

DELIMITING THREE TYPES OF DISJUNCTIVE SCOPE IN MANDARIN CHINESE*

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This paper is an attempt to delimit the disjunctive scope among three types of question forms in Mandarin Chinese. It is argued that the disjunctive scope is targeted at different layers: *vP/VP* for A-not-A questions, *TP/IP* for alternative questions, and *CP* for VP-VP questions. The tripartite distinction is supported by three different patterns with respect to the licensing of *wh*-indefinites. In A-not-A questions, only object *wh*-indefinites can be licensed; in alternative questions, both subject and object *wh*-indefinites can be licensed; in VP-VP questions, *wh*-indefinites in any position cannot be licensed.

1. Introduction

This paper attempts to compare the disjunctive scope among three types of question forms in Mandarin Chinese: alternative questions, A-not-A questions, and VP-VP questions.

- (1) Ni chi fan haishi chi mian? (alternative question)
 you eat rice or eat noodles
 ‘Will you eat rice or eat noodles?’
- (2) Ni chi fan bu chi fan? (A-not-A question)
 you eat rice not eat rice
 ‘Will you eat rice (or) not eat rice?’

* Part of this paper was presented at my dissertation proposal defense. I am indebted to Jen Ting, Miao-ling Hsieh, and Wei-tien Dylan Tsai for generously sitting on the committee and offering invaluable suggestions. An earlier version of this paper was also presented at the 2009 Student Workshop on East Asian Linguistics (SWEAL-2009) held by the NTHU Graduate Institute of Linguistics, and I benefited from extensive discussion with the following audience: Chun Chang, Li-Ching Chiu, Pei-I Hsiao, Han-chun Huang, Cheng-Yu Edwin Tsai, and Barry Chung-Yu Yang. Thanks also go to the anonymous reviewer for helpful comments. Any remaining errors are my responsibility.

- (3) Ni chi fan, chi mian? (VP-VP question)
 you eat rice eat noodles
 ‘Will you eat rice, (or) eat noodles?’

Although these three types of questions differ in several aspects, e.g., whether a disjunctive marker *haishi* ‘or’ is present, and whether the nature of disjunction is opposite or alternative, they seem to consistently disjoin two VPs. This superficial scopal parallel may lead to a conjecture that these three types of questions are derived and licensed in the same fashion. This conjecture, however, may not be true, given the following contrast involving sentential subject islands (cf. Huang 1988, 1991, among others).

- (4) [Wo chi fan haishi chi mian] bijiao hao? (alternative question)
 I eat rice or eat noodles more good
 ‘Is it better that I eat rice or eat noodles?’
- (5) * [Wo chi fan bu chi fan] bijiao hao? (A-not-A question)
 I eat rice not eat rice more good
 ‘Is it better that I eat rice (or) don’t eat rice?’
- (6) * [Wo chi fan, chi mian] bijiao hao? (VP-VP question)
 I eat rice eat noodles more good
 ‘Is it better that I eat rice, (or) eat noodles?’

The difference in island sensitivity indicates that a unified analysis is difficult. Thus, in this paper, I would like to advocate a non-unified analysis, under which the three types of questions vary in derivation.

The rest of this paper is organized as follows. Section 2 discusses the derivation of A-not-A questions, Section 3 alternative questions, and Section 4 VP-VP questions. Section 5 concludes the paper.

2. A-not-A Questions

Of the three types, A-not-A questions have received the most attention and discussion in the literature. This may be due to the fact that they, without an explicit disjunctive marker, are a Chinese-particular question form. A property underlying A-not-A questions is that the duplicate ‘A’ must be verbal.¹ This makes sense since only a verbal constituent can be negated and turned into ‘not-A’.

¹ The reviewer urged me to spell out or even argue for the assumption that adjectives are of verbal category, as illustrated in (7c). I hereby refer to Li and Thompson (1981: 142), who point out that “the vast majority of adjectives may function as verbs in Mandarin”. For example, just like regular verbs, many adjectives can be followed by the aspect marker *le* (e.g., *Tianqi leng le* ‘The weather has got cold.’) and negated by negation markers like *bu* or *meiyou* (e.g., *Tianqi bu leng* ‘The weather is not cold.’).

