Speas (2003) and Speas (2004) (cf. Cinque 1999). Specifically I propose that there exists a perspective phrase in the left periphery of Chinese phrase structure, and this projection hosts a perspective operator that gives *daodi* the appropriate perspective value.

Next, I suggest that the blocking effects mentioned in 3.2 be treated on a par with that of the logophoric *ziji* in Chinese. Then, to deal with the compatibility problem mentioned in 3.3, I investigate into Tsai's (1997, 1999, 2000, 2004) works on Chinese *weishenme* and *zenme(yang)* to facilitate possible solution(s) under current theoretical development. The denotations of *daodi* and a causal *zenme* question that I propose would help us account for the incompatibility.

4.1 Deriving the Island Sensitivity of *Daodi*

Let's reproduce the relevant examples here again. As observed by Kuo (1997) and H&O (2004), *daodi*'s occurrence is restricted by island constraints as shown below:

(1) a. Zhangsan [zai jian-dao shei zhihou] cai shengqi?

ZS when meet who after then angry

'Who is the x such that ZS got angry after meeting x?'

b. Daodi Zhangsan [zai jian-dao shei zhihou] cai shengqi?

Daodi ZS when meet who after then angry

'Who the hell is the x such that ZS got angry after meeting x?'

c. * Zhangsan [zai daodi jian-dao shei zhihou] cai shengqi?

ZS when daodi meet who after then angry

'Who the hell is the x such that ZS got angry after meeting x?'

(2) a. [Zhangsan zai shenmeshihou xie de wenzhang] zui jingdian?

ZS at what-time write Mod article most classical

'What is the time x such that the article that ZS wrote during x is most classical?'

b. Daodi [Zhangsan zai shenmeshihou xie de wenzhang] zui jingdian?

Daodi ZS at what-time write Mod article most classical

'What (the hell) is the time x such that the article that ZS wrote during x is most

classical?’

c. *[Zhangsan daodi zai shenmeshihou xie de wenzhang] zui jingdian?

ZS daodi at what-time write Mod article most classical

‘What (the hell) is the time x such that the article that ZS wrote during x is most classical?’

(3) a. [Mama wei shei dun de niurou] zui haochi?

Mother for whom stew Mod beef most delicious

‘Who is the x such that the beef that mother stews for x is most delicious?’

b. . Daodi [Mama wei shei dun de niurou] zui haochi?

Daodi mother for whom stew Mod beef most delicious

‘Who (the hell) is the x such that the beef that mother stews for x is most delicious?’

c. *[Mama daodi wei shei dun de niuro] zui haochi?

Mother daodi for whom stew Mod beef most delicious

‘Who (the hell) is the x such that the beef that mother stews for x is most delicious?’

However, as mentioned in 3.1, *daodi* may occur in a sentential subject island:

(4) a. [Zhangsan daodi gai yon shenme-fangshi nian-shu] bi-jiao yo-xialui?

ZS daodi should use what-way study more efficient

‘What the hell is the way x such that it is more efficient for ZS to study in x way?’

b. [Women daodi weileshenme dushu] cai you-yiyi?

We daodi for-what-purpose study such-that meaningful

‘What the hell is the purpose x such that it is meaningful for us to study for x?’

c. [Laochen daodi shuo le shenme] rang ta mama name shenqi?

Laochen daodi say Perf what make his mother so angry

‘What the hell did Laochen say such that his mother got so angry?’

The data shown above tell us two things. One is that the covert movement of *daodi* claimed by Kuo (1997) and H&O (2004) is dubious. The other is that even if we maintain the movement property of *daodi*, the mechanism driving this movement claimed by them, that is, the weak uninterpretable *wh*-feature of *daodi*, is not sufficient to explain why *daodi* may cross a sentential subject island, while other elements (e.g., *wh*-adverbials, following Tsai’s (1994) assumption) moving under the same motivation is sensitive to this island as shown by (5):

(5) *[Women weishenme dushu] cai you-yiyi?

we why study such-that meaningful

‘Why should we study such that it is meaningful for us to study?’

In the following two subsections, I would like to argue that actually *daodi* does not undergo covert movement. The observed island sensitivity can be derived if we adopt the assumption that there exists a Perspective Phrase in the left periphery of Chinese phrase structure and the particular probing mechanism of the perspective operator in the specifier of the phrase.

4.1.1 The Perspective Phrase in Chinese

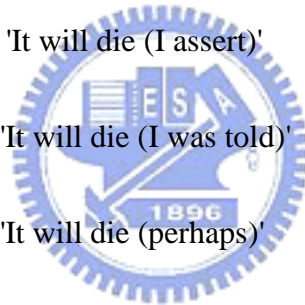
Recently, there have been a variety of proposals for syntactic projections that encode information relevant to the interface between syntax and pragmatics (Rizzi (1997), Cinque (1999), Ambar (1999), Tenny and Speas (2003), Speas (2004) among others). Tenny and Speas (2003) and Speas (2004) proposed that there are syntactic projections bearing pragmatically-relevant features. In particular, they follow Cinque's (1999) claim that there are projections for Speech Act Mood, Evaluative Mood, Evidential Mood and Epistemological Mode in the left periphery of the sentence.

A number of languages have a set of verbal affixes or particles (i.e., evidential morphemes) that expresses the means by which the speaker acquired the information s/he is conveying. In some languages, these evidential morphemes are obligatory.⁸

⁸ Makah data are from Jacobsen (1986); Quecha data are from Weber (1986); Tibetan data are from DeLancey (1986).

