Resolving a Subject-Object Asymmetry with Respect to Existential Polarity *Wh*-Phrases[*]

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This paper evaluates two syntactic approaches to resolving a subject-object asymmetry regarding existential polarity *wh*-phrases in Chinese A-not-A questions. It is argued that the asymmetry is better explained by an account seeking recourse to the c-command condition than an account based on (in)definiteness of the NP subject. In my analysis, a polarity *wh*-phrase in the subject position fails to be c-commanded by the A-not-A licensor in overt syntax, while that in the object position has no such problem. It is meanwhile demonstrated that the c-command relation can be dealt with in overt syntax and need not be at LF.

1. Introduction

This study compares two syntactic approaches to a subject-object asymmetry associated with existential polarity *wh*-phrases in Chinese A-not-A questions, as observed by Li (1992: 128).

(1)   a. *Shei/*Shenme ren   xi-bu-xihuan ta?
            who what   person li-not-like   him/her
            'Does anyone like or not like him/her?'

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b. Ta xi-bu-xihuan shenme?

　s/he li-not-like   what?

　'Does s/he like or not like anything?'

One approach is to appeal to (in)definiteness of the NP subject (Cheng 1991, 1994), whereas the other is to resort to the c-command condition (Li 1992). In this paper, I argue for the latter approach, while revising it to fit in with the more recent development of syntactic theory within generative grammar, i.e., Minimalist Program (since Chomsky 1995), in which representations such as DS and SS are non-existent.

This paper is organized as follows. Section 2 is a critical review of Cheng's analysis with reference to (in)definiteness of the NP subject. Section 3 discusses alternative c-command accounts and proposes a revised version of mine. Section 4 concludes the paper.

2. (In)definiteness of the NP Subject
2.1. Cheng's Analysis

In view of the ungrammatical sentences in (2), Cheng (1991, 1994) claims that subject *wh*-words in Chinese fail to obtain indefinite existential readings.[1]

(2)　　a. *Shei xiang chi pingguo ma?

　　　　 who want eat apple   Q$_{YN}$[2]

　　　　 'Does anyone want to eat apples?'

　　　b. *Shei xiang-bu-xiang chi pingguo?

　　　　 who want-not-want eat apple

　　　　 'Does anyone want to eat apples or not?'

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[1] The sentences in (2), as Cheng acknowledges, are cited from Huang (1982). Taking a careful look at his original work, one may find that Huang in fact intends the two sentences to be interpreted as multiple questions (yes-no question plus *wh*-question), contra Cheng's existential interpretation of subject *wh*-phrases.

[2] The abbreviations used in this paper are glossed as follows: ASP: aspect marker; BEI: passive marker; CL: classifier; Q$_{YN}$: yes-no question particle; REL: relativization marker; SUFX: suffix.

Assuming that a question particle like *ma* is merged in C[0] (c.f., Lee 1986, Tang 1989, Lin 1992, and Cheng, Huang, and Tang 1996), and that the A-not-A operator undergoes LF movement to the CP domain (c.f., C.-T. Huang 1982, 1991, Huang, Li, and Li, 2008), Cheng concludes that the ungrammaticality of cases like (2) is not due to the licensing scope because the polarity licensor in both cases (i.e., Q-particle *ma* and A-not-A operator) is either merged or moved to CP where it should be able to c-command and thus license the lower subject *wh*-phrase.

Rather, Cheng approaches the problem by virtue of a general observation that Chinese subjects cannot be indefinite, as shown below.

(3)   a. Nei-ge ren   lai   le.
           that-CL person come ASP
           'That person came.'
    b. *Yi-ge ren   lai   le.
           one-CL person come ASP
           'A person came.'
    c. You yi-gen ren   lai   le.
           have one-CL person come ASP
           'A person came.'