- (7) a. Ni hui bu hui qu? (modal verb)
 you will not will go
 'Will (or) won't you go?'
 b. Ni qu bu qu? (regular verb)
 you go not go
 'Will you go (or) not go?'
 c. Ni leng bu leng? (adjectival predicate)
 you cold not cold
 'Are you cold (or) not cold?'

It is clear from (7) that an A-not-A question connects verbal disjuncts. This fact is compatible with Ernst's (1994) claim that an A-not-A question has a Q-operator which originates in the VP domain. Along this line, Law (2006) further suggests that an A-not-A operator is base-generated in a VP-adjoined position, as illustrated below.

- (8) [CP A-not-A_i [... [VP t_i [VP [V' ... V ...]]]] ... (Law 2006: 101)

Notice that what undergoes the A-not-A form is the constituent which immediately follows the A-not-A operator. In addition, the A-not-A operator must raise to a left-peripheral position to take the question scope. The movement is covert and cannot cross an island, or an ECP effect (Chomsky 1981) will be induced, as suggested by Huang (1982, 1991). An ungrammatical sentence like (5) is such an example, as schematized below.

- (9) [CP Op_i [TP/IP(island) WO [vP/vP t_i [vP/vP [chi fan] [bu chi fan]]]] bijiao hao]?
- 

In the above case, since the A-not-A trace is neither lexically governed nor antecedent-governed, the sentence is ruled out. Following Ernst and Law, I assume that the A-not-A operator is merged and adjoined to vP/VP. This amounts to saying that the disjunctive scope of A-not-A questions ranges over two disjoined vPs/VPs.

The above analysis merges the A-not-A operator somewhere between the subject and the object. A piece of evidence in support of this analysis comes from an asymmetry regarding *wh*-indefinites. A *wh*-indefinite behaves like a polarity item, the licensing of which requires a polarity licenser such as the A-not-A operator. I assume with Li (1992) that the licensing of *wh*-indefinites in Mandarin Chinese takes place at SS. Now, consider the following contrast (Li *ibid.*: 128).

- (10) a. *Shei/Sheme ren xi-bu-xihuan ta?
 who/what person li-not-like him/her
 'Does someone/anyone like (or) not like him/her?'
 b. Ta xi-bu-xihuan shenme?
 s/he li-not-like what
 'Does s/he like (or) not like something/anything?'

My analysis predicts that the *vP/VP*-adjoined A-not-A operator should be able to license a lower object *wh*-indefinite but not a higher subject *wh*-indefinite.² This prediction is borne out by the subject-object asymmetry in (10). Thus, the *vP/VP*-adjoined analysis of the A-not-A operator is supported.

3. Alternative Questions

As far as I know, the issue concerning how alternative questions in Mandarin Chinese are derived has scarcely been touched upon in the literature. Another question is why Chinese alternative questions are not subject to the island constraint, as already shown in (4). This section is therefore devoted to exploring Chinese alternative questions in more depth.

Han and Romero (2004) argue by providing cross-linguistic evidence that an alternative question is derived by ellipsis combined with the movement of the *whether/Q* operator. Consider (11) below for an English example.

- (11) a. (Q/whether) did John eat beans or rice?³
 b. (Q/whether)_i did *t_i* [John eat beans] or [~~John eat~~ rice]?⁴

Under the ellipsis analysis, an apparent NP-disjoined structure turns out to be a TP/IP-disjoined structure. As argued by Han and Romero, an overt case-marking language like Korean lends empirical support for the ellipsis analysis of alternative questions. Consider the following Korean data given by Han and Romero (*ibid.*: 543).

- (12) a. Chelswu-ka khophi-na cha-lul masi-ess-ni?
 Chelswu-Nom coffee-or tea-Acc drink-Past-Int
 ‘Is it the case that Chelswu drank coffee or tea?’ (y/n-Q)
 b. Chelswu-ka khophi-lul masi-ess-ni animyen cha-lul masi-ess-ni?
 Chelswu-Nom coffee-Acc drink-Past-Int if-not tea-Acc drink-Past-Int
 ‘Which of these two things did Chelswu drink: coffee or tea?’ (alt-Q)
 c. Chelswu-ka khophi-lul animyen cha-lul masi-ess-ni?
 Chelswu-Nom coffee-Acc if-not tea-Acc drink-Past-Int
 ‘Which of these two things did Chelswu drink: coffee or tea?’ (alt-Q)

In (12a), the disjunctive string headed by *-na* ‘or’ in the object position encodes the ‘either...or’ reading and receives only one Accusative Case. In (12b), by contrast, the disjunctive string headed by *animyen* ‘if not’ encodes the

² Notice that the licensing of *wh*-indefinites has been assumed to take place at SS. While the A-not-A operator in (10a) obligatorily moves to CP at LF, a position higher than the subject *wh*-indefinite, the licensing is still impossible since it is not at SS as required.