- (6) a. wiki-caxa-**w** 'It's bad weather (directly exp.)' Makah
- b. wiki-caxa-**k'u** 'It was bad weather'
- c. wiki-caxa-k-**pid** 'It looks like bad weather (inference from physical evidence)'
- d. wiki-caxa-k-**gad'i** 'It sounds like bad weather'
- e. wiki-caxa-k-**wa.d** 'I'm told there's bad weather'
- f. wiki-caxa-k-it-**wad** 'I'm told it was bad weather'

- (7) a. wañu-nqa-paq-**mi** 'It will die (I assert)' Quechua
- b. wañu-nqa-paq-**shi** 'It will die (I was told)'
- c. wañu-nqa-paq-**chi** 'It will die (perhaps)'



- (8) a. K'o. gis yi-ge bri-pa-**red** 'S/he wrote a letter (it seems)' Tibetan
- s/he ERG write-Perf-**EVID**
- b. K'o. gis yi-ge bri-pa-**so**. 'S/he wrote a letter (I saw it happen)'
- s/he ERG write-Perf-**EVID**

The presence of a certain morpheme is generally regarded as a kind of argument for the presence of a corresponding syntactic projection. Therefore, we may infer the existence of the

Evidential Phrase from the morphemes marking the information regarding the evidentiality of the sentence.

As noted by Lasnik and Uriagereka (2005, p.97, fn. 13), once this step of reasoning is taken, nothing prevents the postulation of categories like AgrIO, since many languages exhibit agreement with indirect objects (e.g., Georgian), and other verbal markers for Aspect (which is overtly realized in e.g. Basque), Mood (as in e.g. Spanish), Perspective (e.g., Quecha), etc. In the end, this line of reasoning led to the proposal in Cinque (1999) that there are far more functional heads than had been assumed before, with each of the many distinct classes of adverbs associated with one of the distinct heads. What is of particular interest here is the possible existence of the Perspective Phrase in Quecha because the notion “perspectivity” has generally been thought of as pragmatic and not directly represented in the syntax. But the overt marking of perspectivity in Quecha allows one to assume the existence of this syntactic projection.

I would like to propose that there is also a perspective phrase in the left periphery of Chinese phrase structures. At first blush, this claim may seem weird because unlike Quecha, Chinese is a language with few (if not none) inflections (in Huang’s (1984) term, a ‘cool’ language). Therefore, there is no overt inflectional marking for the notion ‘perspectivity’ in this language. But it is not totally implausible to assume this pragmatic-feature bearing projection in the left periphery of Chinese phrase structures. As is well known, though

Chinese is a language with a poor IP system in the sense that there is almost no inflectional morpheme, it is a language with a rich CP-system because it has many sentence-final particles as exemplified in (9):

(9) a. Ni chi niurou ma?

You eat beef Q-particle

‘Do you eat beef?’

b. Ta xihuang shei ne?

He like who Q-particle

‘Who does he like?’

c. Ta dagai bu lai ba

He maybe not come particle

‘Maybe he won’t show up.’

d. Zhe shou ge zhen shi haoting a!

This CL song really is pleasant-to-listen particle

‘This song is so good!’

e. Ta zhen keai ya!

She really lovely particle

‘How lovely she is!’



The CP-system (or the left periphery in Rizzi's (1997) term) usually encodes pragmatic/discourse-oriented features such as topicalization or focalization. Thus the existence of the perspective phrase in a rich CP-system language like Chinese is not surprising.

Moreover, the phenomena of pro-drop may be of some help for our argument for this pragmatics-feature bearing projection. Borrowing Marshall McLuhan's (1964) "hot-cool" division of the media, Ross (1982) suggests that there could also be a hot-cool division among languages with respect to the pro-drop phenomenon. English and French are classified as hot languages because pronouns cannot in general be omitted from grammatical sentences. On the other hand, Chinese, Japanese, and Korean may be said to be a very cool language in that such pronouns are usually omissible from grammatical sentences, and understanding a sentence requires some work on the reader's or the hearer's part, which may involve inference, context, and knowledge of the world, among other things. Other languages, such as Spanish and Italian, can be depicted as having a status somewhere between these two extremes, allowing more freedom than the "hot" languages, but less than the "cool" ones, for the use of empty or zero pronouns. In sum, there are basically two kinds of languages that allow pro-drop. One of them is languages with a rich inflection system such as Spanish and Italian, and the other is those cool languages with almost no inflections such as Chinese and

Japanese.

Taraldsen (1978) proposed that the possibility of pro-drop in a language often correlates with the existence of a rich inflectional system (rich system of agreement). Chomsky's (1981) theory of pro-drop also claimed that the possibility of dropping a pronoun is tied to the presence of agreement. Taraldsen's generalization has explanatory force for some languages such as Pashto, but it fails to account for the pro-drop phenomenon in languages such as Chinese, Japanese, and Korean which have no system of morphological agreement.

Taraldsen's generalization would predict that these languages allow neither zero subject nor zero object pronouns.

Huang (1984) proposed that a typological parameter such as discourse/sentence-oriented parameter (cf. Tsao 1977) may explain the distribution of pro-drop across languages.

Pro-drop may occur in sentence-oriented languages with rich agreement such as Spanish or in discourse-oriented languages such as Chinese which allows a null topic that could be an antecedent for the zero pronoun/variable.

I think the same remark could also apply to the distribution of perspective phrase across languages. Perspective phrase may occur in languages with overt morphological marking for perspectivity or in discourse-oriented languages with a rich CP-system.

In the next section, we will see how the perspective phrase helps us account for the island (in)sensitivity of *daodi*.

4.1.2 The Semantic and Syntactic Condition on the Probing of the Perspective Operator

Contrary to the account of Kuo (1997) and H&O (2004), I would like to claim that *daodi* does not undergo covert movement. Moreover, *daodi* needs to set its perspective value by binding by the perspective operator in the specifier of the Perspective Phrase. And the observed island sensitivity of *daodi*'s occurrence shown in (10) can be derived from the semantic and syntactic constraint on the probing/binding of the perspective operator.

(10) a. * Zhangsan [zai daodi jian-dao shei zhihou] cai shengqi?

ZS when daodi meet who after then angry

'Who the hell is the x such that ZS got angry after meeting x?'

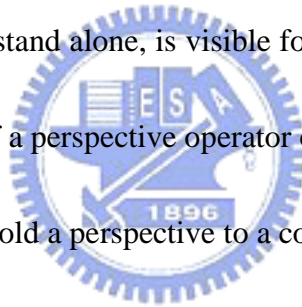
b. *[Mama daodi wei shei dun de niurou] zui haochi?

Mother daodi for whom stew Mod beef most delicious

'Who (the hell) is the x such that the beef that mother stews for x is most delicious?'