Following Diesing (1990, 1992), Cheng assumes that ∃-closure, which serves to introduce an existential quantifier for quantifying indefinite NPs which are variables, only applies in the domain of VP. Accordingly, (3b) is ungrammatical just because the indefinite NP subject *yi-ge ren* 'a person' is outside VP and thus cannot be bound by ∃-closure. In order for the indefinite initial-NP to receive existential quantificational force, another strategy rather than ∃-closure should be sought. This can be seen in (3c), where the indefinite NP is now being quantified by *you* 'have', which is an existential quantifier.

Given the prohibition against the existence of indefinite NP subjects in Mandarin Chinese, an indefinite existential *wh*-phrase is of course not allowed in the subject position. This is why sentences like (2) are ruled out, under Cheng's theory.

2.2. Against Cheng

Cheng's analysis leaves a mystery as to why the addition of the existential quantifier *you* 'have' to precede the indefinite NP subject may rescue ill-formed non-A-not-A sentences like (2a) and (3b), but may not rescue deviant A-not-A cases like (2b). The contrast is shown below.

(4)   a. *Shei xiang chi pingguo ma?
          who want eat apple Q_{YN}
          'Does anyone want to eat apples?'
    b. You shei xiang chi pingguo ma?
       have who want eat apple Q_{YN}
       'Does anyone want to eat apples?'

(5)   a. *Yi-ge ren   lai   le.
          one-CL person come ASP
          'A person came.'
    b. You yi-gen ren   lai   le.
       have one-CL person come ASP
       'A person came.'

(6)   a. *Shei xiang-bu-xiang chi pingguo?
          who want-not-want eat apple
          'Does anyone want to eat apples or not?'
    b. *You shei xiang-bu-xiang chi pingguo?
       have who want-not-want eat apple
       'Does anyone want to eat apples or not?'

It is clear from (6b) that even if the subject of an A-not-A question is an existentially quantified NP, the sentence is still ungrammatical. This suggests that some factor other than (in)definiteness of the NP subject may come into play for the ungrammaticality of A-not-A cases like (6).

Furthermore, Cheng's analysis encounters a theoretical problem regarding the application domain of ∃-closure. As pointed out by Tsai (1994), for a polarity *wh*-phrase, the scope of its binder, namely ∃-closure, does not always stick to VP; instead, it is determined by the structural position of the polarity trigger/licensor. Compare the three configurations below, drawn by Tsai (1994: 62-63).

(7)   a. Akiu bu ∃$_x$ [$_{VP}$ yao shenme$_{(x)}$].

       Akiu not   want what

       'Akiu does not want anything.'

    b. Akiu dagai/keneng   ∃$_x$ [$_{VP}$ yao shenme$_{(x)}$].

       Akiu probably/possibly   want what

       'Akiu probably/possibly wants something.'

    c. Ruguo ∃$_x$ [$_{IP}$ shei$_{(x)}$ mai-le   chezi], …..

       if   who buy-ASP car

       'If someone bought a car, …..'

Concerning (7c) for the present purpose, ∃-closure is over the IP node, introducing an unselective binder from CP which binds the subject *wh*-phrase *shei* 'who' as a variable within IP. This immediately casts doubt upon Cheng's assumption that ∃-closure is restricted to the VP domain.

2.3. A Note on Judgment

As seen above, Cheng's analysis of indefinite subject *wh*-phrases draws upon the traditional view that Chinese does not allow indefinite NP subjects. However, this issue has been controversial, given the following acceptable sentences with an indefinite *wh*-subject, either in the main/matrix clause or in the subordinate/embedded clause.

(8)   a. **Shei** xihuan ta   ma?   (Li 1992:128)

       who like   him/her Q$_{YN}$

       'Does anyone like him/her?'

b. **Shei** zai jiao wo ma?   (Lin 1998:233)

who ASP call me Q$_{YN}$

'Is somebody calling me?'