³ As noted by Han and Romero, (11a) is ambiguous with two readings. One is the alternative question reading, termed ‘whether/Q...or’, and the other is the yes-no question reading, termed ‘either...or’. Only the former is under our present concern.

⁴ Han and Romero do not explain why the deletion of the non-constituent ‘John eat’ in (11b) is applicable, if we take a general requirement to be true that ellipsis only applies to constituents. An explanation I have come up with is that in (11b) ellipsis can be done twice, with ‘John’ elided first and ‘eat’ elided later. Each time the elided item is an unproblematic constituent.

‘whether...or’ reading and has the object in both disjuncts assigned an Accusative Case. For such a clausal disjunctive structure, the verb in the first disjunct can further be deleted, with the Accusative Case retained, as in (12c). In this light, although a case like (12c) can be apparently seen as disjoining two NPs, it actually disjoins two clausal disjuncts, with a verb elided.

Along the lines of Han and Romero, I propose that Chinese alternative questions like (1) and (4) are respectively derived as in (13) and (14), in a cyclic manner.⁵ In the proposed structure, there is an alternative Q-operator merged and adjoined to TP/IP. In other words, the disjunctive scope of alternative questions ranges over two disjoined TPs/IPs.

- (13) a. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [ni\ chi\ fan] haishi [ni\ chi\ mian]]]]?$
 b. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [ni_j\ chi\ fan] haishi [e_j\ chi\ mian]]]]?$
- (14) a. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [wo\ chi\ fan\ bijiao\ hao] haishi [wo\ chi\ mian\ bijiao\ hao]]]]?$
 b. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [wo_j\ chi\ fan\ bijiao\ hao] haishi [e_j\ chi\ mian\ bijiao\ hao]]]]?$
 c. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [wo_j\ chi\ fan\ e_k] haishi [e_j\ chi\ mian\ bijiao\ hao_k]]]]?$

As a result, the alleged sentential subject in (4) is only apparent. Since it is not a subject at all, it makes no island for the operator movement, and the sentence is therefore grammatical.⁶

Let’s consider one more type of island regarding complex NPs, as shown in (15). Under the proposed approach, the form in (15) is derived as in (16).

- (15) Ni xihuan [renshi ni haishi bu renshi ni] de ren? (Huang 1991: 314)
 you like know you or not know you DE person
 ‘Do you like people who know you or don’t know you?’
- (16) a. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [ni\ xihuan\ renshi\ ni\ de\ ren] haishi [ni\ xihuan\ bu\ renshi\ ni\ de\ ren]]]]?$
 b. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [ni_j\ xihuan\ renshi\ ni\ de\ ren] haishi [e_j\ xihuan\ bu\ renshi\ ni\ de\ ren]]]]?$
 c. $[_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [ni_j\ xihuan_k\ renshi\ ni\ de\ ren] haishi [e_j\ e_k\ bu\ renshi\ ni\ de\ ren]]]]?$

⁵ Note that the deletion process involved here is ‘coordinate deletion’. Its application is not unconstrained; rather, it obeys the Directionality Constraint (Ross 1967), according to which forward deletion applies where a coordinate structure shows an identical element on a left branch, whereas backward deletion applies the other way around.

⁶ The reviewer remarked that “it is not right to place the interrogative part which should belong to the matrix clause into the disjoined TPs; in other words, (14) cannot be the representation of (4) and the island problem still exists”. However, in my analysis, the interrogative Q-operator in alternative questions is taken to adjoin to the whole disjunctive complex, rather than to the first TP/IP disjunct. This means that the interrogative Q-operator is merged in a matrix, disjunction-external position. Thus, the problem raised by the reviewer is actually non-existent for me.