The probing of the perspective operator has both semantic and syntactic constraints. The semantic constraint is that a perspective operator's probing is sensitive only to a complete proposition. On the other hand, the syntactic constraint is that only a CP chunk, which syntactically represents a typical complete proposition, is visible to the probing of the

perspective operator. In other words, a perspective operator s-selects a proposition and c-selects a CP as its goal. That is to say, a perspective operator cannot detect elements in either an adverbial clause, which is not a complete (or independent) proposition, or a complex NP, which is not a CP. Therefore, if *daodi* occurs in a complex NP or an adverbial clause, it fails to be detected by the perspective operator. And the perspective value of *daodi* is left undetermined. This leads to the observed island sensitivity. On the other hand, if *daodi* occurs in a sentential subject as in (11), *daodi* is visible to the perspective operator's probing for perspective feature valuation because a sentential subject, which is a CP and a complete proposition that could stand alone, is visible for the perspective operator's probing. It is not weird that the probing of a perspective operator observes such syntactic/semantic constraint because we can only hold a perspective to a complete proposition (which is typically manifested by CP), not to an NP or an adverbial clause.



(11) a. [Zhangsan daodi gai yon shenme-fangshi nian-shu] bi-jiao yo-xialui?

ZS daodi should use what-way study more efficient

‘What the hell is the way x such that it is more efficient for ZS to study in x way?’

b. [Women daodi weilshenme dushu] cai you-yiyi?

We daodi for-what-purpose study such-that meaningful

‘What the hell is the purpose x such that it is meaningful for us to study for x?’

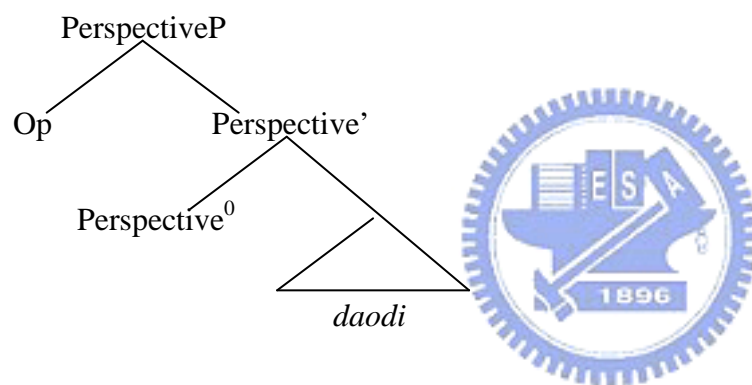
c. [Laochen daodi shuo le shenme] rang ta mama name shenqi?

Laochen daodi say Perf what make his mother so angry

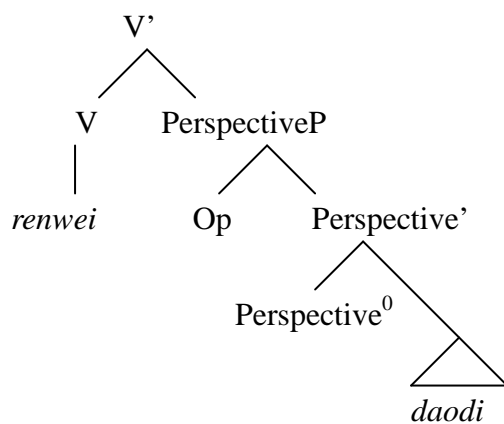
‘What the hell did Laochen say such that his mother got so angry?’

I illustrate the possible occurrence of *daodi* in a sentence in the following tree diagrams:

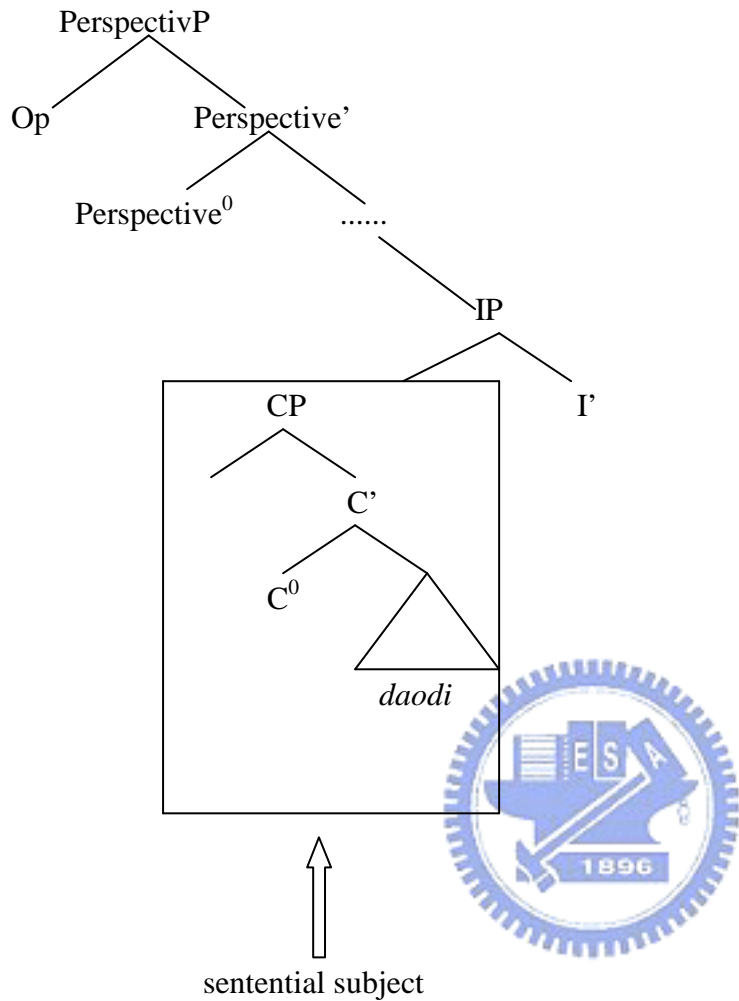
(12) a. Ni daodi xihuang shei?



b. Ni renwei [Zhangsan daodi mal-le shenme]?



c. [Women daodi weileshenme nianshu] cai you yiyi?