c. Yaoshi **shei** xihuan ta, …   (Li 1992:128)

if   who like   him/her

'If anyone likes him/her, …'

d. Ruguo **shei** mai-le   chezi, …   (Tsai 1994:63)

if   who buy-ASP car

'If someone buys a car, …'

e. Ruguo **shei** zhong-le caipiao, …   (Tsai 2001:159)

if   who win-ASP lottery

'If someone wins a lottery, …'

f. Haoxiang[3] **shei** chuan-cuo-le   xiezi   (Lin 2004:459)

seem   who wear-wrong-ASP shoes

'It seems that someone has put on wrong shoes.'

g. Shi-bu-shi **shei** diao-le   qian   le?   (Lin 2004:470)

be-not-be who drop-ASP money ASP

'Is it the case or not that someone lost his/her money?'

h. Ta   zong   juede **shenme** difang bu-duijin.   (from Internet)

s/he always feel   what   place not-right

'S/he just feels that something is wrong.'

i. Mao chi de   dangao, **shei** xiang shi yi-xia ma?   (from Internet)

cat   eat REL cake   who want try one-bit Q$_{YN}$

'(This is) the cake for cats. Does anyone want to try it?'

To highlight opposite judgments on non-A-not-A sentences with an indefinite subject *wh*-phrase, I reproduce (2a) and (8a) below as (9a) and (9b), respectively.

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[3] Unlike a verb/predicate, *haoxiang* 'seem' cannot be used to form an A-not-A question. For this reason, Lin (2004) treats *haoxiang* 'seem' as an adverbial.

(9)   a. ***Shei** xiang chi pingguo ma?   (Cheng 1991, 1994)
          who want eat apple   Q$_{YN}$
          'Does anyone want to eat apples?'
       b. **Shei** xihuan ta   ma?   (Li 1992)
          who like   him/her Q$_{YN}$
          'Does anyone like him/her?'

Here I do not intend to argue for or against either judgment as represented in (9). I would instead like to point out that what is uncontroversial is the judgment on A-not-A sentences with an indefinite subject *wh*-phrase like (1a) and (2b). Neither linguistic literature nor our informants can be found to accept such A-not-A cases. The reason why they appear uncontroversial in grammaticality judgment thus leads to our investigation in this study.

3. C-Command Condition
3.1. C-Command at SS

An alternative account for the ungrammaticality of A-not-A cases like (1a) and (2b) is proposed by Li (1992), who claims that an indefinite *wh*-phrase must be c-commanded by its licensor at S-Structure. Similarly, Lin (1998), following S. Huang (1981), C.-T. Huang (1982), and Lee (1986), also indicates that scope in Chinese is subject to c-command relations at SS. The account based on c-command at SS may straightforwardly explain ill-formed A-not-A sentences like (1a) and (2b), since the A-not-A licensor is not high enough to be able to c-command the polarity *wh*-subject at SS. A piece of supporting evidence is provided by Li (1992: 138), as shown below.

(10)   Shi-bu-shi shenme ren xihuan ta?
        be-not-be what   man like   him/her
        'Is it the case or not that someone likes him/her?'

In the above case, the indefinite *wh*-subject is now being c-commanded by the A-not-A licensor at SS, and the sentence is grammatical as expected.

3.2. C-Command at LF

Nevertheless, a puzzling aspect of Lin's theory arises when he meanwhile claims that "S-structure does not exist in the theory of grammar" and that "the c-command requirement should apply to LF rather than S-structure" (1998: 245-246).[4] Consider the following examples offered by Lin in support of his LF version of c-command.

(11)   a. Yaoshi shei bu ting wode hua, wo jiu bu gei ta tang chi.
        if   who not listen my word I then not give him/her candy eat
        'If somebody does not listen to what I say, I will not give him/her candies to eat.'

       b. Shei yaoshi bu ting wode hua, wo jiu bu gei ta tang chi.
        who if   not listen my word I then not give him/her candy eat
        'If somebody does not listen to what I say, I will not give him/her candies to eat.'

Superficially, an example like (11b) cannot be accounted for in terms of c-command at SS because the polarity *wh*-phrase *shei* 'who' does not fall under the c-commanding domain of the polarity licensor *yaoshi* 'if' at SS. To solve this problem, Lin follows Lin (1996) in assuming that such a case may involve "some kind of reordering" or "the raised necessity operator" at LF. Through either mechanism, the polarity *wh*-phrase can be licensed and the licensing takes place at LF.