- d. [_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [n_j xihuan_k renshi ni de e_g] haishi [e_j e_k bu renshi ni de ren_g]]]]]?
 e. [_{CP} Op_i [_{TP/IP} t_i [_{TP/IP} [n_j xihuan_k renshi ni e_h e_g] haishi [e_j e_k bu renshi ni de_h ren_g]]]]]?

Again, the claimed complex NP island as in (15) is simply superficial. In my analysis, a question form like (15) is derived by a series of deletion processes and its interrogative meaning is licensed by the null-operator movement.

The ellipsis analysis of alternative questions has the merit of correctly capturing the meaning of a sentence like (17).

- (17) Ni changchang hui jia haishi bu hui jia?
 you often return home or not return home
 (i) ‘Do you often go home or do you often not go home?’
 (ii) *‘Do you often go home or do you not go home?’

On the surface, the second disjunct seems to involve no adverb; however, from the interpretation of the sentence we know that there should be one there (i.e., *changchang* ‘often’). It is being absent just because it has undergone the PF deletion.

The TP/IP-adjoined analysis merges the alternative Q-operator in a position higher than both the subject and the object within the two clausal disjuncts. If this alternative Q-operator is a polarity licenser, it should be able to license a subject polarity *wh*-phrase as well as an object polarity *wh*-phrase. This is confirmed as below.

- (18) a. You shei da-le ni haishi you shei ma-le ni?⁷
 have who beat-Asp you or have who scold-Asp you
 ‘Did anyone beat you or did anyone scold you?’
 b. [_{TP/IP} Op [_{TP/IP} [you shei da-le ni] haishi [you shei ma-le ni]]]?
 (19) a. Ni da-le shei haishi ni ma-le shei?
 you beat-Asp who or you scold-Asp who
 ‘Did you beat anyone or did you scold anyone?’
 b. [_{TP/IP} Op [_{TP/IP} [ni da-le shei] haishi [ni ma-le shei]]]?

In brief, the above facts as to *wh*-indefinites give countenance to the treatment of

⁷ The addition of the existential quantifier *you* ‘have’ to the front of a subject *wh*-indefinite is obligatory. This stems from an independent constraint that Mandarin Chinese generally does not allow an indefinite NP subject, unless it is quantified by *you* ‘have’.

- (i) a. * Yi-ge ren lai-le.
 one-Classifier person come-Asp
 ‘A person came.’
 b. You yi-ge ren lai-le.
 have one-Classifier person come-Asp
 ‘A person came.’

For a theoretical account for why English permits an indefinite NP subject while Mandarin Chinese does not, see Cheng (1991, 1994), among others.

the alternative Q-operator as being a polarity licenser merged to TP/IP adjunction.

4. VP-VP Questions

VP-VP questions are formed by juxtaposing two VPs without the use of the disjunctive marker *haishi* ‘or’, hence also named “juxtaposed choice questions” (Huang, Li, and Li 2008: 243, henceforth HLL). A remarkable characteristic of this type of question, as pointed out by Huang (1988, 1991), is that the two VP disjuncts must have partial phonological identity.⁸ Consider the following contrast.

- (20) a. Ni ai ta, ai wo?
 you love him/her love me
 ‘Do you love him/her, (or) love me?’
 b. Ni ai wo, hen wo?
 you love me hate me
 ‘Do you love me, (or) hate me?’
- (21) a. *Ni mai shu, xiu biao? (HLL 2008: 243)
 you sell book repair watch
 ‘Do you sell books, (or) repair watches?’
 b. *Ni xihuan Zhangsan, taoyan ta? (HLL 2008: 244)
 you like Zhangsan hate him
 ‘Do you like Zhangsan, (or) hate him?’

HLL claim that the nature of observed identity is phonological/prosodic, rather than semantic. An ungrammatical case like (21b) is a good example, in which both juxtaposed VPs involve the same person identity but the sentence is still ruled out. Other than phonological identity, HLL do not discuss how the interrogative meaning of a VP-VP question is licensed, nor do they mention an

⁸ I mentioned this phonological requirement in my presentation of a paper at the IACL-16 (Peking University, 2008), but received challenges from Jianming Lu and Y.-H. Audrey Li. I thank Y.-H. Audrey Li in particular for providing a counterexample as below.

- (i) Ni chi-fan, shuijiao?
 you eat-rice sleep
 ‘Will you eat, (or) sleep?’