The perspective operator serves to give a binary perspective value to *daodi*. The value is either external or internal. *Daodi* needs a perspective value because we need to know the attitude induced by *daodi* is ascribed to the external or the internal speaker. For example, in (13) and (14b), *daodi* gets an external-perspective value and in (14a), it gets an internal-perspective value.

(13) Op_{external} Ni daodi_{external} xihuang chi shenme?

You daodi like eat what

‘What the hell do you like to eat?’

(14) a. Zhangsan xiangzhidao [Op_{internal} Lisi daodi_{internal} shenme-shihou hui jia]

ZS wonder LS daodi what-time come-back home

‘ZS wonder when the hell LS will come home.’

b. Ni renwei [Op_{external} Lisi daodi_{external} mai le shenme] ne?

You think LS daodi buy Perf what Q-particle

‘What the hell do you think Lisi bought?’



The perspective operator of the matrix clause encodes the external speaker’s perspectivity, while the embedded perspective operator’s value depends on the person feature of the matrix subject. That is, if the matrix subject is a second person pronoun, *ni* ‘you’, which represents one of the direct discourse participants (the addressee), the embedded perspective operator encodes the external speaker’s perspectivity. On the other hand, if the matrix subject is a third person NP, which does not represent any one of the direct discourse participants (neither the addresser nor the addressee), the embedded perspective operator encodes internal speaker’s perspectivity.

It is not surprising that the probing of the perspective operator observes this dual

constraint, that is, it is only sensitive to a complete proposition and a CP, because we can only hold a perspective to a complete proposition and the notion “perspective,” in itself, is a discourse-oriented notion, which is syntactically usually represented by a CP.

4.2 Comparison with the Blocking Effects of Logophoric *Ziji* in Chinese

Let’s repeat the diagram illustrating the paradigm here as (15):

(15) a. 1st/2nd (*daodi*)... [3rd (*daodi*)...]?

b. 3rd *daodi*... [1st/2nd/3rd ...]?

c. *3rd ... [1st/2nd/3rd *daodi*...]?



The crucial point to note for the paradigm is the person-feature switch of the matrix subject and the position of *daodi*. The general observation is that when *daodi* occurs within the embedded clause of root *wh*-interrogatives, the matrix subject cannot be a third person NP.

It is well known that the first person NP and the second person NP refer to the addresser and the addressee (i.e., the direct participants of the discourse) respectively, while the third person NP is not a direct participant in the discourse. Thus the first/second person NP’s perspective to a proposition is different from that of the third person NP. That is, to borrow Huang and Liu’s (2001) term, the perspective of the first and the second person NP is

obligatorily ‘anchored’ to the external speaker, while the perspective of a third person NP does not have such requirement. When interpreting a sentence, one must maintain perspective consistence and avoid perspective conflict. This fact can be evidenced by the well-known blocking effect of the logophoric interpretation of *ziji* induced by first/second person NPs in mandarin Chinese as noted in Huang et al. (1984) and Tang (1989).

(16) a. Zhangsan_i juede wo_j zai pipin ziji_{*i/j}

ZS think I Prog criticize self

‘ZS thinks that I am criticizing myself.’

b. Zhangsan_i juede ni_j zai pipin ziji_{*i/j}

ZS think you Prog criticize self

‘ZS thinks that you are criticizing yourself.’

c. Wo_i juede Zhangsan_j zai pipin zij_{i/j}

I think ZS Prog criticize self

‘I think that ZS is criticizing himself/me.’

d. Ni_i juede Zhangsan_j zai pipin zij_{i/j} ma?

You think ZS Prog criticize self Q-marker

‘Do you think that ZS is criticizing himself/you?’

e. Lisi_i juede Zhangsan_j zai pipin zij_{i/j}

LS think ZS Prog criticize self

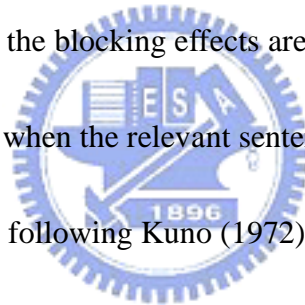
‘LS thinks that ZS is criticizing himself/him.’

The following diagram shows the blocking effects of a first/second person subject NP:

(17) a. [1st/2nd/3rd]_i.....[3rd]_j...*ziji*_{vj}

b. [1st/2nd/3rd]_i.....[1st/2nd]_j...*ziji*_{*i/j}

According to Huang et al. (1984), the blocking effects are the effects of a perspective strategy, i.e., to avoid perspective conflicts when the relevant sentences are put in the context of a direct speech act. They suggested, following Kuno (1972)⁹, that reflexive *ziji* in its logophoric



⁹ Kuno (1972) claims that under one co-referential reading, the sentence (i) is directly derived from (ii) as its underlying structure:

- (i) John said that he saw Bill.
- (ii) John said, “I saw Bill.”

His claim is that the transformational process forming an indirect complement structure from its direct discourse underlying source converts the first person pronoun ‘I’ in (ii) directly into the third person pronoun ‘he’ in (i), without going through the intermediate step (iii) or (iv):

- (iii) John said that John saw Bill.
- (iv) John said,” John saw Bill.”

In Huang and Liu’s (2001) words, the pronoun ‘he’ in (i) is not a result of “pronominalizing” a full NP under identity with another NP somewhere else in a sentence, but has as its direct source the first-person pronoun ‘I’ in the direct discourse representation of the complement clause. The pronoun refers to the matrix subject, the ‘speaker’ of the embedded clause, identified by the first person pronoun in the underlying direct discourse complement source. The referent of the matrix subject may be the actual speaker of the direct discourse complement as in (ii), or a ‘virtual speaker’ (e.g., thinker, feeler, fearer, knower, experiencer, etc.) in situations like (v) and (vi) below:

- (v) John was afraid that he might lose her.

use was permitted when it corresponds to ‘I’ in the direct discourse representation of a sentence in which it occurs. Huang and Liu (2001) propose that blocking effects can be explained by taking literally Kuno’s (1972) direct discourse representation hypothesis. Let’s take (16a/b) for example, which we saw does not permit long-distance binding of *ziji*.