Another piece of evidence for c-command at LF comes from sentences with a particular type of compound verb, as in (12).

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[4] In Lin's view, the c-command requirement itself is not an independent condition. He takes it as being derived from a semantic condition called the NEEC (non-entailment-of-existence condition on existential polarity *wh*-phrases). Since it is generally assumed that language obtains its meaning at LF and that the c-command condition is a mechanism which may play a role in forming an interpretive link between a binder and its bindee, it follows that the c-command condition should apply at LF. This is why Lin attempts to argue for the LF application of c-command. As for what the NEEC is about and why the c-command condition is claimed to derive from the NEEC, see Lin's paper for details.

(12) a. Zhe suan-bu-liao   shenme.
      this count-not-SUFX what
      'It is not a big deal. (This does not count for anything.)'
      b. Zhe-jian shi,   guai-bu-de   shei.
      this-CL   matter blame-not-SUFX who
      'As for this matter, you cannot blame anyone.'

According to Lin, the polarity licensor *bu* 'not' in the above cases behaves as an infix embedded in a compound verb so that it cannot c-command the polarity *wh*-phrase at SS. Instead of maintaining that the c-command relation applies at SS, Lin turns to propose that the compound verbs as in (12) are likely to undergo an LF "decomposing" process, resulting in a configuration with the negator *bu* taking a clausal complement. Under this proposal, the polarity licensor *bu* 'not' is hierarchically high enough at LF to c-command and thus license the polarity *wh*-phrase.

Appealing as it may appear, however, Lin's proposal of c-command at LF runs into several difficulties. First, it poses a problem of inconsistency under his theory. That is, he adopts the SS version in the analysis of A-not-A cases like (1a) and (2b), while the LF version in the analysis of cases like (11b) and (12). Second, the LF version of c-command fails to explain why A-not-A cases like (1a) and (2b) are ungrammatical, given that the A-not-A operator, in order to take the question scope, must raise to a left-peripheral position at LF where it should be able to license the polarity *wh*-phrase. Third, the resort to LF c-command is not a necessary solution for cases like (11b) and (12). In the next subsection, I propose that the c-command condition applies in overt syntax.

3.3. Revised C-Command: In Overt Syntax

In this subsection, I re-examine Lin's two pieces of evidence for LF c-command and argue that they can be accommodated in overt syntax. To begin with, a comparison of (11a) and (11b) with respect to word order may prompt us to treat the former as the underlying structure for the latter, assuming that overt movement has taken place. Consider the representation below.

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(13)   Shei_i yaoshi *e*_i bu ting wode hua, wo jiu bu gei ta   tang chi.
       who if   not listen my   word I   then not give him/her candy eat
       'If somebody does not listen to what I say, I will not give him/her candies to eat.'

Here I point out two options for licensing the polarity *wh*-phrase in a case like (13). First, it can be said that the polarity *wh*-phrase is licensed at DS, that is, before it undergoes movement. Second, it is also possible that the polarity *wh*-phrase is licensed via chaining with its trace. Since the trace falls under the scope of the polarity licensor *yaoshi* 'if', it follows that the chaining member also lies within the province of *yaoshi* 'if'. In either way, it is clear that the polarity *wh*-phrase is licensed in overt syntax.

When it comes to the LF "decomposing" device proposed by Lin to explain data like (12), I suggest that it is not the only way out. An alternative analysis is that we may treat a V-not-suffix compound like *guai-bu-de* 'cannot blame' as a verbal negator. It is likely that such a compound verb has undergone some process of feature percolation (see also Nishigauchi 1986 and Tsai 1997 for utilizing this device in analyzing phrase-level patterns), so that the whole V-not-suffix compound now has the [+NEG] feature contributed by the infix *bu* 'not' and behaves on a par with a negator (see also Hsiao 2002 for treating a compound item like *wang-bu-liao* 'cannot forget' as a lexical negative verb). Being a negator, the compound verb can thus c-command and license the postverbal polarity *wh*-phrase.