Note that in such a case, certain phonological strategies must be adopted in order to yield the question reading. As demonstrated below in (ii), whether high pitch and a pause are used with juxtaposed VPs results in different semantics.

- (ii) a. Xia-ban hou, ta dasuan chi-fan shuijiao. (non-question)
 leave-shift after s/he plan eat-rice sleep
 ‘After work, s/he will plan to eat (and) sleep.’
 b. Xia-ban hou, ta dasuan chi-fan, shuijiao? (question)
 leave-shift after s/he plan eat-rice sleep
 ‘After work, will s/he plan to eat, (or) sleep?’

Thus, it seems that the requirement on phonological identity for VP-VP questions can sometimes be relaxed and replaced by some other phonological mechanisms. I leave this issue for future studies.

ill-formed sentence like (6). Therefore, a detailed analysis of VP-VP questions is called for.

We have seen in (5) and (6) that VP-VP questions behave on a par with A-not-A questions in terms of island effects. Given this, we may postulate that an ill-formed VP-VP case like (6) is ruled out in parallel with (9), a violation of the ECP. Compare the two configurations below, both of which have a vP/VP -adjoined null Q-operator.

(9) * [CP Op_i [TP/IP(island) WO [_{vP/VP} t_i [_{vP/VP} [chi fan] [bu chi fan]]]]] bijiao hao]?

(22) * [CP Op_i [TP/IP(island) WO [_{vP/VP} t_i [_{vP/VP} [chi fan], [chi mian]]]]] bijiao hao]?

Nevertheless, the above postulated parallelism between VP-VP questions and A-not-A questions runs into a difficulty, given a contrast between (23) and (24) in regard to the licensing of *wh*-indefinites.

(23) Ni da-guo shei mei da-guo shei? (A-not-A question)
 you beat-Asp who not beat-Asp who
 'Have you beaten anyone (or) not beaten anyone?'

(24) Ni da-guo shei, ma-guo shei? (VP-VP question)
 you beat-Asp who scold-Asp who
 (i) 'Who have you beaten, (and/or) who have (you) scolded?'
 (ii) * 'Have you beaten anyone, (or) scolded anyone?'

The use of the polarity 'any' gives rise to the same contrast.

(25) Ni da-guo renhe ren mei da-guo renhe ren? (A-not-A question)
 you beat-Asp any person not beat-Asp any person
 'Have you beaten anyone (or) not beaten anyone?'

(26) * Ni da-guo renhe ren, ma-guo renhe ren? (VP-VP question)
 you beat-Asp any person scold-Asp any person
 'Have you beaten anyone, (or) scolded anyone?'

As can be seen, (object) polarity phrases can be licensed in A-not-A questions but cannot in VP-VP questions. This immediately casts doubt upon the postulation of an A-not-A-like Q-operator for VP-VP questions.

To solve the problem, it could simply be assumed that an A-not-A Q-operator is a polarity licenser while a VP-VP Q-operator is not. However, this assumption is too arbitrary to be desirable. Li (1992) and Lin (1998) both suggest that polarity *wh*-phrases in Mandarin Chinese can only be licensed under certain semantic conditions. Given that the three types of questions at issue bear semantic resemblance in offering alternatives, there is no compelling reason on semantic grounds to discriminate the VP-VP type from the other two by claiming that only the former has its null Q-operator not serving as a polarity licenser. In the following, I am about to approach the problem along a different line of thinking.

The double-Q interpretation as shown in (24-i) is a good hint for us to

analyze VP-VP questions. My proposal is given below in (27).

- (27) a. Ni chi fan, chi main?
you eat rice eat noodles
'Will you eat rice, (or) eat noodles?'
b. [_{CP} Q ni_i chni fan]? [_{CP} Q *pro*_i chi mian]?

In my analysis, a VP-VP question is in fact a juxtaposition (i.e., asyndetic coordination) of two independent questions, without involving a coordinate head such as *haishi* 'or'.⁹ By contrast, an alternative question and an A-not-A question both have their disjuncts connected by a coordinate head, either overt or covert.¹⁰ In a word, I am now making the distinction between juxtaposition and coordination, as exemplified below.