Assuming that the long-distance bound *ziji* is underlyingly *wo* ‘I/me’, then (16a/b) under the long distance construal would have the representation (18a/b):

(18) a. ZS juede “**wo** zai pipin **wo**.”

b. ZS juede “**ni** zai pipin **wo**.”



In (a), there are two occurrences of *wo*. Under the intended reading, the first *wo* refers to the (external) speaker of the entire sentence, and the second *wo* refers to ZS, the internal ‘speaker’ of the direct discourse complement. Because of the perspective conflict it would cause, this explains why the intended long distance binding of *ziji* is impossible to get. In (b) *ni* refers to the addressee with respect to the external speaker, but *wo* refers to the internal speaker ZS. Again we have a conflict between the internal source (to whom *wo* is ‘anchored’ in Huang and Liu’s (2001) term) and the external source (to whom *ni* is anchored). As for the acceptable long distance reading of *ziji* in (16c/d/e), according to Huang and Liu (2001),

(vi) John feared in his mind, “I might lose her.”

unlike surface first- or second- person pronouns which are obligatorily anchored to the external speaker, a third person NP is not obligatory anchored to the external speaker whereas it can always be anchored to the internal speaker, the matrix subject. Thus third person NPs do not induce the blocking effects. In (16c/d/e), the direct discourse complement is “ZS zai piping wo (ma)” with nothing obligatory anchored to the external speaker. This allows *wo* to refer to the matrix subject, regardless of the latter’s person feature. Thus Huang and Liu’s account explains not only why blocking effects should occur in case like (16a/b), but also why they do not occur in cases (16c-e).

Now let’s turn to the blocking effects of *daodi wh*-interrogatives. I think the blocking effects in *daodi* questions parallel with that of logophoric *ziji* except for the candidate of the blocker. In the cases of blocking effects of logophoric *ziji*, the blocker is the first- or second-person NP whose perspective is obligatorily anchored to the external speaker, while in the cases of blocking effects of *daodi wh*-questions, the blocker is the third-person NP whose perspective is anchored to the internal speaker (or is not obligatorily anchored to the external speaker).

In other words, logophoric *ziji* represents a perspective obligatorily anchored to the internal speaker (the matrix subject) as in (19a) while the attitudinal adverb *daodi*, when put in root *wh*-questions, represents a perspective obligatorily anchored to the external speaker as in (20a). The former’s perspective may conflict with that of the external speaker (e.g., the

second-person pronoun *ni*) as in (19b), and the latter’s perspective may conflict with that of the internal speaker (e.g., the third-person proper name Zhangsan) as in (20b). Thus, the blocking effects of logophoric *ziji* and *daodi* used in root *wh*-interrogatives are like mirror images of each other.

(19) a. Zhangsan_i juede Lisi_j buxihuan ziji_{i/j}

ZS think LS not-like self

‘ZS thinks that LS does not like himself/him.’

b. Zhangsan_i juede ni_j buxihuan ziji_{*i/j}

ZS think you not-like self

‘ZS thinks that you do not like yourself.’



(20) a. Ni renwei Lisi daodi mai-le shenme?

You think LS daodi buy-Perf what

‘What the hell do you think LS bought?’

b. *Zhangsan renwei Lisi daodi mai-le shenme?

ZS think LS daodi buy-Perf what

‘What the hell does ZS think LS bought?’

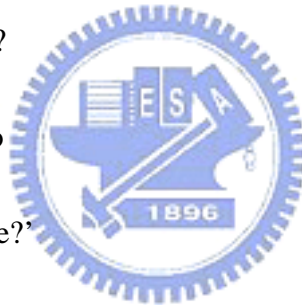
Besides, as shown in (19a/20a), logophoric *ziji*’s perspectivity would not be blocked by a

third-person NP (whose perspective is not obligatorily anchored to the external speaker), and *daodi*'s perspectivity in a root *wh*-question would not be blocked by a first/second person NP (whose perspective is obligatorily anchored to the external speaker).

The blocking effects in *daodi* questions may be formalized if we adopt the existence of the perspective phrase which hosts a perspective operator in its specifier. The perspective operator 'types' the perspective of a given proposition as external or internal (cf. Cheng 1991) as shown in (22):

(22) a. $\boxed{\text{Op}_{\text{external}}}$ [Ni xihuang shei]?

You like who
'Who do you like?'



b. $\boxed{\text{Op}_{\text{external}}}$ [Zhangsan xiangzhidao [$\boxed{\text{Op}_{\text{internal}}}$ Lisi shenme-shihou hui jia]]

ZS wonder LS what-time come-back home

'Zhangsan wonders when LS will come home.'

c. $\boxed{\text{Op}_{\text{external}}}$ [Ni renwei [$\boxed{\text{Op}_{\text{external}}}$ Lisi mai le shenme] ne]?

You think LS buy Perf what Q-particle

'What do you think that Lisi bought?'

d. $\boxed{\text{Op}_{\text{external}}}$ [Zhangsan renwei [$\boxed{\text{Op}_{\text{internal}}}$ Lisi mai le shenme] ne]?

ZS think LS buy Perf what Q-particle

‘What does Zhangsan think that Lisi bought?’

The point to note is that the value of the embedded perspective operator co-varies with that of the matrix subject. As mentioned before, first/second person subject NP’s perspective is obligatorily anchored to the external speaker (the direct discourse participant), while that of the third person subject NP is not. Therefore, the embedded perspective operator’s value in (22b/d) is internal, while in (22c), it is external. Now we put *daodi* in (22b/c/d):

(23) a. Op_{external} [Zhangsan xiangzhidao [Op_{internal} Lisi **daodi**_{internal} shenmeshihou hui jia]]

b. Op_{external} [Ni renwei [Op_{external} Lisi **daodi**_{external} mai le shenme] ne]?

c.* Op_{external} [Zhangsan renwei [Op_{internal} Lisi **daodi**_{internal} mai le shenme] ne]?

The embedded perspective operator values *daodi* as internal or external. The crucial point is that in a root *wh*-question, the attitude carried by *daodi* is ascribed to the external speaker.