Arguably, my verbal-negator analysis is not *ad hoc*. Another potential candidate qualified as a verbal negator is the verb *wushi* 'disregard' (lit., without-look-at). The contrast below in (14) demonstrates that all things being equal, the polarity phrase *renhe ren* 'anybody' can be licensed by the verb *wushi* 'disregard', as in (14a), but cannot be licensed by the verb *hushi* 'ignore', as in (14b).

(14)   a. Akiu wushi   renhe ren   de cunzai.
          Akiu disregard any   person of existence
          'Akiu disregards the existence of anybody.'

b. *Akiu hushi renhe ren   de cunzai[5]

    Akiu ignore any   person of existence

    'Akiu ignores the existence of anybody.'

Interestingly, the verb *wushi* 'disregard' is (near-)synonymous with the verb *hushi* 'ignore', but only the former can license a polarity phrase, suggesting that it should be a polarity licensor. The same state of affairs can also be observed with polarity *wh*-phrases, as displayed below.

(15)   a. Akiu hen zida,   genben wushi   shei de cunzai.

       Akiu very arrogant at-all   disregard who of existence

       'Akiu is arrogant, disregarding the existence of anybody at all.'

     b. *Akiu hen zida,   genben hushi   shei de cunzai.

       Akiu very arrogant at-all   ignore who of existence

       'Akiu is arrogant, ignoring the existence of anybody at all.'

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[5] Shi-Zhe Huang pointed out to me that (14b) is an acceptable sentence to her. In fact, the sentence can be good, but the reading is free choice 'any' rather than polarity 'any'. According to Carlson (1980, 1981) and Ladusaw (1980), free choice 'any' is universal whereas polarity 'any' is existential. Consider the following empirical contrast in Mandarin Chinese (Lin 1998: 251).

(i)   a. Bu keneng   renhe ren   dou de jiang.   (universal, free choice 'any)

       not possible any   person all get prize

       'It is not possible that anybody will get a prize.'

    b. Bu keneg   you renhe ren   de jiang.   (existential, polarity 'any')

       not possible have any   person get prize

       'It is not possible that there will be anybody who gets a prize.'

As Lin indicates, only free choice 'any' must be accompanied by the universal quantifier *dou* 'all'. If we passivize (14a) and (14b), only the latter can co-occur with *dou* 'all', suggesting that a case like (14b) has no problem to express free choice 'any'.

(ii)   a. *Renhe ren   de cunzai   dou bei Akiu wushi.

       any   person of existence all BEI Akiu disregard

       'The existence of anybody is all disregarded by Akiu.'

    b. Renhe ren   de cunzai   dou bei Akiu hushi.

       any   person of existence all   BEI Akiu ignore

       'The existence of anybody is all ignored by Akiu.'

Thus, a case like (14b), when it is acceptable, does not count as a counterexample to my analysis, since the reading yielded is universal, which is not our current concern.

The acceptability of (15a) again verifies the working hypothesis that the verb *wushi* 'disregard' patterns with a negator, being able to license the polarity *wh*-phrase *shei* 'who'.

A question that remains under the verbal-negator hypothesis is how to prove that the verb *wushi* 'disregard' is a single-unit compound verb but not a sequence formed by a free negator plus a free verb. I show that this question can be tackled in terms of morphology. There is a considerable tendency that *wu–* 'without' and *–shi* 'see/look at' are both used as bound morphemes in modern Chinese. They seldom occur independently; rather, they usually appear with accompanying morphemes. Below I list two sets of examples for *wu–* 'without' and *–shi* 'see/look at', respectively.