- (28) a. You jump, I jump. (juxtaposition)
b. You jump and I jump. (coordination)

Support for the above distinction concerns the phonological fact that a pause between juxtaposed clauses is noticeable while unnecessary for coordinated clauses. Regarding VP-VP questions, phonological strategies such as a pause and high pitch are indeed required. This is justified by the contrast below (see also footnote 8).

- (29) a. Akiu bu guai, Mama hui da ta ma ta.
Akiu not well-behaved Mom will beat him scold him
'When/If Akiu_i is ill-behaved, Mom will beat him_i (and/or) scold him_i.'
b. Akiu bu guai, Mama hui da ta, ma ta?
Akiu not well-behaved Mom will beat him scold him
'When/If Akiu_i is ill-behaved, will Mom beat him_i, (or) scold him_i?'

The fact that the occurrence of an intermediate pause helps obtain the question reading for a VP-VP sequence thus lends credence to my double-Q analysis, under which the disjunctive scope of VP-VP questions ranges over two

⁹ One might wonder how a VP-VP question is interpreted as 'whether...or' if there exists no disjunctive coordinator like *haishi* 'or'. I suggest that the selective reading is pragmatically determined. To take the following two sentences for example, they can be connected with different semantics, depending on the context.

(i) John died. Mary cried.

If John is Mary's beloved husband, then the two sentences are better interpreted with a causal, 'because' relation. On the other hand, if John is someone Mary does not like, then the two sentences are better interpreted with a concessive, 'although' relation. As we can see, it is not the syntactic structure that determines the meaning, but the hearer's or reader's knowledge. Likewise, regarding a VP-VP question like *Ta qu ni, qu wo?* 'Will he marry you, (or) marry me?', the reading must be 'whether...or' since, according to our world knowledge, in most countries a man is unlikely to marry two women (#'Will he marry you, (and) marry me?'). So, pragmatics plays a role here.

¹⁰ Many scholars (e.g., Mei 1978, Zhang 1990, McCawley 1994, Cole and Lee 1997, and Wei 2007) have pointed out that A-not-A questions probably evolved from alternative questions. Accordingly, I tentatively assume that there is a null *haishi* 'or' existing in A-not-A questions (see also HLL 2008: 252).

juxtaposed CPs.

With the double-Q analysis, I am now in a position to answer two questions, each associated with one set of given facts. The first question is why *wh*-indefinites in VP-VP questions cannot be licensed, as already seen in (24-ii). My answer is that this is due to the lack of a legitimate polarity licenser such as a negator, a conditional marker, a yes-no question marker like *ma*, or a null Q-operator of A-not-A or alternative types. Notice that the proposed two Qs in a VP-VP question are *wh*-Qs by nature, given that a *wh*-Q particle like *ne* is compatible with a VP-VP question while an y/n-Q particle like *ma* is not.

- (30) a. Akiu bu guai, Mama hui da ta ne, ma ta ne?
 Akiu not well-behaved Mom will beat him Q_{WH} scold him Q_{WH}
 ‘When/If Akiu_i is ill-behaved, will Mom beat him_i, (or) scold him_i?’
 b. *Akiu bu guai, Mama hui da ta ma, ma ta ma?¹¹
 Akiu not well-behaved Mom will beat him Q_{YN} scold him Q_{YN}
 ‘When/If Akiu_i is ill-behaved, will Mom beat him_i, (or) scold him_i?’

As is well known, a *wh*-Q cannot license *wh*-indefinites, as opposed to an y/n-Q.

- (31) [CP [TP Ni chi-le shenme] ne]?
 you eat-Asp what Q_{WH}
 (i) ‘What did you eat?’
 (ii) * ‘Did you eat anything?’
- (32) [CP [TP Ni chi-le shenme] ma]?
 you eat-Asp what Q_{YN}
 (i) * ‘What did you eat?’
 (ii) ‘Did you eat anything?’

Given that the two Qs in a VP-VP question are *wh*-Qs and that *wh*-Qs fail to license *wh*-indefinites, it follows that a VP-VP question has no ability to license *wh*-indefinites, hence the unavailability of (24-ii). Also, a deviant case like (26) is ruled out for the same reason.

The second question has to do with island effects observed with VP-VP questions, as in (6). Recall that this is not owing to (22), a configuration I already rejected. To explain the fact, I draw readers’ attention to the following data.