However, the embedded perspective operator has valued *daodi* as internal, therefore, the ungrammaticality follows from this wrong ascription of the attitude carried by *daodi*. This formal account hinges on the existence of the perspective phrase that hosts the perspective

operator.

At this point, one may wonder why in (24) the embedded subject *Zhangsan*, which is a third person NP, does not induce blocking as it does in (25).

(24) Ni renwei [**Zhangsan** daodi hui mai shenme song ni]?

You think ZS daodi will buy what send you

‘What the hell do you think ZS will buy for you?’

(25) ***Zhangsan** renwei [wo/ni daodi mai-le shenme song ta]?

ZS think I/you daodi buy-PERF what send him

‘What the hell does ZS think I/you bought for him?’



The crucial point is what can be a potential perspective-taker. The perspective-taker of a proposition is usually the 1st/2nd person subject NP or the subject of verbs of saying, thinking, etc. It is clear that the 3rd person embedded subject NP *Zhangsan* in (24) is not qualified for this job. (26) shows the syntactic structure with the relevant information regarding perspective feature valuation:

(26) [OP_{external}...Q_{wh}... [matrix subject_i_{internal/external}...verb

[OP_{internal/external}...*daodi*_i_{internal/external}...*wh*-element...]]?

The matrix perspective phrase must represent the perspective of the external speaker, while the perspective of the embedded perspective phrase co-varies with that of the matrix subject because the embedded proposition is said to represent the matrix subject's beliefs. Blocking effects emerge when *daodi* which must be anchored to the external speaker occurs in the embedded proposition whose perspective is anchored to the internal speaker. This is the case when the matrix subject is a third person NP such as *Zhangsan*. When the matrix subject is *ni*, a second-person NP, the perspective of the embedded proposition is anchored to the external speaker and it is fine for *daodi* to occur within such embedded proposition. (26) shows that the person feature of the embedded subject is not relevant in perspective valuation of *daodi*.



Before leaving this section, I would like to provide another set of data showing similar blocking effects. Consider the following sentence:

(27) Ni zhidao [Lisi juran mai le shenme] ma?¹⁰

You know LS unexpectedly buy Perf what Q-particle

‘Do you know what Lisi unexpectedly bought?’

¹⁰ It is not clear to me why *juran* cannot occur in a root *wh*-question:

- (i) *Lisi juran mai le shenme?
 LS unexpectedly buy Perf what
 ‘What did Lisi unexpectedly buy?’

The evaluative adverb *juran* ‘unexpectedly’ can be used in an embedded *wh*-question to express the external speaker’s unexpectedness. Interestingly, replacing the matrix subject with a third person NP results in ungrammaticality:

(28) ??Zhangsan zhidao [Lisi juran mai le shenme] ma?

ZS know LS unexpectedly buy Perf what Q-particle

‘Does Zhangsan know what Lisi unexpectedly bought?’



The oddity can be accounted for under our proposal. In (28) *juran* occurs in an embedded proposition whose perspective is anchored to the internal speaker and the embedded perspective operator values *juran*’s perspectivity as internal as shown in (29). However, the semantics resulting from this is wrong because the attitude carried by *juran* should be anchored to the external speaker.

(29) #Zhangsan zhidao [Op_{internal}] Lisi **juran_{internal}** mai le shenme] ma?

4.3 On the Incompatibility with Causal *Zenme*

In this sub-section, I would like to account for the incompatibility problem between

causal *zenme* and *daodi* with the help of Collins' (1991) and Tsai's (2004) works on *why* and *how come* in English and Chinese. The result will turn out supporting my proposal about *daodi*'s perspective-taking property. Let's repeat the relevant examples here as (30) for convenience.

(30) a. (*Daodi) ta (*daodi) zenme hui mei lai?

(Daodi) he (daodi) how would not come

'*How come the hell he did not come?'

b. (*Daodi) ta (*daodi) zenme ku-le?

(Daodi) he (daodi) how cry-ASP

'*How come the hell he is crying?'



Tsai's (2004) work, inspired by Collins' (1991), examines the distinction between Chinese causal *zenme* and reason *weisheme*. Here I lay out the crucial difference between them. Consider the following examples inspired by Tsai (2004, p5):

(31) a. i jia i weishenme denyu er?

one plus one why equal-to two

'Why is one and one equal to two?'

Presupposition: One and one is equal to two.

Speech Act: The speaker wants to know the reason one plus one is equal to two.

b. # i jia i zenme(hui) denyu er?

one plus one how-come equal-to two

‘# How come one and one is equal to two?’

Presupposition: One and one is equal to two, and something caused one and one equal to two.

☛ # **One and one shouldn't be equal to two.**

Speech Act: The speaker wants to know what caused one and one equal to two.

c. i jia i zenme(hui) denyu san?

one plus one how-come equal-to three

‘How come one and one is equal to three?’

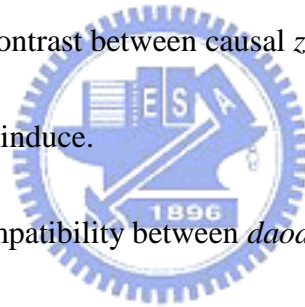
Presupposition: One and one is equal to two, and something caused one and one equal to three.

☛ **One and one shouldn't equal to three.**

Speech Act: The speaker wants to know what caused one and one equal to three.

As highlighted by boldface, the subtle yet crucial distinction between causal *zenme* and reason *weishenme* lies in the extra presupposition/counter-expectation with causal *zenme*.

According to Tsai (pointed out to him by Anikó Lipták and Lisa Cheng), from the presupposition of causal *zenme*, there is also a counter-expectation of some sort, i.e., the state-of-affairs expressed in the question does not match that in the real world or that of the speaker's expectation, which may well be part of the pragmatics of the causal question. The crucial point in (31) is the semantic/pragmatic oddity of (31b). (31b) is clearly not syntactically ill-formed; however, the oddity stems from the clash between the necessary counter-expectation induced by causal *zenme*, i.e., one and one shouldn't be equal to two, and the real-world mathematical facts, i.e., one and one is equal to two. The oddity of (31b), when compared with (31a), shows the contrast between causal *zenme* and reason *weishenme* regarding the presupposition they induce.