Table 1. Morphology of *wu–* 'without'

	Word Formation	Literal Meaning	Gloss
a.	wu-qing	without-sentiment	merciless
b.	wu-guan	without-relevance	irrelevant
c.	wu-fang	without-hinder	just fine
d.	wu-ju	without-fear	fearless
e.	wu-di	without-enemy	invincible/unconquerable
f.	wu-li	without-reason	unreasonable
g.	wu-xian	without-limit	limitless/unlimited
h.	wu-xian	without-wire	wireless
i.	wu-ming	without-name	unknown
j.	wu-chi	without-shame	shameless
k.	wu-zhu	without-help	helpless
l.	wu-neng	without-competence	incompetent
m.	wu-jia-ke-gui	without-home-can-return	homeless
n.	wu-ren-bu-zhi	without-person-not-know	well-known
o.	wu-suo-shi-cong	without-place-fit-follow	be at a loss

Table 2. Morphology of *–shi* 'see/look at'

	Word Formation	Literal Meaning	Gloss
a.	jin-shi	near-see	myopia
b.	yuan-shi	far-see	hyperopia
c.	xie-shi	oblique-see	strabismus
d.	ruo-shi	weak-see	amblyopia
e.	fu-shi	bend-see	look down at

f.	ning-shi	concentrate-see	gaze/peer at
g.	zheng-shi	right-see	face up to
h.	bi-shi	scorn-see	despise
i.	miao-shi	small-see	look down upon
j.	zhong-shi	heavy-see	think highly of
k.	qing-shi	light-see	belittle
l.	jian-shi	watch-see	spy
m.	luo-shi	bare-see	eyesight without glasses
n.	dian-shi	tele-see	television
o.	duan-shi-jin-li	short-see-near-benefit	lack foresight

A conclusion can be drawn from the above tables that *wu–* 'without' and *–shi* 'see/look at' exhibit affixal properties. When combined together, *wu–* 'without' and *–shi* 'see/look at' attach to each other and form a single lexical item, namely, a compound verb.

Note in passing that a test which can be invoked for distinguishing between a negative bound morpheme like *wu–* 'without' and a negative free morpheme like *bu* 'not' is the A-not-A formation. That is, a verbal negative bound morpheme can sometimes undergo A-not-A reduplication, [6] whereas a clausal negation marker never can, as evidenced below.

(16)   a. Ta   hen wu-qing.

        s/he very without-sentiment

        'S/he is (very) merciless.'

       b. Ta [A-not-A wu-bu-wu]-qing?

         s/he   without-not-without-sentiment

         'Is s/he merciless or not?'

(17)   a. Ta   bu lai.

        s/he not come

        'S/he will not come.'

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[6] I have noticed that the verbal items listed in Table (1) have varying degrees of ability to undergo A-not-A reduplication, for reasons yet to be determined. I leave this question open here.

b. *Ta [A-not-A bu-bu-bu]   lai
    s/he   not-not-not come
    'Will s/he come or not?'

The above contrast corroborates our analysis of *wu–* 'without' as being a bound morpheme and as being differentiated from a free negation marker.

The purpose of the above discussion on the verb *wushi* 'disregard' is to show that this compound verb incorporating a negative morpheme behaves in parallel with a negator as a polarity licensor. Analogously, we can also treat V-not-suffix compounds like *suan-bu-liao* 'not count' in (12a) and *guai-bu-de* 'cannot blame' in (12b) as negators. Under this analysis, it comes as no surprise that such negators may c-command and license a polarity *wh*-phrase in overt syntax. No appeal to LF is necessary.

Summarizing, I have proposed a unified c-command account of polarity *wh*-phrases. This account views c-command relations from overt syntax and provides a satisfactory explanation for the contrast between (1a) and (1b). Moreover, the conflict that emerges in Lin's theory between c-command at SS and c-command at LF is never a problem under my proposal here.

4. Conclusion

It is proposed in this study that the subject-object asymmetry with respect to existential polarity *wh*-phrases in A-not-A questions can be resolved in terms of c-command. A polarity *wh*-phrase in the subject position fails to be c-commanded by the A-not-A licensor in overt syntax, while that in the object position has no such problem. It is also argued that an account based on (in)definiteness of the NP subject is untenable and that an appeal to LF c-command is unnecessary.