- (33) a. Ni xihuan shuxue, taoyan shuxue?
 you like math dislike math
 ‘Do you like math, (or) dislike math?’
 b. *Ni xihuan e, taoyan shuxue?
 c. *Ni xihuan shuxue, taoyan e?’

¹¹ Such a sentence is good only when it is interpreted as asking two independent yes-no questions, but not as asking an alternative ‘which one’ question. In other words, when a VP-VP form is understood as involving two separate yes-no questions, it is no longer a typical VP-VP question at issue and thus irrelevant to our present concern about alternativeness.

- (34) a. Ni-men jia, erzi jiao-pi, nü-er jiao-pi?
 you-plural home son more-naughty daughter more-naughty
 'In your home, is your son more naughty, (or) your daughter more naughty?'
 b. * Ni-men jia, erzi *e*, nü-er jiao-pi?
 c. * Ni-men jia, erzi jiao-pi, nü-er *e*?

A generalization drawn from the above data is that no deletion of an identical constituent in either side of juxtaposed XPs is possible.¹² It is precisely this deletion constraint that rules out a case like (6), as depicted below.

- (35) a. Wo_i chi fan bijiao hao, pro_i chi mian bijiao hao?
 I eat rice more good eat noodles more good
 'Is it better that I eat rice, (or) better that I eat noodles?'
 b. * Wo_i chi fan *e*, pro_i chi mian bijiao hao?

As a consequence, the putative sentential subject in (6) is only an appearance. No island effect is actually occurring. The sentence is ill-formed because of the ellipsis problem.¹³

5. Concluding Remarks

For a clear comparison, I summarize the overall discussion by drawing the following configurations.

- (36) A-not-A → [CP Op_i [TP/IP ... [vP/VP t_i [vP/VP [A] (disj.) [not-A]]]]]
 (37) Alternative → [CP Op_i [TP/IP t_i [TP/IP [A] disj. [B]]]]
 (38) VP-VP → [CP Q [A]], [CP Q [B]]

¹² It is acknowledged that this deletion constraint holds only when the two juxtaposed XPs exhibit an identical element on a right branch, but not on a left branch.

- (i) a. Akiu nian Shida, nian Qingda?
 Akiu study NTNU study NTHU
 'Does Akiu study at NTNU, (or) study at NTHU?'
 b. Akiu nian Shida, *e* Qingda?

¹³ Given the deletion constraint, one might wonder if an ill-formed A-not-A sentence like (5) is actually ruled out by the illegitimate process of ellipsis as in (35b), rather than by violating the ECP. One objection to this possibility is that the derivation like (35b) would yield an intermediate pause between the two juxtaposed XPs, while an A-not-A question is more naturally pronounced without an intermediate pause between 'A' and 'not-A'. It is instructive in this connection that derivations for typical coordination (e.g., alternative questions and A-not-A questions) and for asyndetic coordination (e.g., VP-VP questions) may not be equal. Another objection is that under the ellipsis analysis, the underlying structure for an A-not-A case like (5), as represented below in (i), would not conform to HLL's (2008: 252) proposal that 'A' and 'not-A' are two VPs base-generated in disjunction, without an intervening *pro*.

- (i) Wo_i chi fan bijiao hao, pro_i bu chi fan bijiao hao?
 I eat rice more good not eat rice more good
 'Is it better that I eat rice, (or) better that I do not eat rice?'

Both A-not-A questions and alternative questions belong to coordinated structures and contain a null Q-operator with the ability to license polarity phrases. They differ in where the null Q-operator is merged and adjoined. On the other hand, VP-VP questions are juxtaposed *wh*-Q structures without a coordinator. The two Qs in this type of question are incapable of licensing polarity phrases. All in all, the disjunctive scope of A-not-A questions ranges over coordinated *v*Ps/VPs, that of alternative questions ranges over coordinated TPs/IPs, and that of VP-VP questions ranges over juxtaposed CPs.

Through a comparative study like this, I have clarified two facts. First, the seemingly similar disjunctive scope turns out to fall under different layers (*v*P/VP vs. TP/IP vs. CP) and different linkages (coordination vs. juxtaposition). Second, apparent islands observed with alternative questions and VP-VP questions are actually results derived by ellipsis from two full clauses. As is evident, the value and contribution of this paper lie in unmasking deceiving appearance and teasing out the truth behind.

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