One may think that the incompatibility between *daodi* and causal *zenme* has something to do with a pragmatic constraint like presupposition conflict between causal *zenme* and *daodi*. The presupposition/counter-expectation of causal *zenme* is that, as mentioned above, the state-of-affairs described in the question should not happen. Then if another presupposition P is said to be in conflict with the presupposition induced by causal *zenme*, P must be that the state-of-affairs described in the question should happen. However, *daodi* does not induce a presupposition like P. Therefore, a pure pragmatic account in this line does not seem to be promising.

However, the counter-expectation induced by causal *zenme* is too crucial a feature to

give up in our attempt of explaining its incompatibility with *daodi*. In this connection, we may regard the speaker's pragmatic presupposition/counter-expectation toward a proposition as a kind of speaker's attitude toward the proposition.

Just like the attitude carried by *daodi*, the attitude carried by causal *zenme* needs to be ascribed to a perspective-holder. As the following sentences show, the attitude carried by causal *zenme* can be ascribed to either the external speaker as in (32a) or the internal one as in (32b).

(32) a. Laowang zenme mei lai?

Laowang how-come not come

'How come Laowang did not show up?'



b. Zhangsan xiangzhidao [Laowang zenme mei lai]

Zhangsan wonders Laowang how-come not come

'Zhangsan wonders how come Laowang did not show up.'

Given the semantic properties of *daodi* and a causal *zenme* question mentioned above, we propose the denotations of them as follows:

(33) $[[Daodi]] = \lambda Q \lambda x \exists y . y \text{ is an attitude that is ascribed to } x \wedge x \text{ holds } y \text{ toward } Q$

(34) [[*Laowang zenme mei lai*]] = $\lambda z \exists v$. v is an attitude that is ascribed to $z \wedge z$ holds v

toward ($\lambda p \exists w$. w a reason $\wedge p = \sim$ show-up(LW) because
 w)

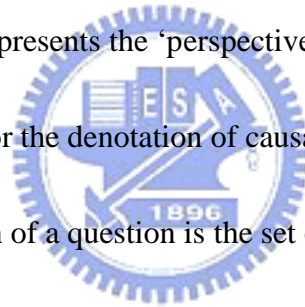
(35) [[*Laowang daodi xihuang shei*]] = [[*daodi*]] ([[*Laowang xihuang shei*]]) = $\lambda x \exists y$. y is an

attitude that is ascribed to $x \wedge x$ holds y toward (λp
 $\exists w$. w a person \wedge like (w)(LW))

(33) means that an attitudinal adverb like *daodi* takes two arguments. Q represents the

interrogative it occurs in, and x represents the ‘perspective argument’ to which the attitude

carried by *daodi* is ascribed. As for the denotation of causal *zenme* questions in (34), I follow
the assumption that the denotation of a question is the set of all possible answers to it.



Moreover, z represents the perspective argument carried by the semantics of causal *zenme*,

and v stands for the attitude carried by causal *zenme*. The perspective argument of *daodi* or a

causal *zenme* question would be saturated by the perspective operator (may be symbolized as

a *pro*) in the specifier of Perspective Phrase. With the rule of compositionality, we may obtain

the correct ascription of the attitude carried by *daodi* or a *zenme* question to either the

external or the internal speaker as shown below:

(36) [[*Laowang zenme mei lai*]] (pro_{ex}) = $\exists v$. v is an attitude that is ascribed to $pro_{ex} \wedge$

pro_{ex} holds v toward $(\lambda p \exists w. w \text{ a reason} \wedge p =$

$\sim\text{show-up(LW)}$ because $w)$

(37) $[[\text{Laowang daodi xihuang shei}]] (\text{pro}_{\text{ex}}) = \exists y. y \text{ is an attitude that is ascribed to } \text{pro}_{\text{ex}} \wedge$

pro_{ex} holds y toward $(\lambda p \exists w. w \text{ a person} \wedge$

$\text{like}(w)(\text{LW}))$

Given these, we may try to combine the denotation of *daodi* with that of a causal *zenme*

question:

(38) $[[\text{DaodiLaowang zenme mei lai}]]$

$= [[\text{Daodi}]] ([[\text{Laowang zenme mei lai}]]) (\text{pro}_{\text{ex}})$

$= \lambda Q \lambda x \exists y [y \text{ is an attitude that is ascribed to } x \wedge x \text{ holds } y \text{ toward } Q]$

$(\lambda z \exists v. v \text{ is an attitude that is ascribed to } z \wedge z \text{ holds } v \text{ toward } (\lambda p \exists w. w \text{ a reason} \wedge$

$p = \sim\text{show-up(LW)}$ because $w)) (\text{pro}_{\text{ex}})$

$= \lambda x \exists y [y \text{ is an attitude that is ascribed to } x \wedge x \text{ holds } y \text{ toward}$

$(\lambda z \exists v. v \text{ is an attitude that is ascribed to } z \wedge z \text{ holds } v \text{ toward } (\lambda p \exists w. w \text{ a reason} \wedge$

$p = \sim\text{show-up(LW)}$ because $w)] (\text{pro}_{\text{ex}})$

$= \exists y [y \text{ is an attitude that is ascribed to } \text{pro}_{\text{ex}} \wedge \text{pro}_{\text{ex}}$ holds y toward $(\lambda z \exists v. v \text{ is an}$

attitude that is ascribed to $z \wedge z$ holds v toward $(\lambda p \exists w. w \text{ a reason} \wedge p =$

~show-up(LW) because w)]

We see that at the end of the composition, the perspective argument of the causal *zenme* question is left unsaturated. The incompatibility follows from the unrestricted/unsaturated perspective argument of causal *zenme*. The attitude carried by causal *zenme* is left unanchored.

Recapitulating the results reached so far, we propose that attitudinal adverbs like *daodi* and causal *zenme* contain an unsaturated perspective argument that is fulfilled by the perspective operator which can be symbolized as a *pro*. This assumption confirms Huang's (2005) assumption that, in modern Chinese, almost all lexical categories have their simplest (pure, "root") meanings only. For example, Chinese verbs are mass verbs (atelic); hence accomplishments must be expressed with a light verb or an Activity-State compound (cf. Lin (2005)). Chinese nouns are mass nouns; hence they need a classifier when you want to count them (cf. Chierchia (1998)). Chinese simple gradable adjectives are unrestricted adjectives; hence they need a degree adverb, a measure phrase, reduplication morphology, (contrastive) focus, or the sentential final particle *le* when you want to restrict them (cf. Liu (2005)).