REFERENCES

Carlson, Gregory N. 1980. Polarity any is existential. *Linguistic Inquiry* 11(4). 799-804.

Carlson, Gregory N. 1981. Distribution of free choice any. *Proceedings of the 17th Conference of the Chicago Linguistic Society* (*CLS 17*). 8-23. Chicago: University of Chicago.

Cheng, Lisa L.-S.. 1991. *On the typology of wh-questions*. Cambridge, MA: MIT dissertation.

Cheng, Lisa L.-S. 1994. Wh-words as polarity items. In Paul Ren-kui Li (ed.), *Chinese languages and linguistics* II, 615-640. Taipei: Academia Sinica.

Cheng, Lisa L.-S., C.-T. James Huang & C.-C. Jane Tang. 1996. Negative particle questions: A dialectal comparison. In James R. Black & Virginia Motapanyane (eds.), *Microparametric syntax and dialect variation*, 41-78. Amsterdam: John Benjamins Publishing Company.

Chomsky, Noam. 1995. *Minimalist program*. Cambridge: MIT Press.

Diesing, Molly. 1990. *The syntactic roots of semantic partition*. Amherst, MA: University of Massachusetts dissertation.

Diesing, Molly. 1992. *Indefinites*. Cambridge: MIT Press.

Hsiao, Su-ying. 2002. *Negative sensitivity in Chinese: A comparative study of Mandarin Chinese and Holo Taiwanese*. Hsinchu: National Tsing Hua University dissertation.

Huang, C.-T. James. 1982. *Logical relations in Chinese and the theory of grammar*. Cambridge, MA: MIT dissertation.

Huang, C.-T. James. 1991. Modularity and Chinese A-not-A questions. In Carol Georgopolous & Robert Ishihara (eds.), *Interdisciplinary approaches to language*, 305-322. Dordret: Kluwer.

Huang, C.-T. James, Y.-H. Audrey Li & Yafei Li. 2008. *The syntax of Chinese*. Cambridge: Cambridge University Press.

Huang, Shuanfan. 1981. On the scope of phenomenon of Chinese quantifiers. *Journal of Chinese Linguistics* 9(2). 226-243.

Ladusaw, William A. 1980. *Polarity sensitivity as inherent scope relations*. New York: Garland Publishing Inc.

Lee, Thomas. 1986. *Studies in quantification in Chinese*. Los Angeles, CA: UCLA dissertation.

Li, Y.-H. Audrey. 1992. Indefinite wh in Mandarin Chinese. *Journal of East Asian Linguistics* 1. 125-155.

Lin, Jo-wang. 1992. The syntax of zenmeyang 'how' and weishenme 'why' in Mandarin Chinese. *Journal of East Asian Linguistics* 1. 293-331.

Lin, Jo-wang. 1996. *Polarity licensing and wh-phrase quantification*. Amherst, MA: University of Massachusetts dissertation.

Lin, Jo-wang. 1998. On existential polarity wh-phrases in Chinese. *Journal of East Asian Linguistics* 7. 219-255.

Lin, Jo-wang. 2004. Choice function and scope of existential polarity wh-phrases in Mandarin Chinese. *Linguistics and Philosophy* 27. 451-491.

Nishigauchi, Taisuke. 1986. *Quantification in syntax*. Amherst, MA: University of Massachusetts dissertation.

Tang, T.-C. 1989. *Studies on Chinese morphology and syntax* 2. Taipei: Student Book Co.

Tsai, Wei-Tien Dylan. 1994. *On economizing the theory of A-bar dependencies*. Cambridge, MA: MIT dissertation.

Tsai, Wei-Tien Dylan. 1997. On the absence of island effects. *Tsing Hua Journal of Chinese Studies*, New Series 27. 125-149.

Tsai, Wei-Tien Dylan. 2001. On subject specificity and theory of syntax-semantics interface. *Journal of East Asian Linguistics* 10. 129-168.