Therefore, like almost all other Chinese lexical categories, the Chinese attitudinal adverb has its simplest (pure, "root") meaning only. Attitudinal adverbs like *daodi* and causal *zenme* is unrestricted with respect to the perspective argument to which the attitude carried by such

adverbs is ascribed. An attitudinal adverb, in itself, only conveys the attitude specified in the lexicon, and the attitude-holder argument is restricted or saturated by the perspective operator when the derivation unfolds.

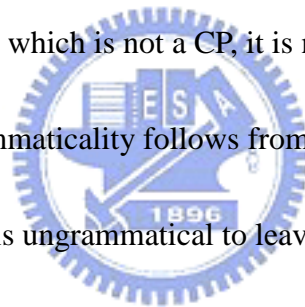


CHAPTER 5

CONCLUSION AND THEORETICAL CONSEQUENCES

This thesis focuses on the syntactic distribution and the semantic property of *daodi*, an attitudinal adverb, to explore the syntax-pragmatics interface in Chinese. I review the previous analyses of *daodi* in chapter 2. Both Kuo (1997) and Huang and Ochi (2004) assume the covert movement of *daodi* to account for the observed island sensitivity of *daodi*'s occurrence. In chapter 3 I present three sets of data that are not accounted for under Kuo's (1997) and Huang and Ochi's (2004) analyses. Firstly, if *daodi* does move in the LF, it should observe all types of island constraints. However, it can appear in a sentential subject island. Secondly, in a root *wh*-question, if *daodi* appears in the embedded clause, the matrix subject in such construction displays a person asymmetry, that is, the matrix subject cannot be of third person. Thirdly, *daodi* is generally regarded as an attitudinal adverb used in *wh*-questions and A-not-A questions to express speaker's impatient and annoyance, but we observe that it is not compatible with causal *zenme* 'how come', another kind of *wh*-question. In chapter 4 I propose my analysis. Specifically, following the recent cartographic approach to phrase structures championed by Cinque (1999) and Rizzi (1997) and Speas' (2004) idea

that there could be syntactic projections bearing pragmatic features, I propose that there is a perspective phrase in the left periphery of Chinese phrase structure. The perspective phrase hosts a perspective operator that serves to type the perspectivity of a proposition as external or internal. Moreover, *Daodi* needs to set its perspective value so that we know to which speaker we should ascribe the attitude carried by *daodi*. The perspective operator is responsible for this job. Moreover, the probing of the perspective operator is subject to a dual constraint. Semantically, it can only detect a complete proposition; and syntactically, only a CP is visible to its searching. That is, if *daodi* is buried in a non-proposition such as an adverbial clause or a complex NP, which is not a CP, it is not visible for the perspective operator's probing and the ungrammaticality follows from the undetermined perspective value of *daodi*. In other words, it is ungrammatical to leave the attitude carried by *daodi* unascribed or 'unanchored'. If the probing of the perspective operator is subject to this dual constraint, it is not surprising that *daodi* may appear in a sentential subject island because a sentential subject is a propositional chunk and a CP which is visible to the probing of the perspective operator. The person asymmetry can also be explained if we adopt the existence of the Perspective Phrase, the mechanism of perspective operator's perspective valuation, and *daodi*'s need to set its perspective value. The 2nd/3rd person asymmetry arises because the attitude conveyed by *daodi* is ascribed to the wrong speaker. Finally, the incompatibility between causal *zenme* and *doadi* can be explained if we examine their semantic denotations. I



propose that there is an unsaturated perspective argument in the semantic denotation of attitudinal adverbs like *daodi* and causal *zenme*. The perspective argument is saturated by the perspective operator when the derivation unfolds. The incompatibility between *daodi* and causal *zenme* results from the fact that a perspective operator can serve to saturate the perspective argument for only one attitudinal adverb; therefore, the combination of *daodi* and a causal *zenme* question would lead to ungrammaticality due to the unsaturated perspective argument position of causal *zenme*. This incompatibility further supports my proposal that the occurrence of *daodi* induces perspective-valuation. Examined in this way, the semantics of Chinese attitudinal adverbs confirms Huang's (2005) assumption that almost all Chinese lexical categories have their simplest (pure, "root") meanings only.



In this thesis, I integrate a pragmatic notion, i.e. perspectivity, into the syntactic structure of Chinese. We see that such integration is capable of account for the behavior of *daodi*. If such move is plausible, we see a supporting evidence for Tenny and Speas' (2003) and Speas' (2004) proposal that there may be pragmatically-relevant syntactic projections. Interestingly, the distribution of pragmatically-relevant syntactic phrases across languages may be treated on a par with that of the pro-drop phenomenon. That is, pro-drop/pragmatically-relevant syntactic projections may occur in languages with either a rich IP system or a rich CP system. Languages with a rich IP system such as Spanish and Quecha show rich agreement morphology. Therefore, it is easy to recover the information in pro-drop sentences. Besides,

the inflectional morpheme encoding perspectivity is a sign for the existence of the perspective phrase. Languages with a rich CP system such as Chinese and Japanese are said to be discourse oriented and may allow a null discourse topic to be the antecedent of a null pronoun. Moreover, due to the pragmatic-oriented nature of the CP-level, it is highly plausible for languages with a rich CP-system to incorporate pragmatic notions into their syntactic structures at the CP level. I believe that there are more interesting typological differences/similarities between IP-oriented languages and CP-oriented languages. This thesis stands as an illustration of this line of research.



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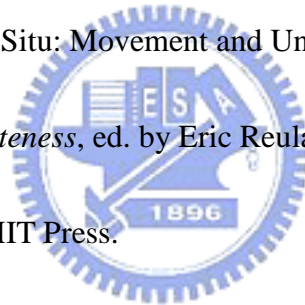
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